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# ACCESS TO ALCOHOL AND DRUG TREATMENT FOR PEOPLE FROM HISTORICALLY DISADVANTAGED COMMUNITIES IN THE CAPE TOWN METROPOLE

**Bronwyn Jane Myers**

Thesis presented for the degree of

DOCTOR OF PHILOSOPHY

in the Department of Psychology

Faculty of Humanities

UNIVERSITY OF CAPE TOWN

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# PREFACE

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# ABSTRACT

**Access to alcohol and drug treatment for people from historically disadvantaged communities in the Cape Town metropole**

**Bronwyn Jane Myers**
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This study examined factors associated with access to alcohol and drug treatment for people from historically disadvantaged communities in Cape Town, South Africa. The Behavioural Model of Health Services Utilisation was used as a conceptual framework for variable selection, data analysis and the interpretation of findings.

A mixed methods design was used that comprised a case-control study and qualitative in-depth interviews. For the case-control study, data were gathered from 434 cases who had accessed treatment and 555 controls who had alcohol or drug problems but had not accessed services. An interviewer-administered questionnaire was used to gather data on socio-demographic variables, indicators of treatment need, and barriers to service use. Hierarchical logistic regression procedures were used to analyse the data. The qualitative phase explored contextual influences on alcohol and drug treatment uptake for people from these communities. Interviews were conducted with 20 key informants from the alcohol and drug treatment system, including treatment providers, members of local drug action committees, and social workers from district social service offices.

This study found inequities in the use of alcohol and drug treatment services. The primary determinant of treatment uptake was not need, but rather non-need factors. These non-need factors included affordability, geographic accessibility and awareness barriers. Compared to men, women from these communities did not have equal access to treatment services. In addition, people with relatively severe alcohol and other drug problems experienced more difficulties in accessing services than those with less severe problems.

Contextual influences that appear to underpin these inequities were identified. These included: difficulties in service planning for alcohol and drug treatment due to infrastructural issues, (ii) limited allocation of resources to alcohol and drug treatment which restricted the availability of affordable services and the capacity of established services to meet the demand for services, (iii) concerns about service quality, (iv) and the impoverished and fractured nature of these communities. These findings highlight the need for further transformation of the social welfare system responsible for treatment delivery. The study makes specific, practical recommendations for how to improve access to treatment for these communities.

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## LIST OF ABBREVIATIONS

- **AOD** — **Alcohol and other drugs.**
  Refers to the use of alcohol, licit and illicit drugs.
- **ATQ** — **Access to treatment questionnaire**
- **CBO** — **Community-based organisation.**
  A small organisation working in the nonprofit sector but not registered as a nonprofit organization
- **HDCs** — **Historically disadvantaged communities.**
  Communities comprising largely poor, Black/African and Coloured persons and were disadvantaged under the partheid regime.
- **LDAC** — **Local drug action committees.**
  Community structures designed to allow communities to mobilise around AOD issues
- **NDOSD** — **National Department of Social Development**
- **NDOH** — **National Department of Health**
- **SAC** — **Substance abuse coordinator.**
  Responsible for coordinating all alcohol and drug services in a designated community
- **TSP** — **AOD treatment service providers**

# CHAPTER ONE

# THE NEED FOR ALCOHOL AND DRUG TREATMENT IN SOUTH AFRICA

## 1.1. THE NEED FOR ALCOHOL AND DRUG TREATMENT

In South Africa, changes in the pattern of alcohol and other drug (AOD) use highlight the need for accessible treatment services. During apartheid, the country's physical and economic isolation, strict monitoring of external borders, and stringent internal controls restricted access to drugs; with alcohol, locally cultivated cannabis, Mandrax (methaqualone combined with an anti-histamine), and prescription medicines being the only drugs readily available. Since the collapse of apartheid, socio-political changes (such as reductions in internal and external border controls and increases in travel and trade), together with the country's poorly resourced law enforcement agencies and advanced banking, transport, and communication systems made South Africa an attractive new market for drug cartels. South Africa's geographic location also made it attractive to traffickers, with the country being a convenient trans-shipment point for drugs from drug-producing countries to drug markets. With these changes, South Africans now have access to a broad range of drugs and indicators suggest that the domestic drug market is expanding, with drug prices decreasing and availability increasing (Parry et al., 2002a; Parry et al., 2002b).

Apart from these changes, anecdotal reports from treatment providers and communities point to an increased need for AOD treatment, with waiting lists for treatment slots increasing and communities mobilising around drug-related issues. Further evidence of the extent of the need for AOD treatment in South Africa is provided by research on the prevalence of and harms associated with AOD use.

### 1.1.1. Prevalence studies of AOD use

Prevalence studies provide one indication of the size of the AOD problem in South Africa. In recent years, several national household surveys on AOD use have been conducted. For example, the 2002 Youth Risk Behaviour Survey of 10 699 school-going adolescents reported prevalence rates of 23% for past-month binge-drinking[1] and lifetime prevalence rates of 13% for cannabis use, 6% for cocaine, 12% for heroin, and 16% for the inappropriate use of over-the-counter and prescription medicines (Reddy et al., 2003). Pettifor, Rees and Stevens (2004) reported lifetime prevalence rates of 56% for alcohol use and 9% for cannabis among 15 to 24 year olds (N = 11904). In contrast, Shisana et al. (2005) reported lower lifetime prevalence rates of 7% for risky drinking, 2% for cannabis and less than 1% for the use of other drugs (N = 23 572).

Although risky or binge-drinking is an important factor associated with future AOD treatment needs (Parry et al., 2004a), in general prevalence studies are restricted in their ability to estimate treatment need. Household surveys have a limited ability to estimate the prevalence of less commonly used drugs, especially if sample sizes are small (Parry et al., 2002a). These prevalence rates are also likely to be underestimates as respondents may refuse to answer sensitive questions about stigmatised behaviours in household surveys (Gfroerer, Wright, & Kopstein, 1997). Importantly, as these surveys did not screen participants for AOD problems or enquire about perceived need for treatment, they provide little indication of the extent of AOD treatment need. An exception to this is the 1998 South African Demographic and Health Survey (SADHS) which included a screening questionnaire for alcohol dependence. This study found that 28% of male and 10% of female respondents screened positive for symptoms of alcohol dependence (N = 13790) (Parry, Pluddemann, Steyn, Bradshaw, Norman, & Laubsher, 2005). However, this household survey still does not provide an adequate indication of the need for AOD treatment.

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[1] Defined as 5 or more alcoholic drinks on at least one occasion in the last two weeks.

### 1.1.2. The burden of harm associated with AOD problems

Another indication of the size of the AOD problem in South Africa is provided by ad hoc studies that document the burden of harm and costs associated with untreated AOD problems. For the health sector, AOD use results in direct and indirect costs that accrue from the costs of AOD treatment, the increased use of emergency services due to AOD-related trauma, the increased use of mental health services due to AOD-related psychiatric problems, the overuse of medical services due to AOD-related medical complications, and special disease costs (e.g. Foetal Alcohol Syndrome (FAS), Hepatitis C, and HIV/Aids) (Alterman, Langenbucher, & Morrisson, 2001; Best et al., 2002; Xie, Rehm, Single, & Robson, 1999). In South Africa, the health-care costs associated with AOD problems are evident from the high levels of mortality and morbidity that accrue from episodes of acute alcohol intoxication. For example, in 2004, 52% of national transport-related deaths and 56% of deaths due to violence had blood alcohol concentrations greater than or equal to 0.05 g/100 ml, the legal limit for driving (Matzopoulos, 2005). In addition, a multi-site study conducted in 2001 reported that 51% of patients admitted to state trauma units in South Africa were alcohol positive, with 60% of violence-related injuries and 35% of traffic-related injuries being alcohol-positive (Pluddemann, Parry, Donson, & Sukhai, 2004).

FAS rates in South Africa also point to the high levels of harm associated with AOD use, with prevalence rates estimated to be 18 to 141 times higher than those reported for populations in the USA (May et al., 2000). These high rates of FAS point to the need for AOD treatment among pregnant women. This is confirmed by findings from a study of 131 pregnant women in Cape Town in which 11% and 23% of the women met DSM-IV criteria for alcohol abuse and alcohol dependence respectively (Carter et al., 2005). Emerging evidence also points to the need for AOD treatment among HIV-positive persons. In a study of 149 HIV-positive patients, 9% met DSM-IV criteria for alcohol abuse, 10% met criteria for alcohol dependence, and 2% met criteria for drug dependence (Olley, Seedat, Nei, & Stein, 2004).

AOD problems also contribute to criminal justice costs. These include the costs of policing and prosecuting drug-related crimes, the costs of incarcerating and rehabilitating drug-related offenders, and costs to the victims of crime (Alterman et al., 2001; Mauser & Van Stelle, 1994). In South Africa, a strong association has been found between AOD problems and crime. A 3-Metro's study, conducted in 2000 reported that 45% of 999 arrestees tested positive for drugs (Parry, Pluddemann, Louw, & Leggett, 2004). A high proportion of these arrestees reported the need for AOD treatment. Across sites, AOD treatment need ranged between 17% to 30% for alcohol-related problems and 27% to 34% for cannabis-related problems (Parry et al., 2004b). These findings provide further evidence of the need for AOD treatment in South Africa,

AOD use also affects the rate of economic development in South Africa as it is associated with lower productivity, increased absenteeism and tardiness, high employee turnover, and work-related accidents (Alterman et al., 2001; Best et al., 2002; Xie et al., 1999). South African research has demonstrated that significant proportions of school-going adolescents misuse alcohol and other drugs (Parry et al., 2004a). Recent school surveys, for example, reported that more than a third of male students in Cape Town and over half of male students in Durban reported binge drinking episodes in 1997 (N = 2930) and 1998 (N= 3030) respectively (Parry *et al.*, 2004a). This is cause for concern, not only because heavy drinking by school-goers is significantly associated with absenteeism, academic failure, risky sexual behaviour (Flisher, Parry, Evans, Muller & Lombard, 2003), increased risk for sexual victimisation (King et al., 2003; Morojele & Brook, 2005), and increased likelihood of other drug use (Grossman, Chaloupka, & Sirtalin, 1998), but also because these adolescents represent the country's future workforce. These findings together with findings from the 2002 Youth Risk Behaviour Survey (Reddy et al., 2003) suggest that a significant proportion of South African adolescents require, if not formal AOD treatment then

at the very least, brief interventions to reduce their risk of developing AOD problems (Parry et al., 2005).

Although cost-to-economy studies of AOD problems have not yet been conducted in South Africa, based on international experience in a range of developed countries, the annual economic costs associated with alcohol problems could range from 0.5% to 1.9% of South Africa's Gross Domestic Product (GDP) (Single, Robson, Xie, & Rehm, 1998). Using a mid-range estimate, alcohol problems could cost the South African economy approximately R9 billion per annum (Parry, Myers, & Thiede, 2003). This amount would increase if the costs associated with other drug problems are added. Given these estimates, AOD problems probably place a large burden on the South African economy. For the Cape Town metropole alone, this economic burden is estimated to be in excess of R1 billion per annum, due to the high levels of AOD problems experienced in the metropole (outlined below), relative to other sites in the country (Myers, Parry, & Pluddemann, 2004). In summary, the high levels of harms and the costs associated with untreated AOD problems present a persuasive argument for the need for accessible AOD treatment services in South Africa.

## 1.2. THE NEED FOR AOD TREATMENT IN THE CAPE TOWN METROPOLE

Compared to other sites in South Africa, the need for accessible AOD treatment services is particularly evident in Cape Town. Findings from national household surveys reflect higher prevalence rates for risky drinking in the Western Cape Province (of which Cape Town is the capital) relative to the other provinces. For example, the 2002 Youth Risk Behaviour Survey reported that 34% of school-going adolescents binge-drink in the Western Cape, which is significantly greater than the national average of 23% (Reddy et al., 2003). Shisana et al. (2005) also found that compared to other provinces, the Western Cape had the highest prevalence of risky drinking (16%), followed by the North West Province (13%)

and the Northern Cape (12%). The remaining six provinces had risky drinking prevalence rates below 10%.

The higher proportion of AOD-related traumatic injuries in Cape Town, relative to other sites also confirms the need for accessible treatment services in this region. In 2001, the proportion of alcohol-positive trauma patients who sustained transport injuries was higher in Cape Town (46%) than in Port Elizabeth (PE) (41%) or Durban (16%) (Pluddemann et al., 2004). In addition, Cape Town was the only site where the proportion of alcohol-positive trauma patients increased significantly from 1999 to 2001. Similarly, in 2000, a higher proportion of trauma patients tested positive for cannabis (35%) in Cape Town compared to Durban (34%) and PE (26%) (Peden, Harris, Sukhai, & Donson, 2001).

The high burden of harm associated with AOD use in Cape Town, relative to other sites, is also reflected in mortality statistics. Findings from the National Injury Mortality Surveillance System reveal that in 2004 the proportion of alcohol-positive deaths due to violence was higher in Cape Town (59%) than in Durban (47%), Johannesburg (47%), or Pretoria (51%). Similarly, the proportion of alcohol-positive deaths due to transport injuries was higher in Cape Town (57%) than in Durban (49%), Johannesburg (48%), or Pretoria (49%) (Matzopoulos, 2005).

Further evidence of the greater need for AOD treatment in Cape Town, relative to other sites, is provided by the 3-Metro's study on drugs and crime. In 2000, a higher proportion of arrestees were drug-positive in Cape Town (56%) than in Durban (50%) or Johannesburg (29%) (Parry et al., 2004b). In addition, compared to other sites, arrestees in Cape Town were more likely to report being under the influence of alcohol at the time of their arrest; with 23%, 16% and 6% of arrestees in Cape Town, Durban and Johannesburg respectively, reporting intoxication (Parry et al., 2004b).

Compared to other sites in the country, Cape Town also reports the widest range of drugs used. In the second half of 2004, Cape Town was the only site reporting methamphetamine use, with 19% of patients attending AOD treatment reporting this as their drug of choice. Cape Town has also experienced significant increases in the proportion of patients reporting heroin as their drug of choice (from 4% in 2000 to 12% in 2006) and the proportion reporting methamphetamine as their primary drug (from less than 1% in 2000 to 42% in 2006) (Pluddemann et al., 2007). While treatment centre statistics only represent patterns of AOD use among people who are able to access treatment, when considered together with findings from household surveys and mortality, trauma and crime studies, they illustrate that Cape Town, relative to other sites, has more AOD problems. The high level of AOD-related harms in Cape Town, relative to other sites, presents a compelling argument for the need for accessible AOD services in this region.

Consequently, this study focuses on access to AOD treatment in the Cape Towr metropole. In this study, access to treatment is defined as both *potential access* to services (namely, the degree to which factors that enable a person to use a needed service are present and the opportunity to seek needed services) and *realised access,* or the actual use of needed services (Andersen, 1995)

### 1.3. IS ACCESS TO AOD TREATMENT IMPORTANT?

Although few treatment outcome studies have been conducted in South Africa, findings from international research (conducted across a variety of treatment settings and client populations) provide considerable evidence of the benefits of AOD treatment (e.g. Gossop, Marsden, Stewart, & Teacy, 2001; McKay & Weiss, 2001; Paraherakis, Charney, Palacios-Boix, & Gill, 2000; Simpson, Joe, & Brown, 1997). In general, national treatment outcome studies conducted in the USA and UK report positive outcomes that include reductions in AOD use, reductions in criminal activity, improvements in physical and psychological

health, and improvements in social functioning (see Table 1 for a summary of these findings).

In addition, several studies provide evidence of cost-savings associated with AOD treatment (Alterman et al., 2001; Langenbucher & Merril, 2001). In the USA, AOD treatment is associated with long-term reductions in the use of health services and health care costs (Holder & Schachtman, 1987; Humphreys & Moos, 1996). For example, a five-year follow-up of Medicaid clients who received AOD treatment in 1989-1990, found that treated clients incurred on average $4500 less in medical expenses than clients who were eligible for but did not receive a "minimal dose" of treatment (Luchansky & Longhi, 1997). AOD treatment is also associated with cost-savings in the criminal justice sector, with studies reporting crime-related cost reductions of up to 80% (Fletcher, 1997; Gerstein, 1997; Gossop et al., 2001).

In developing countries in general (Arif & Westermeyer, 1998), and South Africa in particular, few AOD treatment outcome studies have been conducted. Despite methodological limitations (such as low follow-up rates), preliminary evidence points to the benefits of AOD treatment in these settings. For example, De Silva, Peris, Samarasinghe and Ellawala (1992) reported that 36% of 234 patients attending a treatment centre in Sri Lanka were abstinent two years post-treatment. Significant reductions in AOD use were also reported among 943 patients in Thailand, with 50% of patients abstinent from amphetamine-type substances and 27% abstinent from opiates at six month follow-up (Pengparn & Porncharoen, 2001).

**Table 1. Findings from national AOD treatment outcome studies conducted in the USA and UK***

| | **Drug Abuse Reporting Programme (DARP)** (Simpson & Sells, 1982). | **Treatment Outcome Prospective Study (TOPS)** (Hubbard et al., 1989) | **Services Research Outcome Study (SROS)** (Schildhaus & Gerstein, 1998) | **National Treatment Improvement Evaluation Study (NTIES)** (Gerstein et al., 1997) | **Drug Abuse Treatment Outcome Study (DATOS)** (Hubbard et al., 1997; Simpson et al., 1997a,b) | **National Treatment Outcome Research Study (NTORS)** (Gossop et al., 2001) |
|---|---|---|---|---|---|---|
| **N** | 43 943 | 11 750 | 3047 | 6593 | 10 010 | 1075 |
| **Sites** | 52 sites in USA (1969-1972) | 41 sites in USA (1979-1981) | 99 facilities in USA (1990) | 78 sites, USA- (1993-1994) | 96 sites in the USA (1997) | UK- 54 centres (1995-2000) |
| **Sampling Strategy** | Prospective longitudinal | Prospective, longitudinal | Random, longitudinal | Prospective, longitudinal | Prospective, longitudinal | Prospective, longitudinal |
| **Follow-up period** | At 1 year | At 1 year | Five year | At 1 year | At 1 year | At 1 year |
| **Findings for substance use** | Among outpatients, daily opiate use decreased from 100% to 44%, and use of non-opioids from 54% to 45% | A 60% reduction in weekly heroin use occurred and a 35% reduction in weekly cocaine use among outpatients | Any illicit drug use decreased by 25%, cannabis by 35%, cocaine by 47%, and crack by 14% | Cannabis use decreased by 57%, crack by 50%, cocaine by 53%, heroin by 62% and alcohol by 74% | Cocaine use declined from 67% to 21%, cannabis use from 30% to 11%, heavy alcohol use from 48% to 20% | Opiate use decreased from 69% to 40%, stimulants from 44% to 14%, |
| **Changes in criminal activity** | Arrests decreased from 87% to 34% and incarceration rates decreased from 66% to 34% | 27% reduction in predatory crime. Costs of crime decreased from $47 971 to $28 657 | Breaking and entering by 39% and theft by 32% | Drug selling decreased by 80%, shoplifting by 83% and arrests for any crime by 64% | Illegal activity declined from 26% to 11% | Acquisitive crime decreased from 51% to 28%, and any crime from 64% to 39% |
| **Employment/ welfare** | Employment increased from 60% to 65% | % employed increased from 31% to 45% | 40% reduction in time spent on streets | Rate of employment increased by 16% | Unemployment rates declined from 67% to 64% | Not reported |
| **Changes in physical and mental health** | Not reported | Not reported | 43% reduction in suicidal ideation, 20% decline in abuse | Suicide attempts decreased by 58%, mental and physical health problems by 68%, and 51%. | The proportion with suicidal ideation declined from 3% to 16% | Psychological problems decreased from 13% to 7%, physical problems from 18% to 12% |

***Unless otherwise stated, only findings for inpatient or residential treatment facilities are depicted***

To my knowledge, only two AOD treatment outcome studies have been conducted in South Africa. Coetzee (2001) reported an abstinence rate of 55% among 58 patients attending an outpatient drug treatment centre in 2000. In the second study of 89 patients attending a private inpatient facility, Coetzee (2004) reported an abstinence rate of 48% one year post-treatment. Post-treatment quality of life improvements were also reported, with 49% of participants reporting improvements in physical health, 44% reporting improvements in emotional well-being, and 45% reporting improvements in family relationships (Coetzee, 2004). Given the apparent benefits of AOD treatment, a strong case can be made for the need to ensure that people with AOD problems are able to access treatment.

### 1.4. HOW ACCESSIBLE IS AOD TREATMENT IN SOUTH AFRICA?

Despite the increased demand for treatment and evidence of the benefits associated with AOD treatment, access to AOD treatment services is limited in South Africa; particularly in Cape Town. This is partly due to the limited availability of treatment services; with existing resources in Cape Town only able to serve 2500 to 3000 people per year (Pluddemann et al., 2007). This is grossly inadequate, given that there are an estimated 15 000 heroin users in the city (Dewing, Pluddemann, Myers, & Parry, 2006) and that conservative estimates from the SADHS suggest that at least 10% of the population meet DSM-IV criteria for alcohol abuse and/or dependence (Parry et al., 2005). In a region that is home to about 3 million people (Statistics South Africa, 2005), this would translate to about 300 000 people possibly requiring some form of treatment for alcohol problems alone.

#### 1.4.1. Racial inequities in access to health and social services

While the limited availability of AOD treatment restricts access to treatment for *all* South Africans, AOD treatment seems relatively more difficult to access for poor

Black/African and Coloured South Africans[2] who were historically disadvantaged during the apartheid regime. For these racially-defined social groups, several socio-political factors restricted access to health and social services (including AOD treatment). Under the apartheid system of governance, funding to AOD treatment facilities was generally inadequate and treatment facilities were poorly distributed, with services being concentrated in urban areas that were historically reserved for Whites. Major disparities also existed between the racially-defined social groups in terms of the allocation of resources to and the quality of AOD treatment services. Treatment facilities serving White South Africans were better resourced and provided more comprehensive services than facilities serving black[3] South Africans (Myers et al., 2004; Myers & Parry, 2005).

Since South Africa's transition to democracy in 1994, the health and social welfare sector has worked hard to improve service delivery and reverse racial disparities in the provision of services for historically disadvantaged groups (National Department of Health, 1997; National Department of Social Development, 1997). Despite this, concerns about disparities in both the need for and accessibility of health and social welfare services between the socially advantaged and the socially disadvantaged remain (Sanders & Chopra, 2006). Socio-economic disadvantage remains associated with race in South Africa, despite a growing black middle class. For example, census data reflects that racial inequalities in employment have grown, with unemployment rates among Black/Africans increasing from 43% in 1996 to more than 50% in 2001 (Statistics South Africa, 2005). Similarly, unemployment increased disproportionately among Black/African and Coloured residents of the Western Cape, with the unemployment rate increasing from 24% (1996) to 33% (2001) among

[2] The terms "White, Black/African, Asian/Indian, and Coloured" refer to demographic markers and do not signify inherent characteristics. These markers were chosen for their historical significance. These markers are important as accurate user profiles assist in identifying vulnerable population subgroups and in planning effective intervention programmes.

[3] The term "black South African" refers to all groups who were historically disadvantaged under the apartheid regime including ethnic Black/African, Coloureds of mixed race descent and Indian/Asians.

Black/Africans, increasing from 11% (1996) to 14% (2001) among Coloureds, and remaining stable at 3% among Whites (Statistics South Africa, 2005).

Health and social indicators further reflect these racial disparities; with the infant mortality rate being four times higher among Black/Africans compared with Whites (47 vs. 11 per 1000 births, respectively) (Bradshaw, Masiteng, & Nannan, 2001) and the life expectancy rate in 2001 being 18 times lower for Black/Africans than for Whites (Statistics South Africa, 2003). These racial disparities are also evident in Cape Town. Among the poor in Cape Town, trauma and violence accounts for the largest proportion of the burden of disease (Groenewald et al., 2001). For instance, the homicide rate in the poorer districts in Cape Town exceeds 100/100 000; a level that is almost unmatched in other parts of the world (Prinsloo, Matzopoulos, & Sukhai, 2003). AOD use is a major contributing factor to this trauma and violence (Pluddemann et al., 2004).

In Cape Town, racial disparities in access to basic services have either increased or remained unchanged (Smith, 2005). Compared to Whites, poor Black/African and Coloured residents have more difficulty accessing basic services such as water and sanitation, housing, electricity, and transport. In part, these disparities are fuelled by migration from rural areas. Often migrants have little education and few resources and thus rely heavily on the state to provide housing and other essential services. Compared to other metropolitan areas in the country, Cape Town has the highest migration rate (Statistics South Africa, 2001). This has made it difficult for local government to address inequities in service delivery that have persisted since apartheid.

In summary, despite the political and social transformations that have occurred since the end of apartheid, racial inequities remain. In the Cape Town metropole, Black/African and Coloured communities are still characterised by poverty, limited access to basic services and high levels of crime-related violence

(Kalichman et al., 2006). Given these inequities, it is plausible that similar racial inequities exist in access to AOD treatment.

### 1.4.2. Racial disparities in the need for and access to AOD treatment

As AOD treatment need has not been investigated in South Africa, it is unclear whether there are disparities in the need for AOD treatment among racially-defined social groups. Despite this gap, emerging evidence suggests that poor Black/African and Coloured communities may be especially vulnerable to AOD problems due to the stress associated with rapid urbanisation, poverty, and neighbourhood social dysfunction; factors which characterise these communities (Flisher & Charlton, 2001; Kalichman et al., 2006; Latkin, Williams, Wang & Curry, 2005).

Anecdotal reports suggest that drug use is increasing among poor Black/African and Coloured communities in Cape Town and several community-based studies point to high levels of AOD problems in these communities. A study of 110 community-based organisations (CBOs) providing mental health and social welfare services to poor Black/African and Coloured communities found that 27% of the clients served by these CBOs had alcohol-related problems and 23% had drug-related problems. For some CBOs, up to 80% of clients had AOD problems. In general, these organisations felt poorly equipped to provide AOD services and tended only to refer their clients to specialised AOD treatment centres (Pasche, Myers, & Louw, in press). In addition, a survey of 384 Black/African and Coloured patients attending general practitioners' practices in Cape Town found that 60% of current drinkers drank at problematic levels. Despite this high level of risky drinking, doctors felt ill equipped to intervene and generally did not screen their patients for AOD problems (Koopman, Reagon, Myers, & Parry, 2007). These studies suggest that a significant proportion of black clients attending CBOs and primary health services have untreated AOD problems that require intervention.

Even though these studies provide some insight into the need for AOD treatment among historically disadvantaged communities (HDCs), they are still likely to be underestimates of treatment need, especially as they preceded the methamphetamine epidemic that Cape Town is currently facing. These studies also do not directly examine whether unmet treatment need is greater for Black/Africans and Coloureds relative to Whites. The current study argues that even if unmet treatment need is equivalent across all racially-defined social groups, poor Black/African and Coloured substance users experience more difficulty accessing AOD treatment than their White counterparts due to persisting racial inequities in income, employment, and access to basic services.

To some extent, concerns about access to AOD treatment for poor black South Africans seem justified. According to recent findings from the South African Community Epidemiology Network on Alcohol and Drug Abuse (SACENDU) (Myers et al., 2004; Myers & Parry, 2005; Pluddemann et al., 2007) and audits of AOD treatment facilities in Cape Town (Myers & Parry, 2003) and Gauteng (Myers, 2004a), the race profile of clients at AOD treatment facilities does not reflect the demographics of the general population. Specifically, there has been an under-representation of Black and an over-representation of White South Africans in treatment. This pattern seems entrenched in Cape Town, where the proportion of Black/African clients in AOD treatment declined from 12% in 2000 to 7% in 2004 (Myers & Parry, 2005). This is cause for concern as Black/Africans comprise roughly 32% of the general population in Cape Town (Smith, 2005). The high levels of AOD use among Black/African and Coloured communities (mentioned previously) suggest that this pattern of service use reflects the limited extent to which black South Africans have access to AOD treatment rather than lower levels of AOD use among these population subgroups.

### 1.4.3. Factors associated with racial disparities in access to AOD treatment

In South Africa, debate about access to AOD treatment for HDCs has centred on structural and environmental factors that may restrict access. A major concern has been the limited availability of affordable AOD treatment services. In South Africa, the majority of the population (80%) are without medical insurance and rely heavily on the state sector to provide health and social welfare services (Goosen, Bowley, Degiannis & Plani, 2003) including AOD treatment. As with other services, the uninsured are disproportionately represented by poor, black South Africans (Goosen et al., 2003). For this sector of the population, there are few state-funded AOD treatment facilities and access to these facilities is hampered by lengthy waiting lists of up to six months (Myers et al., 2004; Myers & Parry, 2005).

More specifically, the Cape Town metropole has a differentiated network of treatment facilities for people with AOD problems. Residential treatment is provided by approximately 14 inpatient clinics, one of which is a specialised ward of a general state psychiatric hospital and, another of which is a state treatment facility providing free services. The remainder of these facilities are either private non-profit facilities (n= 7) offering low-cost services (but requiring co-payment fees) or private for-profit facilities charging high fees (n = 5). Outpatient treatment services are provided by four agencies, one of which has several satellite offices. These facilities provide low-cost services however clients are required to pay for each visit. Even though relatively affordable, the costs of these services can still be exorbitant for many indigent clients. Overall, around 2500 to 3000 substance abuse beds (including day care places) are available per year for the Western Cape Province.

Despite the apparent availability of AOD treatment services in the metropole, for the uninsured the availability of affordable AOD treatment has decreased in recent years, with the number of beds allocated for AOD problems in state hospitals decreasing and several state-funded AOD treatment facilities closing.

For the remaining state-subsidised treatment facilities, state funding has decreased in real terms, limiting their capacity to expand services to historically underserved areas (Myers & Parry, 2003; Myers & Parry, 2005). Limited funding has also restricted the number of people that can be served and has forced nonprofit facilities to require clients to make some form of financial contribution towards their treatment (Myers, 2004b). For indigent clients, these financial contributions may still be unaffordable. Although the self-help movement (such as Narcotics Anonymous and Alcoholics Anonymous) is well established in the Cape Town metropole and is an affordable alternative to formal AOD treatment, few self help groups are located in HDCs and existing groups are largely inaccessible to these communities due to transport costs and other geographic access barriers.

The state's limited allocation of funding to AOD treatment facilities (which generally only covers 10-30% of their running costs) is partly due to the diversion of state funding from tertiary inpatient services to community based primary health care (National Department of Health, 1997) and social services (National Department of Social Development, 1997). This policy of integrating AOD services into primary care networks has been an attempt to improve the accessibility of these services for HDCs (Myers & Parry, 2005). For example, the Department of Social Development has encouraged the increased provision of AOD prevention, early intervention, referral, and aftercare services at state district social service offices located within HDCs. Despite this shift in policy, implementation has been slow with few AOD treatment services being offered at a community level (Myers et al., 2004; Myers & Parry, 2005). Poor infrastructure, limited capacity, and multiple demands placed on PHC nurses and community social workers have been some of the reasons given for the slow pace of service delivery (Goosen et al., 2003; Sanders & Chopra, 2006). Whatever the reason, an unintended consequence of these policy changes has been that access to AOD treatment has become even more restricted for poor South Africans.

The shortage of publicly-funded AOD treatment services, together with the increased demand for AOD treatment, has given rise to a growing private nonprofit treatment sector in the Cape Town metropole. Although private nonprofit facilities are relatively more accessible to black South Africans than for-profit services, the quality of services provided by these facilities is often variable and waiting lists at the better resourced facilities are lengthy (Myers, 2004b). In short, concerns about service quality, waiting lists, and co-payment fees may all restrict access to non-profit AOD treatment for persons from HDCs.

## 1.5. ACCESS TO AOD TREATMENT IN SOUTH AFRICA: PRIOR RESEARCH AND THE WAY FORWARD

In a context where there is an increasing demand for scarce health resources due to the burden caused by poverty, TB, HIV/AIDS and other infectious diseases (Freeman, 2000), evidence as to whether difficulties in access to AOD treatment exist at a population level (and the reasons for these difficulties) could assist policy makers and treatment providers in identifying policies and practices that should be changed and guide the design of interventions to improve access (Thind & Andersen, 2003). However, planning and decision-making around AOD treatment in the Cape Town metropole has been hampered by a lack of accurate information on existing levels of AOD treatment need, barriers to treatment, and patterns of treatment service use (Myers & Parry, 2005). This study attempts to address this gap by exploring access to AOD treatment for people from HDCs in the Cape Town metropole. More specifically, this study will use an expanded version of Andersen's Behavioural Model of Health Services Utilisation (BHSU) (Andersen, 1995) as its guiding framework for variable selection, data analysis and the interpretation of findings.

This study is the first to explore barriers to AOD treatment access in South Africa. There has been a paucity of research that has focused on access to and use of AOD treatment by HDCs in South Africa. To date, South African AOD services research has been characterised by a largely descriptive focus on (i) the extent

to which specialist AOD treatment centres are used by clients from HDCs and (ii) the extent to which treatment facilities target factors thought to be barriers to service use by these population groups (Myers, 2004a; Myers, 2004b; Myers & Parry, 2003). Although this early research provides an important foundation for future AOD treatment services research, it has several limitations. Firstly, as South African AOD research has not compared recipients of services with community-based samples of untreated persons with AOD problems, it has been difficult to identify factors that facilitate or restrict access to AOD treatment in HDCs. This has hampered the development of interventions to improve access to AOD treatment for HDCs in South Africa.

Related to this, previous studies have tended to extrapolate findings from developed countries and apply them directly to the South African context. Researchers have assumed that barriers which restrict access to treatment for "special populations" in the USA (such as women, Latino and African-Americans, and the homeless) are likely to be similar for people with AOD problems residing in HDCs in South Africa (e.g. Myers & Parry, 2003; Myers & Parry, 2005). As the factors that enable and restrict access to AOD treatment among HDCs in South Africa have not been directly examined, the degree to which these findings from developed country settings can be extrapolated to the South African AOD service delivery context remains unclear. It is quite likely that local studies will identify a different range of factors that influence access to treatment than those cited in international research. While some of these factors may be generic across settings and populations, others may be specific to the South Africa. These locally-relevant barriers are essential for the design of interventions that are theoretically sound, acceptable to, and culturally-appropriate for the communities they target. The current study hopes to redress this gap by providing contextually relevant information on barriers to AOD treatment access.

Thirdly, prior research on access to AOD treatment services has generally been atheoretical. Both international and South African AOD treatment research has

focused on describing barriers to access and service delivery either at the level of the individual or at the level of the treatment facility, with no studies providing a comprehensive, multidimensional understanding of access to treatment that integrates individual, community and social contextual spheres of influence into an unitary model of AOD treatment use (Matto, 2005; Myers, 2004a; Myers, 2004b; Myers & Parry, 2003). In addition, these earlier studies failed to incorporate analytical models that provide a theoretical context for the interpretation of findings. This atheoretical and often reductionistic approach has not only limited our understanding of the relationships between individual, community and contextual predictors of access to treatment but has also made it difficult to develop interventions that effectively enhance access to services. In contrast, by applying a widely accepted theory of health service use (Andersen, 1995) and through expanding this model to include variables specific to AOD, the current study redresses the limitations of earlier research and provides an opportunity for enhancing understandings of access to AOD treatment.

Finally, the nature of scientific inquiry requires generalisability and applicability of research findings across widely diverse population groups. Comparative research is essential to provide theoretical insights into phenomena that are applicable to all population groups. As the vast majority of research studies on access to health services have been focused in the USA (Choi, Cho, Lee, Lee & Kim, 2004), the stability and applicability of past findings across different national and cultural boundaries remains largely untested. By using a conceptual model that has been widely used in other settings, this study offers an opportunity to test the stability and applicability of this model for the South African context.

## 1.6. SUMMARY AND CHAPTER PLAN

This chapter highlighted the need for accessible AOD treatment in South Africa in general, and the Cape Town metropole in particular. It argued that the benefits of treatment make a strong case for the importance of accessible services. Although racial disparities in access to AOD services have not been directly

examined, this study argued that in the light of persisting racial disparities in income and access to other services, these racial disparities probably exist within the AOD treatment sector. These disparities, together with findings that point to the underutilisation of AOD treatment by Black/African and Coloured persons, present a compelling argument for the need to examine access to AOD treatment among these under-served groups in Cape Town. Finally, this chapter outlined the contribution that this study can make to understandings of AOD treatment access and the development of interventions to improve access.

Following this, Chapter Two reviews the literature on access to health services, focusing specifically on Andersen's (1995) BHSU model and Chapter Three describes factors associated with AOD treatment use in the empirical literature. These chapters are followed by chapters outlining the methods of the study (Chapter Four), results (Chapter Five and Six) and a discussion of the key findings (Chapter Seven). Chapter Eight outlines the study limitations and presents recommendations for policy makers, interventions to improve access, and further research.

# CHAPTER TWO

# CONCEPTUALISING ACCESS TO TREATMENT

## 2.1. INTRODUCTION

Access to health care is a key determinant of health status (Brewer, 2005; Millman, 1993) and a persisting policy concern both internationally (Berk & Schur, 1998; Gulliford et al., 2002; Racher & Vollman, 2002) and nationally (Lalloo, Myburgh, Smith, & Solanki, 2004). In addition, as barriers to access are disproportionately encountered by the economically vulnerable, identifying and addressing factors that adversely affect economically vulnerable persons' access to care has become a matter of equity (Mooney & Jan, 1997) and social ethics (Hurley, 2001). This is highlighted by the United Nations Convention on Social, Economic, and Cultural Rights which recognises access to health services as a fundamental human right (United Nations, 1966).

Nationally, access to health care is among the economic and social rights guaranteed by the Constitution of South Africa (Ngwena, 2003). Various policy documents emphasise the importance of equitable access to health and social welfare services; particularly for historically disadvantaged persons. For example, the 1997 White Paper on the Transformation of the Health System includes "equity, accessibility and utilisation of health services" as one of its seven goals (National Department of Health [NDOH], 1997, p.8) as does the 1997 White Paper on the Transformation of the Social Welfare System (National Department of Social Development [NDOSD], 1997). This commitment to equitable access is also present in the AOD field, with the draft Prevention and Treatment of Substance Abuse Act (which is under discussion in parliament at the time of writing) explicitly recognising that all persons with AOD problems have the "right to be provided with treatment, rehabilitation and reintegration services" (NDOSD, 2006).

Although the importance of universal access to affordable health and social services is widely recognised, in reality individuals with AOD problems often

struggle to access treatment. Studies conducted in the USA reported that few individuals with AOD problems ever access treatment (Burton & Williamson, 1995; Mojtabai, 2005; Ogborne & DeWitt, 1999). For these studies, the ratio of ever treated to untreated AOD users ranged from 1 in 5 to 1 in 10; depending on the type of diagnostic criteria used to determine need (Cunningham & Breslin, 2004; Cunningham, Lin, Ross, & Walsh, 2000; Wilson, Atanda, Atkinson, & Mulvey, 2005). Similarly, community studies conducted in other parts of the world (Bijl & Ravelli, 2000; Teesson, Hall, Lynskey, & Degenhardt, 2000) also reported limited access to AOD treatment.

Although South Africa does not have accurate estimates on the extent to which people with AOD problems need and are unable to access treatment, given the difficulties historically disadvantaged South Africans experience in accessing basic health services (Ngwena, 2000; Sarkin, 2000) and the limited availability of free, state-funded AOD treatment services (Myers & Parry, 2005), it is safe to assume that access to AOD treatment is at least as rare an event as it is in other parts of the world. Yet some poor black South Africans still manage to access AOD treatment. In this resource-scarce setting, it would be interesting to identify the factors associated with successfully accessing AOD treatment for this sector of the population. Prior to examining this question, this chapter reviews the access to health care concept, presents the Behavioural Model of Health Services Utilisation (BHSU) (Andersen, 1995) which is this study's conceptual framework, and critically reviews empirical research driven by the BHSU.

## 2.2. CONCEPTUALISING ACCESS TO TREATMENT: WHAT DOES IT MEAN?

Although "access to health care" is a frequently used concept in debates about health care systems (Wyszewianski, 2002) and despite several attempts to clarify its multiple dimensions and meanings, access to health care remains an elusive, poorly defined concept (Racher & Vollman, 2002). It is important to unpack the various ways in which access has been constructed – not only because multiple understandings impede the development of a common language of access, but also because they hamper the development of health policy, the creation of programmes to improve access, and ultimately the transformation of health

services. To this end, this section reviews theoretical shifts in the conceptualisation of access to health care and attempts to reconcile the critical elements of access.

### 2.2.1. Access as availability of health care services

Historically, access to health care was viewed as the adequate supply of health services, resources and facilities (Mooney, 1983). According to this understanding, access is concerned with the opportunity to obtain care when it is needed (Gulliford et al., 2002) and exists when adequate services are available. Early research thus focused on the organisational aspects of access; including the supply, distribution and availability of facilities and whether the types of services provided matched the health care needs of society (Donabedian, 1972).

While acknowledging the role of availability in determining access, current theoretical understandings challenge the idea that access is determined solely by the distribution of health services. Researchers argued that while service supply is necessary for access to occur, it is not sufficient (Racher & Vollman, 2002) as people encounter financial, informational, structural, and other barriers to accessing care, even where services are available (Donabedian, 1972; Gulliford et al., 2002; Wilson & Rosenberg, 2004). In addition, socio-psychological factors (such as dissatisfaction with the type of services available or failure to recognise the need for services) might influence perceptions of service needs (Wilson & Rosenberg, 2004).

### 2.2.2. Access as use

These observations prompted Donabedian (1972) to comment that "the proof of access is use of services, not simply the presence of a facility." Similarly, Aday and Andersen (1981) suggested that it is "more meaningful to consider access in terms of whether those who need care get into the system or not". However, a focus on utilisation alone does not capture the complexity of the process of accessing treatment, particularly the multiple factors that intervene between translating need for services into service utilisation (Joseph & Phillips, 1984).

This understanding led to a distinction being made between potential access (defined as the degree to which health services are available and the opportunity to access these services when required) and realised access (defined as the actual use of needed services) (Gulliford et al., 2002; Litaker & Love, 2005).

More specifically, potential access consists of the structural and process components of access (Racher & Vollman, 2002). The structural components include characteristics of the health delivery system (such as the availability of personnel and facilities and the organisation of services) whereas the process components refer to characteristics of the target population that inform service use (Racher & Vollman, 2002). In contrast, realised access is commonly regarded as a measurable outcome of potential access (Litaker & Love, 2005). This understanding of access recognises its complex and multi-determined nature. It recognises that although realised access is contingent on potential access, potential access does not necessarily translate into the use of services. This implies that any study of access should include measures of both potential and realised access. This is reflected in the following definitions of access:

> ....the dimensions which describe potential and actual entry of a given population group to the health delivery system
>
> (Aday & Andersen, 1981, p.26)

> Realised access is related to the actual use of such (health care) services to satisfy needs. And use is greatly influenced by availability; as well as the inherent characteristics of the service system and those of potential users which express themselves as either barriers or facilitators.
>
> (Khan & Bhardwaj, 1994; p.67)

This understanding of access not only reflects the interrelationship between potential access and realised access; but also recognises the role of both individual-level and systemic factors in determining access. In addition, this conceptualisation has practical utility, as it has informed the development of conceptual frameworks for examining access to health care services, research on access to treatment, and evaluations of health care policy aimed at improving

access to health care (Ricketts & Goldsmith, 2005). Yet many studies have conceptualised access solely in terms of service utilisation and have failed to include (i) measures of service need, (ii) intrapersonal and contextual factors that influence service use, and (iii) health service delivery factors that limit opportunities to access services (Gulliford et al., 2002; Litaker & Love, 2005; Wilson & Rosenberg, 2004).

### 2.2.3. Access as a process of fit

Another approach views access as reflecting the fit between characteristics and expectations of potential consumers and the health care system (Penchansky & Thomas, 1981; Thomas & Penchansky, 1984; Wyszewianski, 2002). This approach postulates that access occurs when the process of interaction results in a good-enough fit between the client and the system on five key dimensions (Racher & Vollman, 2002; Ricketts & Goldsmith, 2005; Wyszewianski, 2002).

The first dimension, *availability of services*, refers to the extent to which the provider has the resources to meet clients' needs and the volume of clients. This is indicated by an adequate supply of providers, facilities, and services. The second dimension, *accessibility of services*, refers narrowly to the geographic accessibility of health services. Indicators of accessibility include the spatial distribution of services, the proximity of services, distance required to travel to services, travel times, and travel costs. *Accommodation of services* is the third dimension and reflects the extent to which providers' operations are organised in ways that meet the constraints, preferences, and needs of clients. Indicators of this dimension include: operating hours, waiting times, length of waiting lists, and delays in accessing care due to gatekeepers and referral processes. The fourth dimension, *affordability of services*, describes the relationship between service costs and clients' ability to pay for services (indicated by treatment costs, medical insurance and competing financial priorities) as well as clients' perceptions of value in relation to costs. Finally, *acceptability of services* describes the relationship between clients' attitudes about provider characteristics (indicated by perceptions of service quality and satisfaction with services) as well as providers' attitudes about client characteristics (Penchansky & Thomas, 1981; Thomas & Penchansky, 1984; Wyszewianski, 2002).

This concept of fit has been used in empirical studies (Thomas & Penchansky, 1984; Gilbert et al., 2002; Xu, 2002) and in policy initiatives to inform resource allocation in under-serviced areas (Ricketts, 2002). The strengths of this approach are that it (i) emphasises the interactive process of accessing care by focusing on the fit between providers and clients, (ii) reflects the role of systemic and client factors in the determination of access, and (iii) highlights a range of factors that help explain health service barriers to access. Decomposing the concept of access into five dimensions is also useful from a policy point of view, as it allows policy actions to be focused on specific systemic issues that hinder service delivery (Ricketts & Goldsmith, 2005; Wyszewianski, 2002). However, this understanding of access is not without its limitations.

First, it has been criticised for its ambiguity, as many of the terms (particularly access and accessibility) are not clearly defined and are used interchangeably (Frenk, 1992). Secondly, it does not give adequate recognition to the influence of need for care and other psychological and social factors on access. In addition, this approach has not led to the development of useful analytic models for examining access and has rarely been used as an organising framework for health services research (Ricketts & Goldsmith, 2005). Finally, this approach has also been criticised for not reflecting interrelationships between the access dimensions or how clients' need for services and the service delivery system mutually influence each other (Frenk, 1992; Ricketts & Goldsmith, 2005). Frenk attempted to address this last concern by suggesting that "fit" is a process of adjustment between the population and health system: as consumers provide feedback to the health system, the system adjusts to meet clients' changing needs. Despite this clarification, the primary focus of the "access as fit" approach is still on how the characteristics and barriers of the health system influence utilisation, with little emphasis being given to the role of psychological, social, and broader contextual influences on service use.

#### 2.2.4. Reconciling "access as fit" and "access as use"

It should be noted that the concept of "access as fit" is not necessarily distinct from that of the "realised access" concept, as understandings of realised access

recognise that service use is the product of a process of interaction between health consumers and their environment (Millman, 1993). This study employs an integrative approach that combines elements from both the "access as use" and the "access as fit" views. This study conceptualises access as the actual use of AOD treatment, with the understanding that access to AOD treatment can only be understood in relation to service needs and barriers to service utilisation. While the emphasis is on utilisation, this study does examine the five key dimensions of the "access as fit" approach: availability, appropriateness, accessibility, affordability and acceptability. These five dimensions appear closely related to understandings of effective access (Andersen, 1995). Furthermore, this study recognises that access does not occur in a linear fashion, but is the result of dynamic interplay between the AOD treatment system, social environment, and potential consumer. While this is difficult to capture in a quantitative, cross-sectional study, it is hoped that the interactive processes depicted in the "fit" approach will be reflected in the qualitative component of the study.

#### 2.2.5. Equity and access

For the purposes of this study, it is also important to distinguish between equitable and inequitable access. While the concept of equality refers to equal opportunities to use a facility or service (Morris, Sutton, & Gravelle, 2005), equity involves the just distribution of services in relation to need (Aday, Begley, Lairson, Slater, Richard, & Montoya, 1999). This understanding recognises that some people will require more than their equal share of services (Morris et al., 2005). For example, Whitehead (1992) suggests that equitable access is "equal access to available care for equal need, equal utilisation for equal need, and equal quality of care for all" (p.434).

Similarly, approaches to health service utilisation (e.g. Andersen, 1995) argued that equitable access occurred when services were distributed according to health care needs and that inequitable access occurred when services were distributed on the basis of non-need factors such as demographic variables, social structural variables, health belief factors, and/or barriers to service use. This generally refers to horizontal inequity; that is the distribution of services based on non-need rather than need factors (Morris et al., 2005). It should be noted that studies using

utilisation (relative to need) as the indicator of equity have not found this indicator to be sufficiently sensitive to detect inequities in access to care, even in countries where access to care is limited by income (van Doorslaer, Wagstaff, van der Burg, Christiansen, De Graeve, & Duchesne, 2000).

## 2.3. THE BEHAVIOURAL MODEL OF HEALTH SERVICES UTILISATION

Several models have been developed to explain the relationship between factors influencing access to and the use of health services (e.g. Khan & Bhardwaj, 1994; Millman, 1993; Penchansky & Thomas, 1981), of which the most widely used is the Behavioural Model of Health Services Utilisation (BHSU) (Andersen, 1995). This model adopts a systems approach that integrates a range of individual, contextual and provider variables associated with health services use (Phillips, Morrisson, Andersen, & Aday, 1998) into a single framework. It allows researchers to examine why individuals use health services, measure equitable access to health services, and guide policy development concerning service use. The model is thought to both predict and explain health service utilisation. The BHSU forms the basis of this study's conceptual framework.

Since its development in 1968, the BHSU has provided a research agenda for the study of realised access, has undergone several revisions (Andersen, 1995), and has been extensively critiqued (Aday & Awe, 1997). This section outlines these theoretical developments and critically reviews the core components that comprise this model.

### 2.3.1. The BHSU: theoretical developments

The original BHSU focuses on population characteristics associated with health care utilisation. It assumes that health care utilisation is a function of three components: factors that predispose individuals to seek health care, enabling conditions that allow the person to attain needed health services, and the need for these services. The model assumes that these three components interact to influence as well as separately make independent contributions to predicting health service use. The model also suggests a causal ordering of the three components; with need variables being the most important, proximal determinants of use; predisposing characteristics being relatively weaker influences on use; and

enabling variables being necessary but not sufficient conditions for use (Aday & Andersen, 1974; Andersen, 1995; Andersen & Newman, 1973; Thind & Andersen, 2003).

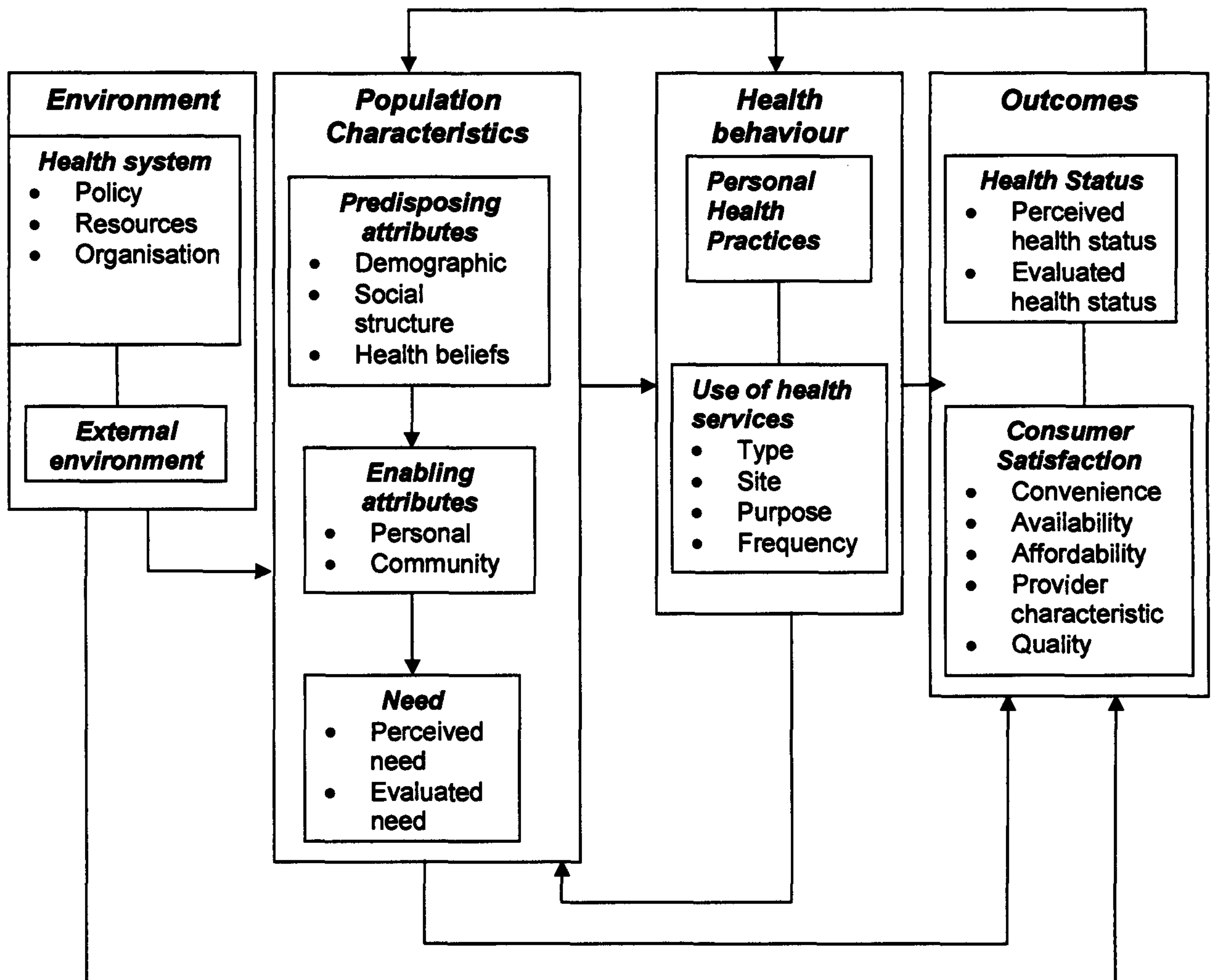
Since its initial development, the BHSU has been modified on several occasions. The model was revised in the 1970s to include factors within the health care system (Aday & Andersen, 1974; Andersen, 1995; Andersen & Newman, 1973). This revision acknowledged the important role that health system policy, resources, and their organisation play in determining utilisation and the influence that this variable domain has on enabling and need for treatment variables. Service satisfaction, an outcome of health service use, was also added to the model during this phase of development (Andersen & Newman, 1973). This addition explicitly recognised that health policy is concerned with health service use in relation to service outcomes (Andersen, 1995).

The BHSU was further refined in the 1980s and 1990s. During this phase of development, a health outcomes variable domain was added to the model. This was based on the acknowledgement that health services aim to improve health status. This variable domain includes indicators of perceived and evaluated health status as well as measures of service satisfaction (Andersen, 1995; Andersen, Davidson, & Ganz, 1994); all of which are postulated to be outcomes of realised access. This phase also recognised that personal health practices (such as exercise and healthy diet) interact with health service use to influence health outcomes (Evans & Stoddart, 1990). Importantly for the purposes of this study, the external environment was included as an important variable domain for understanding health service use during this phase of development.

In the mid 1990s, the BHSU evolved further. Although implicit in earlier versions of the model, Andersen (1995) explicitly recognised the dynamic and recursive nature of the BHSU in this phase (see Figure 1). This version of the model portrayed the multiple influences on health service use (and on subsequent health status). More specifically, feedback loops were added to the model which demonstrated that health outcomes affect predisposing factors, enabling

resources, perceived need for services, and ultimately the future use of health services (Bradley, et al., 2002; Gelberg, Andersen, & Leake, 2000; Rew, 1998).

**Figure 1. Components of the revised BHSU (Andersen, 1995).**




Since this last revision, minor changes have been made to the model. The role of community factors within the external environment and within the enabling variable domain have been unpacked (Andersen, Yu, Wyn, Davidson, Brown, & Teleki, 2002) and greater emphasis has been placed on the role of community and other contextual factors (including health provider characteristics) in determining access (Andersen, Rice, & Kominski, 2007; Brown et al., 2004; Davidson, Andersen, Wyn, & Brown, 2004; Phillips et al., 1998). In addition, the BHSU has been adapted for vulnerable population groups (Gelberg et al., 2000; Wenzel, Leake, Andersen, & Gelberg, 2001).

**2.3.2. Understanding AOD treatment utilisation: a conceptual framework**

This study uses an adapted version of the BHSU as its conceptual framework (see Figure 2). As this study's dependent variable of interest is realised access (or AOD treatment use), the conceptual framework does not include personal health practices within the health behaviour domain or the "health outcomes" variable domain. While Andersen (1995) argues that these are important domains to consider when evaluating whether access to services is efficient and effective, this is beyond the scope of the present study. Using an adapted version of the BHSU is appropriate as the BHSU is a framework for analysis rather than a mathematical model, and does not dictate the precise variables that should be used to examine health services use. This model recognises that variable inclusion will vary according to the research question, breadth of prior research, and data availability (Phillips et al., 1998).

More specifically, the conceptual framework contains three of the four BHSU domains: characteristics of the population at risk; the environmental domain (comprising the external environment and health care system); and the outcome of interest, the health behaviour domain (indicated by AOD treatment use). The following sub-sections critically review conceptual understandings of these domains. Specific variables to be included in each of these domains were identified from the AOD treatment literature (see Chapter Three).

***2.3.2.1. Population characteristics influencing health services use***

The BHSU suggests that health service use is partly a function of the separate and combined influence of three categories of population characteristics: predisposing factors, factors that enable or restrict health service use, and need variables (Andersen, 1995; Andersen & Davidson, 1996; Andersen & Davidson, 1997; Thind & Andersen, 2003).

*2.3.2.1.1. Predisposing characteristics*

This model defines predisposing characteristics as variables that exist within the individual prior to the onset of a particular health need and that predispose the individual to use (or not use) services (Andersen, 1995; Andersen & Newman,

1973; Verbrugge, 1985). These variables seem to be associated with help-seeking in the presence of need via their influence on enabling/restricting variables. Applications of the BHSU have generally included the following categories of variables in the predisposing domain: demographic, social structure, and attitudinal-belief variables. This study expands these categories to include social-cognitive variables.

- Demographic and social structural factors

Demographic variables (such as age and gender) represent biological characteristics that might be associated with the probability of a person using health services. Although demographic variables are generally immutable and not easily influenced by policy changes, these variables could act as indicators of opportunities for intervention (Andersen, 1995; Booth, Staton, & Leukefeld, 2001).

In contrast, social structural characteristics reflect the location (status) of the individual in society, as measured by ethnicity/race, socio-economic status, education, and social environment (including indicators of neighbourhood disadvantage and community resources) (Andersen, 1995; Andersen & Newman, 1973; Thind & Andersen, 2003). While early applications of the model did not emphasise the role of social and physical environments on health services use, this study includes measures of these environments in the predisposing variable domain.

Although these social structural characteristics are weakly mutable, they might impact on an individual's ability to access treatment through their influence on (i) individual status within a community and (ii) enabling/restricting factors such as the ability to cope with presenting problems and the ability to gather resources to address problems (Andersen, 1995; Andersen & Davidson, 1997).

- Attitudinal-belief variables

Predisposing demographic and social structural variables are also associated with attitudinal-belief variables. Attitudinal-belief variables refer to the attitudes and beliefs that people have about specific health problems and health services.

Beliefs about the effectiveness of health care and attitudes towards service providers might influence (i) perceptions of need and (ii) whether (and where) individuals seek care (Aday & Andersen, 1974; Andersen, 1995; Booth et al., 2001; Thind & Andersen, 2003, Wallace, Scott, Klinnert, & Andersen, 2004) directly. In addition, attitudinal-belief variables might affect service use through their influence on enabling variables (Andersen, 1995). As with other predisposing factors, health beliefs are not considered direct reasons for using services but are thought to lead to differences in the tendency to use services (Andersen, 1995).

According to Andersen (1995), earlier studies of health services utilisation tended to employ global measures of health beliefs. As such, these studies were not able to reflect the influence these beliefs had on predicting and understanding service use as the measures used were not closely tied to the type of health condition under scrutiny. The present study goes some distance to address this concern by including measures of health beliefs that are specific to AOD treatment, namely concerns about AOD treatment processes, beliefs about the effectiveness of AOD treatment, and community views about access to AOD treatment.

- Psychological predisposing variables

Studies using the BHSU as an organising framework have generally excluded psychological characteristics from their understandings of predisposing factors (Andersen, 1995; Bradley et al., 2002). This is cause for concern as other theories of help-seeking, such as the Theory of Planned Behaviour (Ajzen, 1991), have shown that psychosocial factors play an important role in decision-making processes and in treatment seeking. To address this earlier limitation, the present study expanded the original set of predisposing variables to include social-cognitive factors, specifically self-efficacy to change AOD use and abstinence self-efficacy. These variables have been significantly associated with help-seeking, treatment retention and positive treatment outcomes in the AOD treatment literature (Broyles, Narine, & Robertson, 2004). While health beliefs refer to beliefs about health services and service providers, these psychological variables refer to intrinsic processes and socio-cognitive beliefs about one's personal ability to make behaviour changes.

#### 2.3.2.1.2. *The enabling variable domain*

The BHSU defines enabling factors as resources that facilitate (or restrict) an individual's use of health services when services are required. These factors represent the actual ability of an individual to obtain health services (Andersen, 1995; Booth et al., 2001; Wallace et al., 2004) and are mutable by interventions. The model assumes that greater enabling resources increase the likelihood of accessing care when needed. More specifically, the BHSU assumes that the enabling domain includes both personal and community enabling resources which appear to interact with each other to influence service use (Andersen, 1995; Thind & Andersen, 2003). The model suggests that for health service utilisation to occur, both personal and community enabling resources need to be present.

Personal enabling resources include individuals' awareness of services and their means to use these services. These resources incorporate factors such as income, medical insurance coverage, having a regular source of care, language, and awareness of services (Andersen, 1995; Rew, 1998) as well as functioning in areas such as employment, social relationships and physical and mental health (Tucker, Vuchinich, & Rippens, 2004). This study expanded these personal enabling resources to include competing needs. This variable refers to difficulties in meeting subsistence needs and has been identified as an important enabling variable in the Behavioural Model of Health Services Utilisation for Vulnerable Populations (Gelberg et al., 2000; Wenzel et al., 2001); an adapted version of the BHSU. The researcher considered this variable appropriate to include as this study focuses on AOD service use among low-income, black South Africans.

In contrast, community enabling resources include attributes of the community where the individual lives and attributes of the health provider that enable the individual to obtain services. Attributes of the health provider include convenience, availability, affordability, geographic accessibility, and acceptability of services (Andersen, 1995; Rew, 1998). Despite the recognition given to the role of community enabling resources in the BHSU, earlier applications of the model tend to focus primarily on personal enabling resources (Phillips et al., 1998). Andersen (1995) argued that this was mostly due to methodological limitations of earlier studies rather than conceptual limitations of the BHSU. In

fairness, later applications of the BHSU explicitly recognised the influence of community enabling variables on health services use; particularly community support and community structure variables (Andersen & Davidson, 1996; Andersen et al., 2002; Phillips et al., 1998). These studies measured these community-level influences at an aggregate level, using indicators such as the percentage of community members living in poverty, per capita income in the community, and public hospital bed/population ratios.

While community-level influences should be measured at the aggregate level, this kind of data is often not available in South Africa; particularly for AOD treatment providers. Where aggregate data is available it is often regional rather than community-specific, and of variable quality. While the limited availability of aggregate data hinders the extent to which community-level variables can be examined in conjunction with individual-level data, the quantitative component of the current study attempts to include community variables by measuring them at the individual level. These variables include perceptions of service availability, social capital, community social support, and community stigma; all of which have been shown to strongly influence help-seeking for AOD problems (Brown, O'Grady, Battjes, & Katz, 2004). In addition, the qualitative component of this study provides an in-depth analysis of the role of provider and community factors in shaping access to AOD treatment. To the author's knowledge, this is the first study of access to AOD treatment that includes a broad range of community and personal enabling factors within its analytical framework.

The BHSU has also been criticised for not viewing social relationships as an enabling resource (Freedman, 1993). In part, this may be due to a lack of conceptual clarity, where social relationships and environments are viewed as predisposing factors in the original version of the BHSU and as enabling factors in some expanded versions of the BHSU, such as the Behavioural Model of Health Services Utilisation for Vulnerable Populations (Gelberg et al., 2000). This study attempts to clarify this ambiguity by distinguishing between (i) broad social structural influences (such as neighbourhood disadvantage or drug use within communities) that might predispose a person to use AOD services and (ii) enabling factors linked to relationships that facilitate treatment seeking (such as

social support). For example, having friends who use AOD treatment services might predispose a person to use these services when needed, whereas having friends who take you to AOD services might provide you with the means to use these services.

#### *2.3.2.1.3. Need for health services*

The BHSU assumes that need variables reflect illness levels that are sufficiently severe enough to warrant access to services. According to the BHSU, need for services is the most immediate determinant of health service utilisation, with the model assuming that some need must always be present for appropriate health service utilisation to occur (Aday & Andersen, 1974; Andersen, 1995; Andersen & Newman, 1973; Thind & Andersen, 2003). This seems to be supported by research which suggests that need variables explain more variance in health service utilisation than predisposing and enabling variables (Knowlton et al., 2001). More specifically, the BHSU distinguishes between perceived and evaluated need for health services.

Perceived need refers to how people view their own health status (Andersen, 1995; Rew, 1998). Perceptions of need involve judgements about the need for health services that are based on self-assessments of health status and the extent to which symptom severity impairs functioning and quality of life. These judgements can be made by the individual, family caregivers, or the larger community (Andersen, 1995; Andersen & Davidson, 1997). These perceptions of need are largely social phenomena that are shaped by the social structure and by health beliefs that include socio-cultural constructions of illness and disease (Andersen, 1995; Rew, 1998). Individuals with AOD problems often have low levels of perceived need and may access treatment due to external pressures from family, employers, or the criminal justice system (Booth et al., 2001; Hser, Maglione, Polinsky, & Anglin, 1998). This study thus distinguishes between individual perceptions of the need for AOD treatment and externally perceived need (that is family and community perceptions about an individual's need for treatment).

In contrast, evaluated need refers to professional judgements about an individual's health status and their need for services (Andersen, 1995; Thind & Andersen, 2003). These professional judgements are based on clinical evaluations, and where available diagnostic tests (Andersen & Davidson, 1996; Rew 1998). The BHSU assumes that while utilisation could occur independently of objectively assessed need, perceived need is almost always necessary for (voluntary) service use to occur (Andersen, 1995; Litaker & Love, 2005; Thind & Andersen, 2003). In contrast, the model postulates that evaluated need is closely related to the kind and amount of treatment that will be provided after a person presents at a health care provider (Andersen, 1995). The present study examines both perceived and evaluated need for AOD treatment.

#### ***2.3.2.2. The contextual/environmental domain***

The BHSU also recognises the role of contextual determinants of health (Andersen, 1995; Andersen, Rice, & Kominski, 2007; Litaker & Love, 2005). The BHSU identifies two types of societal determinants of health service use: factors at the level of the health care system (Andersen & Newman, 1973) and external environmental influences (Andersen, 1995). These societal determinants are thought to interact to influence population-level determinants of health service use, and ultimately the use of health services.

##### *2.3.2.2.1. Health system factors*

Factors within the health system are also viewed as determinants of service use (Andersen, 1995), primarily because the health system structures the provision of health services in society and thus influences service availability (Andersen & Newman, 1973; Litaker & Love, 2005). The BHSU proposes that the health system consists of three dimensions: health policy, health-related resources and health care organisation. Together these dimensions shape health service delivery and influence the extent to which provider enabling resources are present in society and the use of services. In turn, these elements are shaped by society's priorities and values (Miralles & Kimberlin, 1998; Phillips et al., 1998).

More specifically, health (and social welfare) policies are understood to influence legislation and social norms concerning the structure and functioning of the health

system including resource allocation, training of health workers, and health priorities (Andersen, 1995; Andersen & Newman, 1973). Health system resources are defined in terms of the financial and personnel resources allocated for health care. These resources include personnel responsible for service delivery, health care facilities, and materials used to provide services. According to the BHSU, the resource dimension is comprised of two elements: the total volume of resources relative to the population served (indicated by bed/population ratios and personnel/population ratios), and the spatial distribution of resources.

In addition, the BHSU defines the organisational dimension in terms of the distribution of health resources, including the co-ordination and regulation of personnel and facilities (Andersen & Newman, 1973). This dimension is comprised of two elements: access and structure. Access refers to the way in which a person gains entry into the system and is indicated by eligibility requirements and system barriers such as waiting times, referral processes, and gatekeepers. In contrast, structure refers to factors that determine the type of services received once a person enters the system. This structural component is difficult to define and relate to utilisation; partly because it is interrelated with other health system components. For example, access is influenced by structure and structure depends on the availability of health resources.

Given the role of health system factors in determining service use, this study explores the influence of factors within the AOD treatment system (as conceptualised by the BHSU) on AOD treatment use. As indicators of resource allocation and system organisation are largely unavailable for the South African AOD treatment system, this study uses qualitative methods to examine the influence of these dimensions on AOD service delivery and treatment use.

*2.3.2.2.2. Factors within the external environment*

According to the BHSU, other contextual factors that influence an individual's ability to access health care include external environmental influences, such as the economic, political, and social milieu and prevailing social norms (Andersen, 1995; Andersen, Rice & Kominski, 2007; Litaker & Love, 2005; Phillips et al., 1998; Rew, 1998). This group of inter-related characteristics represents several

basic influences that shape the opportunities available to individuals independently of their personal characteristics, by providing a context for health service delivery.

Although the BHSU acknowledges the external environment's role in determining access, it focuses largely on the individual (Andersen, 1995; Andersen & Newman, 1973; Phillips et al., 1998). Studies that have incorporated contextual and environmental factors have tended to draw upon these variables to assist in the interpretation of findings and generally have not examined these variables as integral parts of the model. To be fair, there have been recent exceptions to this (e.g. Andersen, Rice, & Kominski, 2007; Brown et al., 2004; Davidson et al., 2004; Litaker & Love, 2005). Nonetheless, the external environment remains a poorly understood influence on utilisation; with most studies providing little information on how the social environment influences patient behaviour. In part, this may be due to the conceptual overlap between community enabling resources and external environmental influences in the BHSU (Phillips et al., 1998). This study attempts to clarify this ambiguity by distinguishing between (i) community-level enabling resources that have a direct influence on help-seeking behaviour and (ii) broader external environmental influences that refer to the context or milieu in which communities and health systems are situated and utilisation occurs.

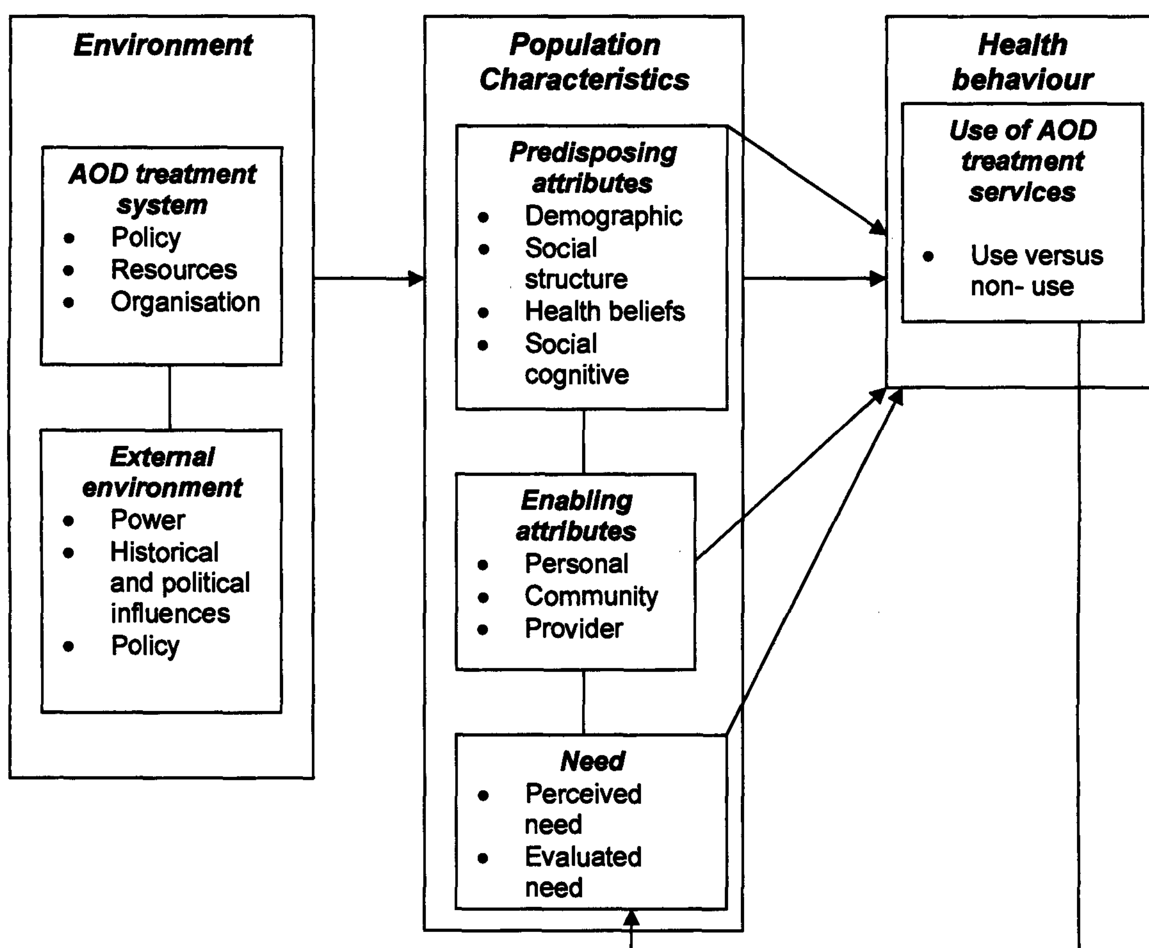
This study weaves an understanding of the socio-cultural context within which the South African AOD treatment system is located throughout its conceptual framework; particularly in the qualitative component of the study which explicitly explores the influence of contextual factors on realised access. The inclusion of these factors is based on the understanding that AOD outcomes, the use of AOD services, and the structure and functioning of the AOD treatment system are shaped by political and economic ideologies and power relations inherent in all societies (Morgan, Mallet, Hutchinson, & Leff, 2004; Zurayk, 2001).

#### *2.3.2.3. The Health Behaviour Domain: Utilisation*

The conceptual model in this study focuses on one aspect of the BHSU's health behaviour domain, namely health services use. This is viewed as an immediate outcome of access to health care (Andersen, 1995). The BHSU defines health

service utilisation as obtaining health care provision in the form of a health care contact. Studies using the BHSU have used the following indicators of health service utilisation: use versus non-use, the location and site of visit, frequency of visits, and intensity of care received (Andersen, 1995; Andersen & Davidson, 1996; Thind & Andersen, 2003). This study focuses on the use versus non-use of AOD treatment services; regardless of the type of treatment services used.

**Figure 2. Conceptual framework of the current study**




## 2.4. USE OF THE BHSU IN PREVIOUS STUDIES

The BHSU has been widely applied to the study of health and social service utilisation in both developed (e.g. Choi, 2006; Davidson, Cunningham, Nakazono, & Andersen, 1999) and developing country settings (e.g. Acosta-Ramirez, Duran-Arenas, Eslava-Rincon, & Campuzano-Rincon, 2005; Fosu, 1989). It has been used to examine access among the general population and also among various population sub-groups, including persons with AOD problems (e.g. Mojtabai,

2005); children (e.g. Kane, Zotti, & Rosenberg, 2005); the elderly (e.g. Shah, Rathouz, & Chin, 2001); and vulnerable population groups such as homeless women (e.g. Heslin et al., 2001) and HIV positive individuals (e.g. Andersen et al., 2000). The breadth of the BHSU's application is portrayed in Table 2.

Yet, these studies are not without their limitations. First, many studies have relied on national survey data to examine the correlates of service utilisation. While repeated national surveys are useful for tracking changes in service utilisation over time and for identifying broad correlates of service utilisation, these surveys generally do not include area identifiers (Phillips et al., 1998) and thus cannot examine how these correlates vary from region to region. This has important implications for health policy reform, as dissimilar regions and population sub-groups might require different types of interventions to improve access. As the current study is targeted at a specific region in South Africa and controls for potential race and gender sub-group variations, it goes some way to address this shortcoming.

Secondly, earlier research focused largely on individual-level factors associated with health service utilisation, despite the model's explicit recognition of contextual influences (Bradley et al., 2002; Phillips et al., 1998). Similarly, most studies have gathered self-report data from consumers, with few obtaining data from health care providers. This has made it difficult to identify interactions between consumers and providers and to identify possible linkages between individual and contextual variables (Phillips et al., 1998). In part, this has been due to the use of population-based surveys as a means of gathering data, which has made it difficult to measure health system characteristics and provider-related variables that are often not available in national data sets (Ricketts & Goldsmith, 2005). In the USA, this limitation is often addressed through linking aggregate data files such as the US area resource files to population based surveys. As this kind of aggregate information is generally not available in South Africa, this study addresses this limitation by collecting quantitative data on consumers' perspectives as well as qualitative data on AOD treatment providers' perspectives on access. This allows for a more comprehensive understanding of utilisation to be developed.

Table 2. **Use of the Behavioural Model of Health Service Utilisation in previous research***

| Authors | Population | Setting | Country |
|---|---|---|---|
| Acosta-Ramirez et al. (2005) | Adults | Vaccination use | Colombia |
| Albizu-Garcia et al. (2001) | Adults | Mental Health service use | USA |
| Andersen et al. (2000) | HIV+ve adults | Access to antiretroviral therapy for vulnerable groups | USA |
| Asch et al. (1998) | Adults with TB | Health service use | USA |
| Auslander et al. (2005) | Elderly immigrants | Social work service use | Israel |
| Burnam et al. (2001) | HIV+ve adults | Substance abuse and mental health services | USA |
| Chen et al. (2000) | Women | Maternal support services | Taiwan |
| Choi (2006) | Immigrants | Health service use | USA |
| Chou & Chi (2004) | Elderly | Health service use | China |
| Davidson & Andersen (1997) | Adults | Dental service use | USA |
| Davidson et al. (1999) | Adults | Dental service use | USA |
| Dobalian et al. (2003) | Adults with HIV | Dental service use | USA |
| Ekanayake & Mendis (2002) | Adults | Dental service use | Sri Lanka |
| Fernandez-Mayoralas et al. (2000) | Elderly | Health service use | Spain |
| Finlayson & Dalmonte (2002) | Adults | Occupational therapy use for multiple sclerosis | Canada |
| Fosu (1989) | Adults | Health service use | Ghana |
| Goodwin & Andersen (2002) | Adults | Health service use for panic attacks | USA |
| Heslin et al. (2001) | Homeless women | Health service use | USA |
| Kane et al. (2005) | Special needs children | Health service use | USA |
| Katz et al. (2001) | HIV+ve adults | Medical service and medication use | USA |
| Lim et al. (2002) | Homeless women | Medical service use | USA |

| | | | |
|---|---|---|---|
| Miralles & Kimberlin (1998) | Elderly | Medical service use | Brazil |
| Palacio et al. (1999) | HIV+ve women | Primary care use | USA |
| Park (2005) | Older adults | Health service use | South Korea |
| Redondo-Sendino et al. (2006) | Elderly | Health service utilization | Spain |
| Rost et al. (2002) | Adults in rural communities | Mental health service use | USA |
| Shah et al. (2001) | Elderly | Emergency room use | USA |
| Shah et al. (1996) | Adults | Emergency room service | Kuwait |
| Shea et al. (1994) | Nursing home residents | Mental health service use | USA |
| Soskolne et al. (2006) | Elderly immigrants | Medical & social work use | Israel |
| Subedi (1989) | Adults | Health service use | Nepal |
| Sunil et al. (2006) | Women | Maternal care services | India |
| Thind (2005) | Children | Health service use for respiratory problems | Indonesia |
| Thind (2004) | Children | Health service use | India |
| Thind & Andersen (2003) | Children | Medical service use for respiratory illnesses | Dominican Republic |
| Thind & Cruz (2003) | Children | Health service use | Philippines |
| Van Achterberg et al. (1996) | Care dependent adults | Home-based care | USA |
| Wallace et al. (2002) | Children | Health service use for Asthma | USA |
| Weisner & Matzger (2002) | Adults | Substance abuse treatment | USA |
| Yanagisawa et al. (2004) | Adults | Health services use | Cambodia |
| Yanagisawa et al. (2006) | Women | Skilled birth attendants use | Cambodia |

*** Please note that this summary of previous research is not exhaustive**

It also allows for the study hypotheses to be tested in different data sets and from two different perspectives, increasing the robustness of findings. The addition of a qualitative component also makes it easier to examine contextual and health system influences on access, for which quantitative indicators are generally not available in South Africa.

Another difficulty associated with previous research relates to the non-use of AOD services, which generally has been poorly examined (Ricketts & Goldsmith, 2005). While population surveys frequently ask respondents about non-use or delayed use due to a variety of barriers, these measures of non-use are assigned to the population rather than to a service system and are rarely correlated with other individual or contextual factors. Similarly, studies that have examined AOD treatment use have relied largely on clinical samples of AOD users in treatment, who necessarily had weak barriers to treatment entry (Tucker et al., 2004). These studies have struggled to identify correlates of AOD treatment use (apart from need) and have not established the generalisability of findings to community-based samples of AOD users (Simpson & Tucker, 2002; Tucker, 2001; Tucker et al., 2004). This has hampered the design of interventions to improve AOD treatment use. The present study addresses this limitation by using both community and clinical samples to compare non-use of AOD treatment services with service use.

A further limitation is that although the BHSU recognises the dynamic nature of access, particularly the impact of experience, learning and adaptation on help-seeking behaviour (Andersen, 1995), empirical research generally has not focused on the temporal aspects of access, such as the role of experiential learning and the impact that interactions with the health system have on future help-seeking (Mechanic, 1998; Ricketts & Goldsmith, 2005). This has been largely due to the use of cross-sectional study designs which present static snapshots of a dynamic process (Litaker & Love, 2005; Ricketts & Goldsmith, 2005). To accurately represent the dynamic and interactive nature of access as conceptualised by the BHSU, longitudinal prospective studies that track individual AOD users over time and measure changes in resources, population characteristics and service utilisation patterns are needed. Even though longitudinal prospective research can speak to causal connections better than cross-sectional designs (Tucker et al., 2004), the

researcher considered this type of study design premature without strong evidence on the correlates of AOD treatment utilisation in the South African context. Finally, most studies that have used the BHSU to examine AOD treatment use have been conducted in the USA (e.g. Krahn, Farrell, Gabriel, & Deck, 2006; Mojtabai, 2005; Tucker et al., 2004; Weisner & Matzger, 2002). As the financing and structure of the US healthcare system is different from that of many other countries, it is possible that results from these studies may not generalise to other settings. The present study thus adds value to theoretical understandings of AOD treatment utilisation by examining the extent to which findings on the correlates of AOD treatment use in other country settings can be generalised to the South African context.

## 2.5. RATIONALE FOR USING THE BHSU AS THIS STUDY'S CONCEPTUAL FRAMEWORK

In summary, this chapter reviewed the concept of access; described the BHSU, with particular emphasis on the BHSU domains that comprise this study's conceptual framework; and critiqued prior applications of the BHSU. Despite the limitations of empirical research driven by the BHSU, this model was chosen as this study's conceptual framework for several reasons. First, it is arguably the dominant conceptual and theoretical framework for understanding and examining access to health care services (Phillips et al., 1998; Racher & Vollman, 2002; Ricketts & Goldsmith, 2002). The model continues to be a relevant and evolving model in health services research (Wallace et al., 2004). It has not only been used extensively in studies examining access to health services (Eden, 1998), but has also been used as an organising framework to shape health policy initiatives (Gold, 1998; Ricketts & Goldsmith, 2005).

Secondly, the model provides a well-established framework for understanding the determinants of access to health care services in general, and access to AOD treatment, in particular. The use of a well-established model is important as it provides a common framework and language for understanding findings across studies and in different contexts. In this study, the BHSU served as a conceptual guide for the selection of study variables in the design phase, informed data analysis, and assisted in the interpretation of study findings.

Thirdly, while the BHSU has not been extensively applied to the study of AOD treatment service utilisation, the use of this model is appropriate given that the BHSU was originally developed to examine the utilisation of behavioural health services which incorporate mental health and AOD services (Aday et al., 1999). In addition, using the BHSU to examine AOD treatment use might add to the theoretical refinement of the BHSU by expanding the breadth of its application. More specifically, this study provides a chance to critically review the appropriateness of using this model in a country context characterised by high levels of health disparities and inequities in access to services.

Finally, this model was chosen as it has been used to examine the determinants of access for a variety of health problems, amongst diverse population groups, in both community and clinical settings, and in a range of country settings (Eden, 1998; Thind & Andersen, 2003). Given its broad application, it is safe to assume that the BHSU will be appropriate to use, with some adaptation, among historically disadvantaged South Africans with AOD problems.

# CHAPTER THREE

# FACTORS ASSOCIATED WITH AOD TREATMENT USE

## 3.1. INTRODUCTION

Although a plethora of studies focus on access to medical care, few studies have examined the use of AOD treatment services (Tucker et al., 2004). The extent to which findings from health services utilisation research can be generalised to AOD treatment settings is questionable, especially because drug use is illegal and drug treatment utilisation highly stigmatised (Hser et al., 1998). Factors that influence treatment entry among drug users thus may differ from those that predict treatment use for other health problems. Despite this, most AOD services research has focused on factors associated with treatment engagement and treatment outcomes, with research attention only recently being directed toward predictors of AOD treatment entry (Sobell, Sobell, & Toneatto, 1992; Hser et al., 1998; Tucker et al., 2004).

More specifically, research on access to AOD treatment has consisted largely of descriptive studies that identified factors associated with treatment entry among special population groups, such as the homeless (Nyamathi, Longshore, Galaif, & Leake, 2004), HIV-positive drug users (Booth, Kwiatkowski, Iguchi, Pinto, & John, 1998), women (Zule, Lam, & Wechsberg, 2003) and minority ethnic groups (Longshore, 1999). Other studies examined self-reported obstacles to accessing treatment (Appel, Ellison, Jansky, & Oldak, 2004). Only a few studies have compared out-of-treatment AOD users with recipients of treatment services (Green-Hennessy, 2002; Hser et al., 1998; Power, Hartnoll, & Chalmers, 1992; Schell, Orlando, & Morral, 2005). Three broad inferences can be drawn from this limited body of research. First, AOD treatment seeking and initiation are a function of problem severity and AOD-related treatment needs. Secondly,

treatment use is influenced by socio-demographic factors, environmental factors, and the sociocultural context. Finally, the availability and characteristics of AOD treatment services shape patterns of treatment use. The balance of this chapter discusses empirical evidence in support of these assumptions and describes factors that are associated with treatment use in the AOD literature. The conceptual guide of this study (see Chapter Two) is used as an organising framework for this chapter.

## 3.2. AOD TREATMENT NEED AND TREATMENT UTILISATION

Recent patterns of drug use, drug use severity, and involvement in the criminal justice system are almost universally considered to reflect treatment need and are strongly associated with treatment linkage (Booth et al., 2001, Finney & Moos, 1995). Other related situational need factors include problem recognition, readiness for treatment, and desire for help. These factors are often, although not always, associated with treatment linkage (Griffith, Knight, Joe, & Simpson, 1998; Knight, Hiller, Broome, & Simpson, 2000; Rapp et al., 2006). This section describes these need factors in more detail.

### 3.2.1. Drug-problem severity

Although levels of drug consumption (frequency and quantity) are often used as markers of treatment need, current understandings of AOD problems suggest that problem severity (indicated by impairment in psychosocial functioning) is a more accurate indication of need for treatment. These understandings point to AOD problems varying on a continuum of severity from non-problematic use to pathological dependence; with only more severe problems requiring specialised treatment (Institute of Medicine, 1990; Miller, 1996). Consequently, persons with less severe AOD problems have a lower need for treatment compared to persons with more severe AOD problems, irrespective of consumption levels.

In addition, studies consistently point to problem severity being a significant predictor of treatment use. For example, Haller, Miles and Dawson (2002)

compared female treatment recipients with women who declined AOD treatment and found that treatment enrollees had greater problem severity. Greater alcohol-related impairment was also positively associated with AOD treatment-seeking among out-of-treatment persons in two studies (Tucker, 2001; Tucker et al., 2004). Similarly, two studies employing the BHSU model reported that drug problem severity (Weisner, Matzger, Tam, & Schmidt, 2002) and drug-related negative consequences (Kertesz et al., 2006) were significant predictors of treatment use among alcohol-dependent persons. These findings are consistent with results from medical and mental health service utilisation research, which show that problem severity fuels treatment use (Tucker, 2001). Based on these findings, this study hypothesises that drug problem severity will be positively associated with treatment access.

### 3.2.2. Perceived need for treatment

Perceiving a need for treatment is a necessary stage in the process of accessing AOD treatment (Tucker et al., 2004); with treatment use being unlikely when there are low levels of perceived need. Perceived need for AOD treatment is informed by the following constructs: readiness to change and treatment motivation. Although related, these concepts are conceptually distinct (Joe, Simpson, & Broome, 1998). According to De Leon and Jainchill (1986), people with AOD problems may be ready to change but not motivated to enter treatment. Given this distinction, readiness to change AOD use and treatment motivation are discussed separately in relation to treatment access.

#### *3.2.2.1. Readiness to change*

The concept of intrinsic motivation, or readiness to change, emerged from the transtheoretical stages of behaviour change model (Prochaska, DiClemente, & Norcross, 1992). In this model, readiness to change is conceptualised as a series of stages, with the latter stages indicating greater readiness for change. These stages include precontemplation, in which there is low awareness of the problem behaviour and little intention to change; contemplation, in which the problem

behaviour is recognised but there is little commitment to change; preparation, in which intentions and plans to change are developed; and action, in which the person takes action to change (including seeking treatment) (Pollini, O'Toole, Ford, & Bigelow, 2006; Prochaska et al., 1992).

In the AOD treatment literature, failure to use needed treatment has often been attributed to a lack of motivation (Miller, 1999). Empirical evidence also points to motivation or readiness to change being a predictor of treatment utilisation (Cahill, Adinoff, Hosig, Muller, & Pulliam, 2003). For example, motivation was a significant predictor of AOD treatment utilisation in a randomised clinical trial of linkage to primary care (Kertesz et al., 2006). Weisner, Mertens, Tam, and Moore (2001) also identified motivation as a predictor of treatment use among individuals with AOD problems. Similarly, Neff and Zule (2002) reported that "motivation to quit" was a significant predictor of treatment use among 673 drug users. In addition, Booth et al. (1998) found that motivation to change was positively associated with drug treatment use among out-of-treatment injection drug users. In the light of these findings, this study hypothesises that readiness to change AOD use will be positively associated with AOD treatment use.

#### 3.2.2.2. Treatment motivation

The "treatment motivation" construct is comprised of three elements: AOD problem recognition, desire for help with AOD problems, and treatment readiness (Joe, Simpson, & Broome, 1998; Simpson & Joe, 1993). Problem recognition is informed by recognition of the negative consequences of AOD use, severity of AOD use, and perceived AOD problems (Carpenter, Miele, & Hasin, 2002; Knight, Holcom, & Simpson, 1994; Nwakeze, Magura, & Rosenblum, 2002). Prior studies provide evidence for the relationship between AOD problem recognition and treatment motivation; with problem recognition being a predictor of treatment motivation among 748 homeless women (Nyamathi et al., 2004). Similarly, problem recognition was positively associated with treatment motivation among 84 people with co-occurring disorders (Carey, Purnine, Maisto, & Carey, 2001).

The second component of treatment motivation is desire for help. This construct reflects awareness of an intrinsic need for change and interest in seeking help for AOD problems (Knight et al., 1994). Despite high problem recognition and desire for help, people with AOD problems might not be ready for treatment (De Leon & Jainchill, 1986). Treatment readiness is thus an important aspect of treatment motivation and reflects readiness for and commitment to changing AOD use by entering a treatment program (Knight et al., 1994).

Problem recognition, desire for help, and treatment readiness interact to influence overall treatment motivation. Problem recognition seems a determinant of desire for help. For example, Longshore (1998) reported that recognition of drug problems predicted desire for help among 88 drug-using Mexican American arrestees. Nwakeze and colleagues (2002) also found that greater drug problem recognition, more frequent drug use, and more severe AOD problems predicted desire for help among 190 out-of-treatment drug users. Desire for help also predicted treatment readiness. Another predictor of treatment readiness is drug problem severity, with higher alcohol problem severity being associated with greater treatment readiness in a study of 549 out-of-treatment alcohol-dependent persons (Freyer, Tonigan, Keller, Rumpf, John, & Hauke, 2005). Similarly, among 526 homeless alcohol-abusing women, treatment readiness was predicted by greater alcohol problem severity (Nyamathi, Stein, Dixon, Longshore, & Galaif, 2003).

These components of treatment motivation independently predict AOD treatment utilisation. Several studies point to problem recognition, desire for help, and treatment readiness being associated with access to AOD treatment (Battjes, Onken, & Delaney, 1999; Griffith et al., 1998; Knight et al., 2000; Rapp et al., 2006). Longshore (1999) reported that AOD treatment use was significantly more likely for drug users scoring high on AOD problem recognition. In addition, Power and others (1992) found that self-reported concern about drug use

(problem recognition) and desire for help differentiated between 120 non-treatment seeking and 120 treatment-seeking problem drug users. Similarly, Schell and colleagues (2005) reported that perceived need for treatment (encompassing problem recognition and desire for help) was associated with higher levels of treatment use among 995 AOD using adolescents. Green-Hennessy (2002) also reported that perceived AOD problems and perceived need for treatment predicted treatment use among 1893 AOD using adults. Based on these findings, this study hypothesises that problem recognition, desire for help and treatment readiness will be positively related to AOD treatment use.

## 3.3. PREDISPOSING FACTORS ASSOCIATED WITH ACCESS TO AOD TREATMENT

In addition, the AOD treatment literature has found associations between a range of socio-demographic and attitudinal-belief factors and AOD treatment utilisation. The following sub-sections describe these factors.

### 3.3.1. Socio-demographic factors associated with treatment utilisation

Few consistent socio-demographic differences have been found between people who do and do not seek AOD treatment (Simpson & Tucker, 2002; Tucker, 2001); with several studies reporting equivocal findings for the relationships between treatment utilisation and gender, race/ethnicity, age or education (Hser et al., 1998). For gender specifically, some studies found that female problem drinkers were underrepresented in treatment-seeking samples (Schober & Annis, 1996), others reported that gender was not a significant predictor of treatment utilisation (Hser et al., 1998; Weisner et al., 2002), and others found that female gender was positively associated with treatment utilisation (Green-Hennessey, 2002; Kertesz et al., 2006). Similar results were found for race/ethnicity; with some studies reporting that race/ethnicity was a significant predictor of treatment utilisation (Weisner et al., 2002) and others finding race/ethnicity to be a poor predictor of treatment use (Haller et al., 2002; Hser et al., 1998). Equivocal findings have also been reported for age and education. While some studies

reported that age and education were poor predictors of AOD treatment use, Weisner and colleagues (2002) found that older adults with less education were more likely to enter treatment.

These equivocal findings might be due to the fact that static characteristics such as age, sex, and educational level have weak and inconsistent associations with barriers to treatment entry (Hajema, Knibbe, & Droop, 1999; Hser et al., 1998; Kleinman, Millery, Scimeca, & Polissar, 2002). The context in which these studies were conducted, especially the nature of local AOD treatment systems, also might hold some explanations for these equivocal findings. More specifically, socio-demographic differences in access to care might reflect gender or racial/ethnic inequities in the treatment system (Andersen, 1995). Based on this assumption, this study examines the relationship between treatment utilisation and a broad range of socio-demographic variables.

Other variables that might predispose individuals to use AOD treatment include variables within the person's immediate social environment. Several systematic reviews suggest that when other individual socio-demographic factors are controlled for, neighbourhood environment has an independent effect on a broad range of health outcomes (Pickett & Pearl, 2001; Putnam, 1995; Silver, Mulvey, & Swanson, 2002), including access to services and amenities (Altschuler, Somkin, & Adler, 2004). This study focuses on one aspect of neighbourhood environment, namely neighbourhood disorder.

#### *3.3.1.1. Neighbourhood disorder*

Neighbourhood disorder is generally characterised by neighbourhood poverty, deteriorating built environments, high levels of neighbourhood criminal activity, and community norms supportive of drug use (Crum, Lillie-Blanton, & Anthony, 1996; Silver et al., 2002). The relationship between neighbourhood disorder and AOD use has been extensively examined, with results pointing to positive associations between neighbourhood disorder and the prevalence of AOD

problems and need for AOD treatment (Boardman, Finch, Ellison, Williams, & Jackson, 2001; Hembree et al., 2005; Kalichman et al., 2006; King, Bernardy, & Hauner, 2003).

While the relationship between neighbourhood disorder and AOD treatment utilisation has not been examined, studies have examined the relationship between neighbourhood disorder and unmet healthcare needs (Law et al., 2005) and the relationship between disorder and access to primary health care (Prentice, 2006). These studies suggest that neighbourhood has a significant effect on access to services, even when controlling for the effect of other predisposing and enabling variables.

Several mechanisms have been postulated to account for neighbourhood disorder's association with health service utilisation. First, neighbourhood disorder might have an indirect effect on health service utilisation via its influence on social capital, a community enabling factor. There appears to be a reciprocal relationship between neighbourhood disorder and social capital (Ross & Jang, 2000). In less cohesive neighbourhoods, the relative absence of social control seems to diminish community capacity to control neighbourhood processes (Sampson, Raudenbush, & Earls, 1997), such as drug availability. This appears to result in signs of neighbourhood disorder such as litter on the streets, vandalism, public intoxication, drug-dealing, dilapidated buildings, and obvious criminal activity. In return, these visible signs of disorder seem to decrease cognitive social capital by increasing mistrust among residents (Ross & Jang, 2000) and by undermining the collective efficacy of a neighbourhood (Sampson et al., 1997). This diminished social capital decreases the likelihood of residents intervening when observing individuals with AOD problems (Darke & Hall, 2003) and reduces the chances of inhabitants seeking AOD treatment services (Hembree et al., 2005).

Other researchers suggest that social support, an enabling resource, mediates the relationship between neighbourhood disorder and treatment utilisation. Neighbourhood disorder might have disruptive effects on social support by eroding social networks (Schulz et al., 2006). Silver and colleagues (2002) reported that residents of socially disordered neighbourhoods not only found it difficult to develop and maintain supportive interpersonal relationships, but also struggled to maintain positive affiliations with local institutions. This could hamper access to services.

Psychosocial mechanisms have also been postulated to mediate the relationship between neighbourhood disorder and health services utilisation (Weich, Blanchard, Prince, Burton, & Erens, 2002). Research suggests that residents of disordered neighbourhoods experience disproportionate levels of psychological distress (Boardman et al., 2001; Hill & Angel, 2005; Latkin, Williams, Wang, & Curry, 2005). This could be due to perceived environmental dangers that result in feelings of fear and anxiety (Hill & Angel, 2005; Mirowsky & Ross, 2003). The perceived inability to escape these environments might also result in depression; with studies reporting that residents of disordered neighbourhoods have more symptoms of depression than those of more ordered environments (Weich et al., 2002). This impacts on treatment utilisation as residents experiencing high levels of psychological distress find it difficult to mobilise to seek AOD treatment.

Based on these findings, this study hypothesises that lower levels of neighbourhood disorder will be associated with a greater likelihood of AOD treatment use. In addition, the researcher hypothesises that neighbourhood disorder will have an indirect effect on treatment utilisation via its association with social capital.

### 3.3.2. AOD beliefs associated with treatment utilisation

Although health beliefs appear to predispose individuals towards utilising health services (Andersen, 1995), few studies have examined the relationship between

AOD treatment beliefs and treatment uptake. Exceptions to this include a general population study where AOD users identified "lack of confidence in the effectiveness of treatment" as a condition that interfered with linkage to treatment (Grant, 1997). Another study also identified privacy and confidentiality concerns as well as beliefs that treatment would be ineffective as barriers to seeking treatment for alcohol problems (Tucker et al., 2004). Similarly, Appel et al. (2004) found that injection drug users reported barriers to accessing treatment that included fears about treatment and concerns about confidentiality. Simpson and Tucker (2002) also found that low rates of help-seeking for AOD problems were associated with concerns about privacy, confidentiality, and treatment effectiveness.

In the light of these findings, this study examines the relationship between AOD treatment use and treatment beliefs, including beliefs in the effectiveness of treatment and concerns about the process of treatment. More specifically, this study hypothesises that fewer treatment concerns and stronger beliefs about the effectiveness of treatment will be positively associated with AOD treatment use.

### 3.3.3. Self-efficacy and treatment utilisation

Perceived self-efficacy is a cognitive variable that refers to individuals' belief in their ability to organise and implement specific behaviours to produce a desired outcome (Bandura, 1986; Murdock, Wendler, & Nilsson, 2005). Self-efficacy involves the creation of cognitive expectancies about personal competence and tends to be situation-specific. These expectancies are proximal mediators of the decision to initiate behaviour (such as treatment-seeking) and play an important function in the initiation and maintenance of behaviour change (Bandura, 1997; Burleson & Kaminer, 2005). As such, it is appropriate to view self-efficacy as a predisposing variable for AOD treatment utilisation.

Empirical studies confirm the role of self-efficacy in the treatment of addictive behaviours, with a number of studies showing that self-efficacy to avoid AOD use

predicts treatment outcomes (DiClemente, 1986; Sheikh, Salah, Gaily, & Bashir, 2004; Stephens, Wertz, & Roffman, 1995), with higher intake self-efficacy generally predicting better post-treatment functioning. However, some studies found that very high levels of self-efficacy predicted poorer treatment outcomes (Powell et al., 1993; Langenbucher, Suselund, Chung, & Morgenstern, 1996). One explanation for these equivocal findings is that improvements in self-efficacy only predict positive outcomes until a ceiling has been reached. For instance, people with AOD problems with very high levels of self-efficacy might be overconfident in their abilities to deal with their problems (Powell et al., 1993; Langenbucher et al., 1996), might have low problem recognition (Fiorentine & Hillhouse, 2003), and little recognition of their need for treatment. These findings suggest that one of the ways in which self-efficacy influences AOD treatment use is through perceptions of treatment need. More specifically, very high levels of self-efficacy could negatively impact on perceptions of treatment need, and subsequently reduce the likelihood of accessing AOD treatment.

Research on barriers to AOD treatment provides some support for this explanation. George and Tucker (1996) and Tucker et al. (2004) found that "belief in the ability to solve one's own problems" was an obstacle to alcohol treatment use. Similarly, Appel and colleagues (2004) reported that "being able to handle it on my own" was a major obstacle to treatment among injection drug users. Another way in which self-efficacy might influence AOD treatment use is via its association with enabling/restricting variables. Previous research has found negative associations between self-efficacy and indicators of psychological functioning; particularly anxiety and depression (Bisschop, Kriegsman, Beekman, & Deeg, 2004; Kashdan & Roberts, 2007; Vickers & Vogeltanz, 2000). Finally, several studies suggest that there might be gender differences in self-efficacy. For example, Pellisier and Jones (2006) found that compared to men, female offenders had lower levels of general self-efficacy and self-efficacy to remain abstinent. Similarly, Sheik and colleagues (2004) found that being female was a marker for low self-efficacy.

Given these findings, this study examines the relationship between treatment utilisation and self-efficacy to change AOD use. More specifically, this study hypothesises that self-efficacy to change AOD use will be positively associated with AOD treatment use.

## 3.4. FACTORS THAT ENABLE/ RESTRICT ACCESS TO AOD TREATMENT

The AOD treatment literature has also identified a range of personal, provider-related, and community factors that enable (or inhibit) AOD treatment use.

### 3.4.1. Personal enabling/restricting factors

As mentioned in Chapter Two, personal enabling resources include individuals' knowledge and awareness of services and their means to use these services (Andersen, 1995). This section outlines several personal enabling resources including employment status, income, competing needs, awareness of services, stigma, and psychological functioning.

#### *3.4.1.1. Financial barriers: income, employment status, and medical insurance*

Financial barriers related to employment status, medical insurance, and income might also hamper access to AOD treatment (Appel et al., 2004). Studies examining the relationship between employment status and treatment use have reported equivocal findings. While being employed predicted treatment use in some studies (Weisner, Mertens, Tam, & Moore, 2001), unemployment predicted treatment entry in other studies (Weisner, 1993). For other studies, employment status did not predict treatment utilisation (Haller et al., 2002; Hser, Joshi, Maglione, Chou, & Anglin, 2001; Tucker et al., 2004). For income status, several studies found that having a low income hampered access to AOD treatment (Green-Hennessy, 2002; Sturm & Sherbourne, 2001). Low income not only restricts individuals' ability to pay for out-of-pocket treatment costs, but also their ability to acquire health insurance (Sturm & Sherbourne, 2001). This means that

low-income individuals often have to rely on free, publicly-funded treatment services. This is cause for concern in South Africa, where there is limited availability of free treatment services (Myers, 2004). These findings suggest that employment status and income are proxy indicators for treatment affordability.

Affordability factors have been identified as significant obstacles to AOD treatment entry (Hser et al., 1998; Simpson & Tucker, 2002; Tucker et al., 2004). These factors include the direct costs of treatment as well as indirect costs associated with transport to treatment facilities, replacement of wages, and child care (Beckman & Amaro, 1986; Myers, 2004). While these economic barriers appear to exist for both the insured and uninsured, several studies have pointed to economic barriers being highest for the uninsured (Grant, 1997; Sturm & Sherbourne, 2001; Wells, Sherbourne, Sturm, Young, & Burnam, 2002). More specifically, Appel and colleagues (2004) found that lack of medical insurance was a primary reason for failing to access AOD treatment among injection drug users. In addition, compared to insured drug users, the uninsured have higher levels of unmet treatment need (Wells et al., 2002) and are six times less likely to access AOD treatment (McAlpine & Mechanic, 2000). In contrast, having health insurance has been associated with greater likelihood of entering AOD treatment (Riley, Safaeian, Strathdee, Brooner, Beilenson, & Vlahov, 2002; Wenzel et al., 2001). This is worrisome as less than 16% of the South African population has access to medical insurance (Goosen et al., 2003).

Given these findings, this study hypothesises that affordability barriers will be negatively associated with AOD treatment use, and in particular that low employment status, income, access to medical insurance, and high treatment costs will decrease the likelihood of AOD treatment use.

#### *3.4.1.2. Competing needs*

Competing needs also appear to act as barriers for AOD treatment entry. These competing needs include the need to provide child care (Appel et al., 2004; Uziel-

Miller, Lyons, Kissiel, & Love, 1998) and the need to pay for basic necessities such as food and housing (Gelberg, Andersen, & Leake, 2000). For example Hser and colleagues (1998) found that out-of-treatment drug users reported significantly more difficulties in making necessary arrangements for going to treatment (such as accommodations for family needs and housing) than treatment enrollees.

For vulnerable populations (such as women and minority ethnic groups), competing needs may be particularly relevant barriers to treatment entry (Beckman & Amaro, 1986; Gelberg et al., 2000; Schober & Annis, 1996); especially for low income groups with few financial resources. For example, Black respondents in a US national longitudinal alcohol epidemiological study reported more material barriers (such as not knowing where to seek help, lacking the means to pay, and lack of child care) to seeking treatment than White respondents. In contrast, White respondents were more likely to report psychological and social barriers to seeking care (Grant, 1997).

#### *3.4.1.3. Awareness factors*

Limited knowledge and awareness about where to seek help for AOD problems and how to access treatment appears to inhibit AOD treatment use (Hser et al., 1998). For example, Porter, Metzger and Scotti (2002) found that non-specific knowledge of service availability and limited awareness of services was associated with less use of AOD services among injection drug users. Lack of awareness of treatment programmes seems to be a particularly important barrier for females with AOD problems; with women less likely to know where to go for help than men (Allard, Tolman, & Rosen, 2003; Grant, 1997). This study hypothesises that awareness of AOD treatment will be positively associated with AOD treatment use.

#### *3.4.1.4. Stigma and treatment utilisation*

Stigmatisation occurs when people label differences in behaviour and associate negative stereotypes with these labels (Fortney, Mukherjee, Curran, Fortney, Xan, & Booth, 2004). AOD problems are highly stigmatised (Copeland, 1997), with attitudes which negatively label AOD users being commonplace (Ritson, 1999). For example, an estimated 62% of persons with AOD problems in the USA experience stigma (Hart, 2005). Similarly, a study in Malaysia reported that drug users were commonly viewed as "parasites" and as an embarrassment to their families (Low, Zulkifli, Yusof, Batumalil, & Aye, 1996). Often this stigma persists because of misperceptions that AOD problems are untreatable (Obot, Pozniak, & Monteiro, 2004).

A distinction has been made between public and self-stigma, where public stigma refers to the public's perceptions of labelled persons (Corrigan & Watson, 2002) and self-stigma (or stigma consciousness) refers to internalised public stigma (Crocker, Major & Steele, 1998) or the extent to which people expect to be negatively stereotyped by others (Pinel, 1999). Stigma consciousness is negatively associated with self-efficacy and social support (Fortney et al., 2004; Mueller, Nordt, Lauber, Rueesch, Meyer, & Roesslet, 2006) and seems to contribute to difficulties in accessing care.

In part, stigma's influence on access to care seems to occur indirectly, through stigma's contribution to personal distress, social isolation, and perceptions about treatment. More specifically, AOD users with high levels of stigma consciousness often do not trust health care providers to be supportive. To some extent, these perceptions appear justified. In South Africa, for example, Pasche and colleagues (in press) reported that a large proportion of community-based organisations had negative attitudes towards AOD users. Moodley-Kunnie (1988) also reported that nurses in KwaZulu-Natal, South Africa, had negative perceptions towards people with AOD problems. These findings suggest that

stigma interacts with other enabling factors (such as social trust) to influence treatment utilisation.

In addition, stigma may directly hinder access to treatment as those who need help tend to deny or hide their condition for fear of being labelled (Murphy & Irwin, 1992; Schober & Annis, 1996). This may be especially true for AOD-using women who experience greater shame than men as intoxication is often associated with sexual availability (Copeland, 1997). Research on barriers to AOD treatment supports these assertions; with stigma being a frequently cited barrier to AOD treatment (Cunningham, Sobell, Sobell, Agrawal, & Toneatto 1993; Cunningham, Sobell, Sobell, & Gaskin 1994; Grant, 1997).

In the light of these findings, this study assumes that public stigma and stigma consciousness will act as barriers to AOD treatment access; with higher levels of stigma decreasing the likelihood of AOD treatment use.

#### *3.4.1.5. Psychological functioning and treatment utilisation*

This study includes psychological functioning as an enabling factor in its conceptual model. This decision was based on emerging evidence which suggests that psychological functioning appears to have a direct effect on AOD services use and plays an important role in decisions to seek AOD treatment. For example, the Health Belief Model (Rosenstock, 1966) suggests that psychological functioning impacts on the use of AOD treatment by mediating an individual's perceptions about the threat posed by AOD use (i.e. problem recognition) and the likelihood of taking effective action to treat this problem.

The presence of co-occurring mood and anxiety disorders are strongly associated with treatment seeking and increased service utilisation (Collins, Westra, Dozois, & Burns, 2006). Findings from the mental health services utilisation literature suggest that as psychological distress and psychiatric disability increase, people are more likely to seek mental health care (Bukstein,

Cornelius, Trunzo, Kelly, & Wood, 2005; Collins et al., 2006; Mojtabai, Olfsson, & Mechanic, 2002).

The role of psychological functioning in facilitating access to AOD treatment is not as well studied. One way in which psychological functioning could enable treatment use is via its influence on perceptions of treatment need. Several studies suggest that anxiety and depression mediate help-seeking for drug problems (Agosti & Levin, 2004; Brienza et al., 2000; Cahill et al., 2003; Teesson, Hall, Lynskey, & Degenhardt, 2005) through their positive association with motivation for treatment, an indicator of treatment need. For example, Cahill and colleagues reported that depression and anxiety were positively correlated with internal motivation and interpersonal help-seeking.

In contrast, studies that examined the direct effect of psychological functioning on AOD treatment entry report equivocal findings. One national survey found that the likelihood of receiving any AOD treatment increased with the presence and severity of mental health problems (Harris & Edlund, 2005). Similarly, several studies reported lower rates of depression among out-of-treatment drug users compared to treatment cohorts (Brienza et al., 2000; Teesson et al., 2005); suggesting that psychological distress is positively associated with AOD treatment use (Teesson et al., 2005). Hser and colleagues (1998), however, found that out-of-treatment AOD users had more severe psychological problems than treatment enrollees. The use of a threshold hypothesis might help explain these equivocal findings. It is possible that higher levels of psychological distress facilitate access to AOD treatment until a distress threshold is obtained. Once this distress threshold is crossed, any additional distress will inhibit treatment-seeking behaviour by undermining motivation to change, self-efficacy, and ability to seek treatment (Hser et al., 1998). In other words, providing that psychological distress does not become overwhelming, depression and anxiety might increase perceptions of AOD treatment need and subsequently AOD treatment use. In the light of this empirical evidence, this study hypothesises

that psychological functioning will be positively associated with AOD treatment use.

### 3.4.2. Community enabling and restricting factors

As mentioned in Chapter Two, community enabling variables consist of resources within the community and provider related resources that enable or inhibit access to services. This section describes the relationship between these resources and treatment utilisation.

#### *3.4.2.1. Perceived social support and treatment utilisation*

Social support refers to the process by which help is provided to others and is influenced by characteristics of individuals and the environment as well as available resources (Cohen, Doyle, Turner, Alper, & Skoner, 2003). Distinctions have been made between structural and functional aspects of support, where the former describes support in terms of social network structure and the latter in terms of the functions that social relationships serve (Cohen & Syme, 1985). While structural social support could be conceptualised as a predisposing variable (Andersen & Newman, 1973), the functional aspects of social support are widely recognised as direct enablers of service use. This study is only concerned with the functional aspects of social support.

For functional social support, a further distinction has been made between perceived and received support. Perceived support refers to evaluations of whether support would be provided when required. In contrast, received support refers to the actual exchange of supportive resources. There is substantial evidence that perceptions of support are important for help-seeking behaviours (Sarason, Sarason, & Gurung, 2001). This study thus focuses on the functional aspects of perceived support which include emotional support, or reassurance that a person is loved and cared for; instrumental or tangible support, such as assistance with material needs (e.g. transportation or money); and informational

support, such as the provision of guidance and feedback from others (Antonucci, 2001; Lin, Ye, & Ensel, 1999; Sherbourne & Stewart, 1991).

Findings from mental health service utilisation research suggest that social support affects service utilisation (Antonucci, Ajrouch, & Janevic, 2003; Unger & Johnson, 1997). Biegel, Shafran and Johnsen (2004) found that social support was a significant predictor of participation in support groups for 145 family caregivers of adults with mental illness; with higher levels of support predicting more participation. Similarly, Kouzis, Ford and Eaton (2000) reported that persons with confiding social support were more than four times likely to use mental health services compared to persons without confiding support. In addition, Berdahl, Hoyt and Whitbeck (2005) found that social support was positively associated with mental health care use among homeless and runaway adolescents.

Although fewer studies have examined the relationship between social support and AOD treatment use, emerging evidence suggests that emotional support facilitates treatment utilisation (Brown, O'Grady, Battjes, & Katz, 2004; Cunningham et al., 1993; Tucker et al., 2004). In contrast, a lack of tangible support might be an important barrier to treatment, especially as AOD users often report economic and practical obstacles to treatment (Appel et al., 2004; Brown et al., 2004; Tucker et al., 2004).

Several mechanisms have been postulated to account for these findings. Social support could influence treatment use by buffering against the impact of other barriers. For example, informational support might buffer against poor problem recognition by providing health information that enables people to recognise the need for health care. Informational support also might buffer against negative expectations about treatment and limited awareness of services by providing information on when, where and how to get health services as well as treatment efficacy (Ensign, 2003; Hatton et al., 2001). In addition, the provision of tangible

support might facilitate access by buffering against practical obstacles to care (such as a lack of transport and treatment costs) (Paschal, Ablah, Wetta-Hall, Molgaard, & Liow, 2005). These findings suggest that social support interacts with perceptions of treatment need and enabling/restricting variables to influence AOD treatment use.

However, the relationship between social support and AOD treatment use is not simple. The AOD treatment literature has distinguished between general social support and support for abstinence. Abstinence-specific support is defined as the provision of support for treatment and abstinence from AOD use (Longabaugh, Beattie, Noel, Stout, & Malloy, 1993; McKay, Foltz, Stephens, Leahy, Crowley, & Kissin, 2005). Compared to general social support, abstinence-specific social support appears to be a better predictor of post-AOD treatment functioning (Longabaugh Wertz, Zweben, & Stout, 1998; McKay et al., 2005). Research has shown that low levels of abstinence support act as a barrier to treatment utilisation (Duran et al., 2005). Limited support for abstinence seems a particularly important obstacle for women. Compared to men, women are more likely to face resistance to entering treatment from family, friends (Beckman & Amaro, 1986) and intimate partners (Higgins, Budney, & Bickel, 1994).

Given that abstinence-specific social support is as important as general social support for facilitating access to AOD treatment, this study examines the associations between both forms of support and AOD treatment use. More specifically, this study hypothesises that both forms of support will be positively associated with AOD treatment access.

#### *3.4.2.2. Social capital*

Another community enabling resource that appears to facilitate treatment utilisation is social capital. This is comprised of social networks, norms and social trust which enable community members to cooperate for mutual benefit (Putnam, 1995; Ziersch, 2005). Social capital consists of structural and cognitive

elements (Subramanian, Lochner, & Kawachi, 2002; Subramanian, Kim, & Kawachi, 2002). The structural component describes the breadth and intensity of social network associations. While this study does not examine structural social capital, it does measure an outcome of this component, namely functional social support (Prentice, 2006). In contrast, cognitive social capital refers to individual perceptions of interpersonal trust and social cohesiveness within communities (Subramanian et al., 2002 a, b). This component is also referred to as collective efficacy. Collective efficacy is defined as the expectation that community members will act jointly for the public good to secure needed resources (Sampson, 2003), including AOD treatment services.

While the relationship between social capital and AOD treatment has not been examined, the documented association between social capital and health service utilisation (e.g. Ahern & Hendryx, 2003; Prentice, 2006) makes a strong case for examining this relationship. For example, a cross-sectional household survey reported that community social capital enabled better access to health care in the USA (Hendryx, Ahern, Loverick, & McCurdy, 2002). In addition, Prentice (2006) found that neighbourhood social capital predicted primary care access independently of functional social support; with more social capital predicting greater access. Lee's (2005) study on health service use by HIV-infected persons also found positive associations between social capital and health service use.

Several mechanisms have been postulated to account for social capital's influence on health care use (Sampson, 2003). Neighbourhood collective efficacy appears positively associated with trust in health care institutions (Ahern & Hendryx, 2003; Hendryx et al., 2002) which seems to affect social norms around treatment seeking (Lee, 2005) and leads to increased utilisation. In addition, residents who share common values toward health care seem more effective at holding the local health care system accountable to their needs, including protecting access to care for vulnerable populations (Steinberg & Baxter, 1998).

Finally, cohesive social relationships might provide functional support by acting as sources of information on available treatment resources (Lee, 2005).

Therefore, social capital might increase health care access through enhancing community support for treatment use. Based on these previous research findings, this study hypothesises that cognitive social capital will be positively associated with AOD treatment use.

#### ***3.4.2.3. Provider-related enabling variables and treatment utilisation***

The AOD treatment literature has also identified provider-related factors that inhibit treatment use (Tucker et al., 2004). These include geographic access barriers and service availability.

##### *3.4.2.3.1. Geographic access*

Geographic access refers to the physical distance that a person must travel from his/her place of residence to receive services (Monnet et al., 2006) and is represented by distance and travel time. Transport difficulties are also related to geographic access. More specifically, there appears to be a negative association between geographic access barriers and treatment utilisation, with several studies reporting that distance, travel time and transport difficulties were barriers to AOD treatment entry (Friedmann, Lemon, & Stein, 2001; Hser et al., 1998; Reif, Golin, & Smith, 2005). These barriers seem particularly salient for low-income groups. Longer distance and travel times imply more difficult commutes, particularly for low-income groups who have less access to private transportation (Allard, Tolman, & Rosen, 2003). This is confirmed by findings that the provision of transport to AOD treatment increases the use of health services (Booth, Corsi, & Mikulich, 2003; Friedmann, D'Aunno, Jin, & Alexander, 2000; Hser, Polinsky, Maglione, & Anglin, 1999). Similarly, previous research found that greater distances to treatment were associated with lower levels of treatment retention (Beardsley, Wish, Fitzelle, O'Grady, & Arria, 2003) and less use of aftercare services following inpatient treatment (Fortney, Booth, Blow, & Bunn, 1995;

Schmitt, Phibbs, & Piette, 2003). Given these findings, this study examines the association between geographic access barriers and AOD treatment use and hypothesises that greater travel time and distance to treatment will decrease the likelihood of AOD treatment use.

*3.4.2.3.2. Availability of services*

As mentioned in Chapter One, there are too few programmes available to treat AOD problems in South Africa. This is particularly true for low income clients who rely heavily on the state and nonprofit sector for services where the number of AOD treatment places does not match the demand for these services. In the Cape Town metropole specifically, several treatment facilities serving this population group have closed or have stopped providing AOD treatment services (Myers et al., 2004; Myers & Parry, 2005). Low availability is an important barrier to AOD treatment access and may restrict help-seeking, even when there are high levels of perceived need (Appel et al., 2004). While perceptions of service availability appear to influence treatment utilisation directly, it is important to note that availability is shaped by the organisation of resources within the AOD treatment system (McLellan & Meyers, 2004). These contextual influences on AOD treatment use are examined below.

## 3.5. THE CONTEXTUAL DOMAIN

Findings from the AOD treatment literature have identified a range of factors within the AOD treatment system that influence access to AOD treatment.

### 3.5.1. Organisational barriers within AOD treatment services

A variety of organisational factors within the AOD treatment system might restrict treatment utilisation in Cape Town. First, prior research identified long waiting lists as a barrier to AOD treatment entry (Grant, 1997; Hser et al., 1998; Sturm & Sherbourne, 2001; Tucker et al., 2004). Timely access is important for facilitating treatment utilisation as many people with AOD problems are ambivalent about seeking treatment and may have little tolerance for waiting (Carr et al., 2007;

Graham, Brett, & Bois, 1995; Kaplan & Johri, 2000). Low income and uninsured individuals appear most vulnerable to waiting list barriers; with Friedmann, Lemon, Stein and D'Aunno (2003) reporting that AOD facilities that serve indigent populations in the USA were least likely to provide "treatment on demand" due to scarce treatment resources. Similarly, in South Africa delays in accessing treatment due to waiting lists are common amongst public and private nonprofit treatment facilities that serve the indigent and uninsured (Myers, 2004b). These findings suggest that waiting list barriers are underpinned by limited resources within the AOD treatment system. Timely access might also be hindered by gatekeepers that control admission to AOD treatment facilities. For example, several private nonprofit and publicly funded facilities in South Africa require reports from social workers prior to admitting a person for treatment. This results in treatment delays (Myers, 2004b).

Other organisational factors that seem to restrict access to AOD treatment include complex programme admission and eligibility criteria (Appel et al., 2004; Farabee, Leukefeld, & Hays, 1998; Festinger, Lamb, Kountz, Kirby, & Marlowe, 1995; Hser et al., 1998). For example, an evaluation of several nonprofit treatment facilities in South Africa revealed complex eligibility requirements for treatment participation, including the need to speak English, refusal to accept clients with criminal records and co-occurring psychiatric conditions, and refusal to accept clients who were not motivated for treatment (Myers, 2004b). Given that people with AOD problems often have co-occurring psychiatric disorders and that ambivalence about treatment is characteristic of these clients (Carr et al., 2007; Miller, 1999), these eligibility requirements might limit AOD treatment access.

The organisational and staffing infrastructure at AOD treatment facilities might also limit AOD treatment use (Friedmann, Alexander, & D'Aunno, 1999; McCaughrin & Howard, 1996). Earlier South African research found that several AOD treatment facilities (particularly those in the nonprofit sector) were

characterised by fragile and unstable organisational and staffing infrastructures (Myers, 2004b; Myers & Parry, 2005). As in the USA (McLellan & Meyers, 2004), the professional staffing component at these facilities is low. This is partly due to a lack of resources. In addition, the nonprofit treatment sector has very high levels of staff turnover, particularly amongst counsellors (Myers, 2004b; Myers & Parry, 2003). These factors combined could produce inadequate types and amount of services and might impact on the comprehensiveness of services provided. In addition, these factors could impact on the extent to which the public perceives AOD treatment services to be useful and effective, and subsequently treatment utilisation.

**3.5.2. Resource barriers within AOD treatment services**

Resource factors within the AOD treatment system thus appear to affect the availability of AOD treatment services. In South Africa, as mentioned previously, there is limited capacity to treat indigent clients without medical insurance or ability to pay for services. This is partly due to the limited availability of free AOD services. Even though nonprofit treatment facilities do have a small number of treatment slots available for indigent clients, the availability of these treatment slots is limited by financial resources. More specifically, as state funding to nonprofit facilities has decreased in real terms over time, the bulk of the client population at these facilities needs to be comprised of paying clients (Myers et al., 2004; Myers & Parry, 2005).

Findings from previous South African research also suggest that limited resources in the public and nonprofit treatment sectors hamper the quality of AOD treatment services. Findings suggest that there are few resources for staff training and development, to invest in up-to-date treatment models, to employ additional members of staff to increase treatment coverage (with many counsellors carrying very high caseloads), and to provide comprehensive treatment services such as mental health services in these sectors of the AOD treatment system (Myers, 2004b). Evidence from the USA supports this

association between resources within the AOD treatment system and service quality (Grosenick & Hatmaker, 2000), service breadth (Friedmann et al., 1999), and service coverage (Friedmann et al., 2003; Friedmann et al., 2006). This is cause for concern, not only because service comprehensiveness has been linked to treatment outcomes (Friedmann et al., 2003; Wenzel, Turner, & Ridgely, 2004) but also because perceptions of service quality have been associated with AOD treatment uptake (Grosenick & Hatmaker, 2000; Simpson & Tucker, 2002).

Based on these findings, this study examines the relationship between treatment utilisation and barriers within the AOD treatment system. More specifically, this study hypothesises that organisational and resource barriers interact to influence access to care. Organisational barriers are thought to impact on treatment utilisation both limiting timely access to treatment and via their influence on perceptions of treatment quality and effectiveness. Similarly, resource barriers are hypothesised to impact on treatment utilisation via their influence on the availability of services and on beliefs about the quality and effectiveness of available services.

### 3.6. SUMMARY

Previous research has identified a range of AOD treatment need factors, predisposing variables, personal and community enabling factors, and treatment system factors that appear to be associated with AOD treatment utilisation. This chapter provided an overview of these factors.

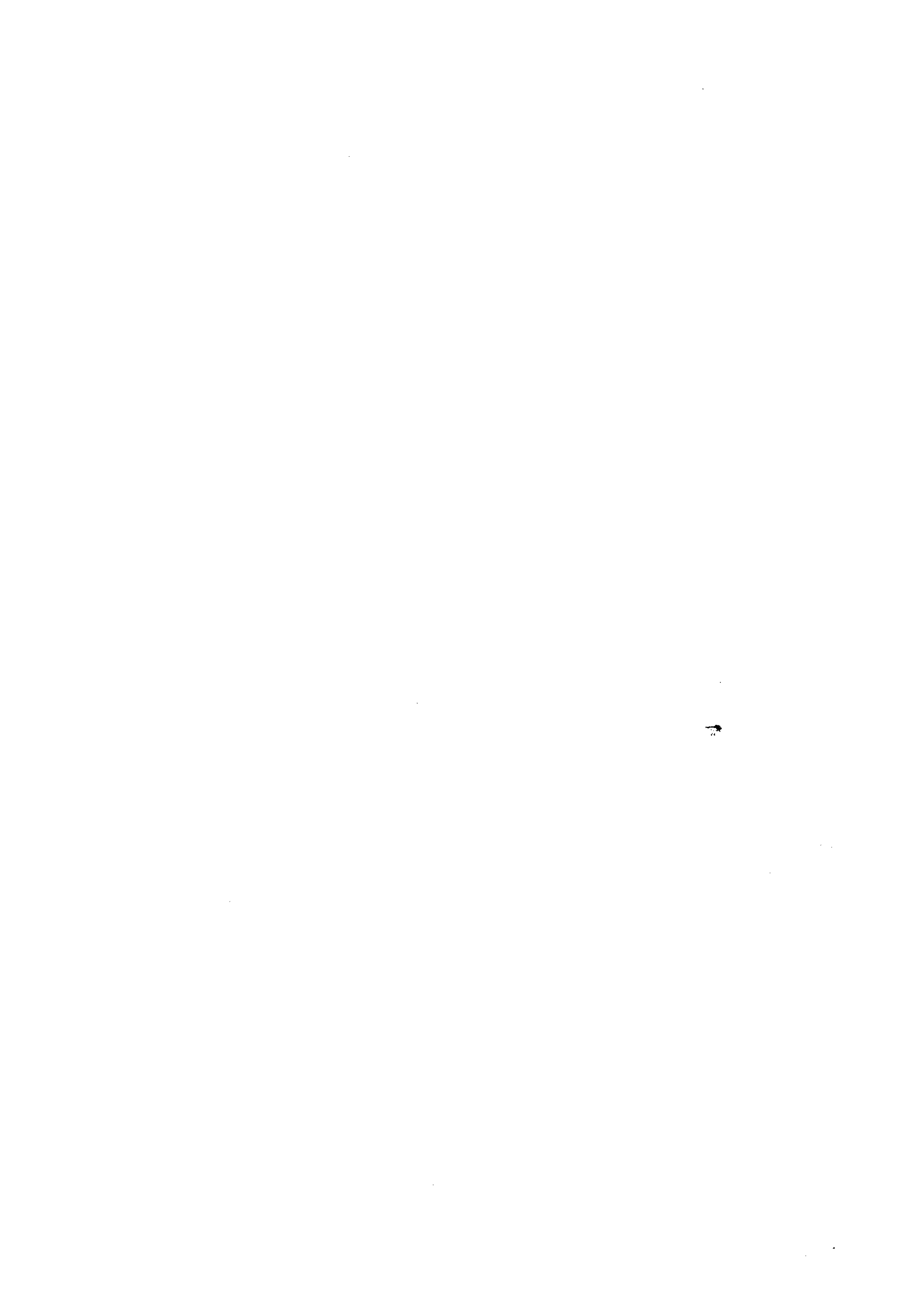
Despite this body of research, studies of access to AOD treatment have been flawed. Prior research has tended to reduce understandings of AOD treatment access to explanations of barriers to treatment initiation at the level of the individual (Appel et al., 2004; George & Tucker, 1996; Hser et al., 1998), with scant acknowledgement given to the role of the social context; or the level of the AOD treatment system (Friedmann et al., 1999; Matto, 2004). Few, if any, studies have provided a comprehensive understanding of access to AOD

treatment which integrates findings from different levels of influence. Not only has this shortcoming limited our understanding of the relationships between individual and contextual influences on treatment access, but has also hampered the development of interventions to enhance access to AOD treatment.

As mentioned previously, research on access to AOD treatment has largely consisted of descriptive studies of factors associated with treatment entry among special population groups, self-reported obstacles to accessing treatment, and factors that differentiate out-of-treatment AOD users and recipients of treatment services. Apart from a few studies that have used abbreviated versions of the BHSU model, few studies have included theoretical frameworks that provide a context for interpreting findings. These studies not only lack explanatory power, but also provide limited insight into how barriers interact with treatment need to inform access.

The current study redresses many of these limitations by exploring both individual and contextual influences on access to AOD treatment and by employing a widely accepted theory of health services utilisation. This theory-driven approach could provide opportunities for expanding conceptual understandings of access to AOD treatment and for developing interventions. This might lead to more comprehensive policy initiatives to reduce disparities in access to services.

More specifically, the primary purpose of this study is to identify factors associated with realised access to treatment for adult people with AOD problems from historically disadvantaged communities in the Cape Town metropole. This study thus compares and contrasts out-of-treatment AOD users and recipients of AOD treatment on a range of factors thought to be associated with AOD treatment utilisation. The aims and objectives of this study are described more fully in Chapter Four.



# CHAPTER FOUR

# METHOD

## 4.1. AIMS

This study aimed to identify individual, community, and contextual factors associated with access to AOD treatment among historically disadvantaged communities (HDCs) in the Cape Town metropole. The study also explored whether inequities in access to AOD treatment were present for these communities. To provide a comprehensive view of access to treatment, data were collected from treatment providers, treatment recipients and those in need of services. It is hoped that this comprehensive approach will provide guidelines for interventions that enhance access to AOD treatment for HDCs. More specifically, this study had the following aims:

***Aim 1:*** To explore whether access to AOD treatment among HDCs in Cape Town is equitable.

*Objective 1:* To identify whether need or non-need variables account for the largest proportion of the variance in AOD treatment access among people from HDCs.

> <u>Hypothesis 1:</u> Non-need variables will be more strongly associated with realised access than need variables.

***Aim 2:*** To identify variables associated with access to AOD treatment for people from HDCs in the Cape Town metropole.

*Objective 1:* To identify predisposing factors associated with AOD treatment use.

Hypothesis 1: Lower levels of neighbourhood disorder will predispose individuals to use AOD treatment

Hypothesis 2: Negative beliefs about treatment effectiveness and treatment concerns will be negatively associated with AOD treatment use.

Hypothesis 3: Self efficacy to stop AOD use will be positively associated with treatment access.

*Objective 2:* To identify enabling and/or restricting variables associated with AOD treatment use.

Hypothesis 1: Affordability, awareness, geographic access and availability barriers will be negatively associated with AOD treatment use.

Hypothesis 2: Stigma will be negatively associated with AOD treatment use.

Hypothesis 3: Psychological functioning, social support and social capital will be positively associated with treatment use.

*Objective 3:* To identify the need for treatment variables associated with AOD treatment use.

Hypothesis 1: Evaluated treatment need (i.e. drug problem severity) will be positively associated with AOD treatment use.

Hypothesis 2: Perceived treatment need (i.e. perceived drug problem, readiness to change and treatment motivation) will be positively associated with treatment use.

*Objective 4:* To identify and describe socio-contextual influences on AOD treatment use for people from HDCs.

***Aim 3***: To describe socio-demographic differences on the profile of variables associated with AOD treatment use for people from HDCs in Cape Town.

*Objective 1:* To identify gender differences on the profile of predisposing, enabling and need for treatment variables associated with AOD treatment use.

*Objective 2:* To identify race differences on the profile of predisposing, enabling and need for treatment variables associated with AOD treatment use.

***Aim 4:*** To explore possible interactions between the predisposing, need for treatment, enabling/restricting and contextual variables associated with AOD treatment use for people from HDCs in the Cape Town metropole.

*Objective 1:* To examine whether the association between need for treatment and access is mediated by enabling/restricting variables.

Hypothesis 1: Enabling/restricting variables will mediate the association between treatment need and AOD treatment use.

*Objective 2:* To explore whether the association between need for treatment and access is moderated by enabling/restricting variables.

*Objective 3:* To explore whether the association between enabling/restricting variables and access is moderated by other enabling/restricting variables

Hypothesis 1: The association between geographic access barriers and treatment use will be moderated by affordability and awareness barriers.

***Aim 5:*** To explore the applicability of the BHSU model for examining AOD treatment use among HDCs in a resource-poor setting.

***Aim 6:*** Based on the study's overall findings, to make recommendations and inform intervention efforts to improve access to treatment for HDCs in the Cape Town metropole.

## 4.2. STUDY DESIGN

Given the complexity and potentially multiple influences on access to AOD treatment, this study employed a multi-level mixed methods research design that consisted of a cross-sectional case-control study (Phase one) as well as a separate qualitative study (Phase two). More specifically, the case-control study compared people with AOD problems from HDCs who accessed treatment (cases) with people with AOD problems from HDCs who had not accessed treatment (controls) on a range of predisposing, enabling and need variables thought to be associated with access to treatment.[4] The qualitative case study examined contextual (specifically AOD treatment system) influences on access to AOD treatment for people from HDCs.[5] This mixed methods design allowed the researcher to gain insights into aspects of access to AOD treatment at different levels; with phase one focusing primarily on intra and inter-personal factors associated with access to treatment and phase two focusing primarily on contextual influences on treatment access. While the knowledge generated by these studies is level-specific, the use of the BHSU model as a guiding framework for both studies allowed results from each phase to be integrated so that global inferences about access to AOD treatment for HDCs in the Cape Town metropole could be made.

There were several advantages to examining the access phenomenon through both quantitative and qualitative lenses, including allowing for a more comprehensive understanding of access to AOD treatment to be gained than would be from using a single approach (Creswell, 2003). While the quantitative component provided insight into access-related factors at a population level; the qualitative phase provided additional insight into contextual and systemic influences on access to treatment that deepened the study and allowed for a description of complex, non-linear interactions (not easily represented in quantitative studies) to be made (Coleman, 1986; Denzin, 1988). Phase two also

[4] This case-control design is described in section 4.2.1

[5] This case study design is described in section 4.2.2.

helped improve the explanatory power of phase one by identifying factors within the treatment system that clarified and helped interpret findings from this phase. In addition, as quantitative and qualitative methods have their own set of strengths and weaknesses, combining methods (and triangulating different data sources) enhanced the validity, reliability and usefulness of the full set of findings (Creswell, 2003; Denzin, 1988; Tashakkori & Teddlie, 2003). This allowed for many of the limitations of a single approach to be overcome and enabled stronger inferences to be made (Tashakkori & Teddlie, 2003). The specific research design used in each phase is described in the following sub-sections; thereafter each study phase is discussed separately.

#### 4.2.1. Phase One: The case-control design

A cross-sectional case-control design was used during Phase one. This design, also known as a case-referent design, probes causal inferences about an outcome of interest by comparing cases that have the outcome of interest with controls that do not have the outcome of interest. These comparisons are done using retrospective data on multiple variables thought to be risk factors for the outcome of interest (Paneth, Susser, & Susser, 2002; Shadish, Cook & Campbell, 2002). This design was chosen as it is well-suited to generating hypotheses about causal connections between risk factors and outcomes. More specifically, the researcher thought this design would allow for the identification of factors significantly associated with AOD treatment use among HDCs in Cape Town.

For this study, subjects were selected based on the presence or absence of the outcome of interest, namely realised access to AOD treatment. This study defined cases as persons from HDCs with AOD problems who had accessed AOD treatment in the 12 months preceding the study.[6] In contrast, controls were

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[6] Access to treatment was operationalised as having completed detoxification (if required) and having attended at least two treatment sessions.

defined as persons from HDCs with AOD problems who had not accessed AOD treatment prior to this study.

As mentioned earlier, this design is well-suited to answering this study's research questions, as it allows potential determinants of access to be identified and facilitates the study of multiple factors thought to be associated with a particular outcome. In addition, case-control studies are more feasible to implement than experiments when the outcome of interest is rare or takes time to develop (Shadish et al., 2002). This is particularly important for the study of access to AOD treatment among poor black South Africans, which is a very rare event (see Chapter Two for a discussion). More specifically, this design is appropriate to use when examining rare outcomes as it is efficient with respect to sample size (due to over-sampling of the rare outcome) and therefore practical in terms of time and expense (Paneth et al., 2002). Apart from being cheaper and logistically easier to conduct than field experiments or cohort studies, this design is often ethically more appropriate as it may reduce risks to participants. Given the harms associated with untreated AOD problems, the researcher felt it would be more ethical to use a case-control design than a prospective cohort design that tracks people with AOD problems until they access services.

Despite the value of this design, it does have certain limitations. First, the methods of selecting cases and controls necessarily vary as they rarely present in the same way (Schulz & Grimes, 2002; Shadish et al., 2002). This may introduce certain selection biases into the study. One way of addressing these biases is via matching controls to cases on geographic influences and demographic factors. In this study, selection bias was controlled for by sampling controls from the same communities in which the cases arose, and by matching cases and controls on gender and race dimensions using frequency matching techniques (Grimes & Schulz, 2002; Paneth et al., 2002). Despite this, the researcher acknowledges that matched controls may still differ from cases in unobserved ways that can be confounded with presumed determinants of the

outcome. While the use of controls from multiple sources could have helped avoid such problems (Shadish et al., 2002), this was not within the scope of the current study. This study used a narrowly defined control, which according to Schulz and Grimes (2002) is useful when the research question is highly specific; as it is in the current study.

A second limitation is that assessment of treatment and risk exposure in case-control designs is retrospectively reconstructed from fallible sources such as memory and clinical records (Shadish et al., 2002). The use of retrospective data may lead to recall and ascertainment biases (Grimes & Schulz, 2002). In this study, the researcher tried to limit these biases via the careful selection of cases and controls (Schulz & Grimes, 2002). In addition, recall bias was limited by using time-line follow back (TLFB) procedures to collect retrospective data. TLFB procedures have been shown to improve the accuracy of retrospective AOD data (Sobell, Sobell, & Toneatto, 1992). Other limitations of this design that are relevant for this study include the inability to estimate rates of access to treatment, difficulties in determining causal order among multiple risk factors, and the risk of inaccurate interpretation of findings due to confounding factors (Grimes & Schulz, 2002; Paneth et al., 2002). Nonetheless this design was appropriate for this study's research questions given its widespread use in examining rare outcomes and for its ability to generate causal hypotheses (Shadish et al., 2002)- which is the primary aim of this study.

#### 4.2.2. Phase Two: The qualitative component

A qualitative case study design was employed during Phase two. The case study is an intensive investigation of a single unit of interest (Yin, 1994) and examines the interaction of the unit of study within its context (Babbie & Mouton, 2001). Qualitative case studies take multiple perspectives into account and attempt to understand the influence of social systems on subjects' perspectives and behaviours (Newman & Benz, 1998; Yin, 1994). While the unit of study may be

an individual, family, community or country, the unit of interest for this study was the nonprofit AOD treatment system in the Cape Town metropole.

The case study design was well suited to addressing this study's research questions, as it allowed for the identification and examination of social contextual factors within HDCs and the AOD treatment system that might influence access to AOD treatment for people from HDCs and that were not easily quantifiable. More specifically, this component of the study examined the influence of several contextual factors on access to treatment, specifically community-level influences, AOD treatment system influences, and broader political influences. This component of the study also integrated multiple perspectives on access to AOD treatment, specifically those of treatment service providers and local communities (see section 4.4.1.). The inclusion of these multiple variables and multiple perspectives allowed the researcher to examine how the nonprofit AOD treatment system and individuals seeking treatment interact with the social context. This contextualised knowledge also allowed for a more nuanced understanding of access to AOD treatment to be formed.

## 4.3. PHASE ONE

### 4.3.1. Sample characteristics

To be selected for inclusion in the study, potential cases and controls had to meet the following eligibility criteria: they had to be at least 18 years old; self-identify as either Black/African or Coloured; earn less than R2500 per month; have AOD problems (either treated or untreated); and provide written, informed consent to participate in the study.

#### *4.3.1.1. Sampling method*

As the target population consisted of a hard-to-reach population for which limited information was available, snowball sampling techniques were used to identify cases and controls. During the data collection period (June 2005 to January 2006), cases were identified at nonprofit AOD treatment facilities in the Cape

Town metropole, with which the researcher had well-established relationships. Nonprofit treatment centres were identified as starting points for sampling as compared to the for-profit treatment sector; they are more likely to serve clients from HDCs (see Chapter One). In addition, community contacts were used to identify controls in each of the 12 recruitment areas (see section 4.3.2 for a description of these contacts). These cases and controls served as starting points for snowball sampling by referring the researcher to other potential cases and controls who fulfilled the study criteria. This chain referral process continued until the cases and controls adequately represented the 12 recruitment areas and the desired sample size had been obtained.

Although the use of snowball sampling does have inherent limitations, such as a limited ability to generalise results to the broader population, the possibility of response bias, and the possibility that significant relationships may be due to the influence of extraneous variables (Bryman & Cramer, 1997), this study tried to address these limitations. To minimise the risk of response bias, this study obtained a response rate of 98.3%; well over the 70% recommended by Babbie and Wagenaar (1992). Procedures that enabled the researcher to obtain such a high response rate are described in section 4.3.2. This study also controlled for extraneous variables by collecting biographical data. As race and gender were identified as potential confounders of access to treatment, equal proportions of male and female as well as Black/African and Coloured cases were sampled and frequency matching was used to ensure that cases and controls were matched on these dimensions. Race and gender were also controlled for in statistical analyses.

#### *4.3.1.2. Recruitment areas*

To ensure that controls represented the population of persons with AOD problems in HDCs, subjects were recruited from a range of these communities. Two residential areas from each of the six sub-structures of the Cape Town metropole were selected as key focus areas for sampling. To be selected, the

area had to consistently appear in SACENDU's list of top ten residential areas for AOD problems or be identified by key informants as an area with high levels of AOD use. Selected areas also had to be classified as "Black" or "Coloured" residential areas under the apartheid regime, have high levels of health and social problems, have limited infrastructure to support service delivery, and be low-income areas.

For this study, recruitment areas included: Atlantis and Dunoon in the Blaauwberg/ Northern sub-structure, Delft and Khayelitsha in the Tygerberg sub-structure, Eersterivier and Wallacedene in the Oostenberg/Eastern sub-structure, Macassar and Lowandle in the Helderberg sub-structure, Langa and Retreat in the Southern Peninsula sub-structure, and Mitchell's Plain and Gugulethu in the Central sub-structure of the Cape Town metropole[7]. These recruitment areas have been identified as key target areas for AOD interventions by provincial government and other policy makers.

More specifically, these communities were chosen as recruitment areas as they appear to be representative of HDCs in the Cape Town metropole. Like other HDCs, they are characterised by high levels of poverty and unemployment (Statistics South Africa, 2005); high incidence rates for TB and HIV (Bradshaw et al., 2004); high levels of crime, violence and trauma (Groenewald et al., 2001); and low levels of social infrastructure, such as housing and transport (Smith, 2005). Therefore, a strong case can be made for the study sample being representative of HDCs in the Cape Town metropole, particularly as all subjects also had low monthly incomes.

#### *4.3.1.3. Characteristics of the final sample*

A non-random, snowball sample of 989 participants was drawn from the selected recruitment areas (see section 4.3.1.1.). The final sample consisted of 434 cases and 555 controls. Of these controls, approximately 46 were selected from each

[7] A map of these recruitment areas can be found in Appendix 1.

recruitment area. Chi-square tests of association revealed that cases and controls did not differ by gender or race. Similarly, independent sample *t* tests showed that mean age and level of education did not differ among cases and controls. Demographic data for this study are shown in Table 3.

**Table 3. Demographic information for the overall sample (N = 989)**

| Variable | Cases | Control | Chi-square/ t -test (p) | Overall |
|---|---|---|---|---|
| **Male** | 54.4% (236) | 50.3% (279) | 1.65 (0.20) | 52.1% (515) |
| **Female** | 45.6% (198) | 49.7% (276) | | 47.9% (474) |
| **Black/African** | 50.9% (221) | 50.3% (279) | 0.04 (0.84) | 50.6% (500) |
| **Coloured** | 49.1% (213) | 49.7% (276) | | 49.4% (489) |
| **Mean age in years(SD)** | 24.95 (4.81) | 25.43 (5.98) | 1.38 (0.17) | 25.22 (5.51) |
| **Mean education - grade (SD)** | 11.55 (1.57) | 11.45 (1.52) | -0.95 (0.34) | 11.50 (1.54) |
| **Total (N)** | 434 | 555 | - | 989 |

### 4.3.2. Procedures

Prior to initiating Phase one, the Access to Treatment Survey Questionnaire (ATQ) (see section 4.3.3.) was pilot-tested among 40 people with AOD problems from two HDCs in Cape Town. Pilot-testing took the form of face-to face interviews. This one-on-one interview format allowed fieldworkers to provide feedback on the extent to which interview items were understood and to identify problematic wording that needed to be changed. This feedback allowed the researcher to refine the ATQ prior to the main study. Only a few items were problematic. Items relating to self-efficacy were reworded so that they were more easily understood, negatively worded items were changed due to misunderstandings that occurred, and examples and probing questions were added to ensure that the meaning behind the ATQ items would be understood by all and to minimise the occurrence of "don't know" and "neutral" responses. Pilot-

testing also allowed the reliability of the scales comprising the ATQ to be established for a South African population.[8]

The researcher had initially planned to translate the ATQ into Afrikaans and isiXhosa. However, feedback from fieldworkers, key informants and participants during pilot-testing revealed that most individuals in the urbanised communities of the Cape Town metropole had a good grasp of English. Given this feedback and the costs associated with translation, the researcher decided not to translate the ATQ and instead employed trained fieldworkers, fluent in at least two of the three official languages of the region (English, Afrikaans, and isiXhosa), who could translate items where needed.

During Phase one, data were collected by a team of five fieldworkers. All of the fieldworkers had extensive experience in conducting community surveys related to AOD use and had been previously employed by the South African Medical Research Council for this purpose. All fieldworkers were familiar with and had close contacts in the target recruitment areas. This facilitated entry into these communities and enabled fieldworkers to gain the trust of potential participants. Trust was also facilitated by the matching of potential participants and fieldworkers on ethnicity and (where possible) gender dimensions. Fieldworkers completed 40 hours of training in data collection procedures, such as recruitment, quality assurance, screening and interview administration; research ethics; and AOD-related issues. In addition, fieldworkers were provided with a training manual and guidelines for questionnaire administration. During the initial stages of pilot-testing and study implementation, fieldworkers were closely monitored by a fieldwork manager and by the researcher. This helped maintain data quality by ensuring that that the ATQ was adhered to, participants' responses were correctly recorded, and that probes were used to ensure appropriate responses.

[8] Reliability statistics for the pilot-test are reported in section 4.3.3.

The first step of data collection involved identifying, screening and interviewing respondents who acted as cases for realised access to treatment. More specifically, all inpatient and outpatient nonprofit AOD treatment facilities in the Cape Town metropole were contacted. Having obtained the support of these treatment providers, the investigator trained counselling staff from these facilities to identify recipients of services that met the study's selection criteria. First, counsellors obtained written informed consent from potential cases so that locator information could be gathered and passed on to the fieldworkers. The counsellors also screened potential recruits for eligibility using the brief screener (described in section 4.3.3). This brief screener took approximately five minutes to complete. Of the 440 persons screened, all met the study's eligibility criteria. Once eligibility had been established, the counsellors obtained locator information (e.g. residential address and contact telephone numbers)[9] from each recruit so that fieldworkers could contact them and arrange an interview. Fieldworkers contacted these recruits telephonically or in person to obtain written informed consent to conduct a full ATQ. Only six recruits refused to participate in the interview. During this interview, the ATQ was administered in a face-to-face format. The use of face-to face interviews had several advantages for this study; including the ability to decrease "neutral", "unsure" and "don't know responses" to survey items through the use of probing questions and the ability to guard against confusing items by clarifying items that the participant had clearly misunderstood. This interview took approximately 90 minutes to complete and was generally conducted in recruits' place of residence. It should be noted that this sampling strategy was approved by the University of Cape Town's ethics review board (see section 4.5. for a detailed description).

The second step in data collection consisted of identifying, screening and interviewing respondents who acted as controls. Fieldworkers entered the target communities by contacting community organisations, community leaders, and

[9] The brief screener, informed consent form, locator information form and ATQ for treatment recipients can be found in Appendix 2.

individuals in the community with known interests in the AOD field. This process was made easier by the fact that the fieldwork team and the fieldwork manager were known to the target communities. Having obtained the support of these key informants, fieldworkers asked them to identify potential recruits for the study who were known to have AOD problems. Key informants were assured that in doing so, their anonymity would be protected. In addition, informants were fully informed about the process of contacting potential controls and gave contact information for these individuals knowingly. Key informants were easily able to identify controls within their communities. This is partly due to the social and political structure of poorer South African communities where people live together in close confines, often depend on each other for financial survival and support, and know their neighbours. In such communities, keeping issues such as involvement in crime, health and social problems, and drug use private is often a challenge. Based on this understanding of poor South African communities, the researcher assumed that key informants would be able to provide lists of individuals with AOD problems.

Having obtained lists of potential control subjects (which served as a starting point for snowball sampling); fieldworkers contacted these individuals in person. These potential control subjects were never told who had identified them as having AOD problems. In addition, they did not seem to be surprised or offended about being asked to participate in the study. For the most part, responses were positive, with controls eager to share their experiences. After explaining the aims of the study, fieldworkers obtained written informed consent to screen them for study eligibility. The interviewer-administered brief screener took approximately five minutes to complete. Participants were given feedback from the results of the screener and those who did not meet the study's eligibility criteria were thanked for their participation and given a resource list of AOD services.[10] Of the 559 participants screened, only four did not meet the study's eligibility criteria. For eligible participants, fieldworkers obtained written consent to conduct a full

[10] This resource list can be found in Appendix 3.

interview. A time and place was arranged where participants could be interviewed in private, during which time the ATQ was administered. This interview took approximately 90 minutes to complete. Although participants did not receive financial incentives, fieldworkers did provide participants with refreshments. Fieldworkers also provided participants with feedback from their interview and referrals to AOD treatment and other health services if required.

### 4.3.3. Data collection tools

Two data collection tools were used over the course of this phase: (1) the interviewer-administered brief screener and (2) the Access to Treatment Questionnaire (ATQ) developed by the author for the purpose of this study. The following sub-sections provide detailed descriptions of these tools.

#### *4.3.3.1. The brief screener*

The brief screener was used to determine eligibility to participate in the study. This screener collected information on socio-demographic variables such as area of residence, gender, age, race, and legal income in the last 30 days. Controls were also screened for current AOD problems in order to objectively assess their need for AOD treatment. As cases were known to have lifetime AOD problems, they were not screened for these problems. This study used the Texas Christian University Drug Screen (TCUDS-II; Knight, Simpson, & Hiller, 2002) to screen controls for current AOD problems.

##### *4.3.3.1.1. TCUDS-II*

The TCUDS-II is a screening tool for drug use severity and dependence that has been used with treatment-seeking populations and community samples (Knight et al., 2002). This study uses the first 9 items of the TCUDS to compute a continuous composite score that measures drug use severity (Peters et al., 2000). Composite scores range from 0 to 9, with a composite score of 3 or greater indicating relatively severe drug-related problems that correspond to a DSM-IV-TR drug dependence diagnosis; characterised by clinically significant

impairment in social and occupational functioning, drug-related harms, increasing tolerance for the substance, and loss of control over AOD use (American Psychiatric Association, 2001). The scale's overall reliability is good ($\alpha = .89$) (Knight et al., 2002) and has good test-retest reliability ($r = .97$) (Peters et al., 2000). This study obtained a Cronbach coefficient alpha of .88 for the scale. In addition, all controls scored above the cut-off point of 3, indicating an objective need for treatment.

#### *4.3.3.2. The Access to Treatment Survey Questionnaire (ATQ)*

The ATQ was compiled by the author to examine access to AOD treatment among South African populations. The ATQ is a 45 page interviewer-administered survey that measures AOD treatment use, need for AOD treatment, factors thought to predispose individuals to seeking treatment, and factors thought to enable or restrict treatment use. The ATQ examines these variable domains using existing standard questionnaires, where available. Where existing scales were not available, the author was forced to construct measures of these variables. For these constructed measures, item choice was guided by the available literature. The following sub-sections describe the measures that comprise the ATQ. These measures, and the domains they relate to, are reflected in Table 4.

##### *4.3.3.2.1. Use of AOD treatment*

The key dependent variable for this study was realised access or treatment use. This was assessed by the question: "Have you ever gone anywhere or seen anyone for help with alcohol and/or drug-related problems? " This item had a "yes" (1) or a "no" (0) response.

##### *4.3.3.2.2. Need for AOD treatment*

The ATQ assessed evaluated need for treatment, perceived need for treatment, and two situational indicators of perceived need: readiness to change AOD use and treatment motivation.

- Evaluated need for treatment

Evaluated need for AOD treatment was ascertained by a scale adapted for the purposes of this study. The ATQ included 17 items based on the Substance Use Disorders module of the Structured Clinical Interview for DSM-IV-TR (SCID-I; First, Spitzer, Gibbon, & Williams, 1997). These items assess the impact of AOD use on health and emotional well-being, attempts to cut down on AOD use, tolerance and withdrawal symptoms. Each item is rated on a 4-point Likert scale, with responses ranging from "never" (1) to "in the past month" (4). Higher composite scores indicate greater drug problem severity and greater evaluated need for AOD treatment. This scale appears to have good internal reliability, with this study obtaining composite score alpha coefficients of .90 for the pilot and .89 for the main study.

- Perceived need for treatment

Internally perceived need for treatment was examined via the following questions: "Do you think you have an alcohol or drug problem?" and "Do you think you need help (treatment/rehab) to change your alcohol and/or drug use?" The question "Have other people suggested that you need help to change your use of alcohol/drugs?" examined externally perceived need for treatment. These items had a "yes" (1) or "no" (0) response.

- Readiness to change

The Stages of Change, Readiness and Treatment Eagerness Scale (SOCRATES-8D; Miller & Tonigan, 1996) was used to measure readiness to change AOD use. This 19-item scale consists of three subscales: the 7-item problem recognition scale, the 4-item ambivalence scale and the 8-item taking steps to change scale. Each item is rated on a 5-point Likert scale, with responses ranging from "strongly disagree" (1) to "strongly agree" (5). This study only used the composite SOCRATES score, calculated by averaging the aggregated responses to all items. Higher scores indicate greater readiness to change AOD use (Miller & Tonigan, 1996).

The SOCRATES has good construct validity; predicting treatment initiation, treatment engagement and treatment outcomes across a range of populations and settings (Cloud & Peacock, 2001; Maisto, Chung, Cornelius, & Martin, 2003; Miller & Tonigan, 1996). Good internal reliability coefficients have been reported, with coefficients ranging from .68 to .89 for the subscales and test-retest reliability correlations ranging from .83 to .99 (Figlie, Dunn, & Laranjeira, 2005; Miller & Tonigan, 1996). This study obtained alpha coefficients of .91 for the pilot and .95 for the main study.

- Treatment motivation

The Texas Christian University (TCU) motivation scales (Simpson & Joe, 1993; Simpson, 2001) were used to measure problem recognition, desire for help and treatment readiness. The 9-item Problem Recognition (PR) scale measures the extent to which participants' perceive problems related to their AOD use. The 6-item Desire for Help (DH) scale examines intrinsic need for change and interest in getting help for AOD problems. The 8-item Treatment Readiness (TR) scale assesses commitment levels and expectations about how helpful AOD treatment will be (Knight, Holcom & Simpson, 1994). For these scales, responses range on a 5-point Likert scale from "strongly disagree" (1) to "strongly agree" (5). Composite scores are computed by averaging the aggregated responses (Joe, Broome, Rowan-Szal, & Simpson, 2002). These scores are then rescaled so that they range from 10 to 50.

These scales have good construct validity and predict treatment entry, retention, and outcome among people with AOD problems in different populations (De Weert-van Oene, Schippers, De Jong, & Schrijvers, 2002; Simpson & Joe, 1993; Simpson, Joe, Rowan-Szal, & Greener, 1995; Simpson, Joe, Rowan-Szal, & Greener, 1997). In previous studies, the PR, DH, and TR scales have yielded high coefficient alpha reliabilities, ranging from .70 to .91 and test-retest reliability correlations ranging from .74 to .85 (De Weert-van Oene et al., 2002; Joe, Simpson, & Broome, 1999; Knight et al., 1994; Simpson et al., 1995; Simpson et

al., 1997). This study obtained Cronbach alpha coefficients of .97 and .86 for the PR scale, .85 and .86 for the DH scale, and .65 and .68 for the TR scale for the pilot and main study, respectively.

*4.3.3.2.3. Predisposing factors for access to treatment*

The ATQ contains several variables thought to be predisposing factors for AOD treatment use. These include demographic and social structural factors, beliefs and attitudes related to AOD treatment; and psychological factors.

- Predisposing demographic and social structural factors

The ATQ includes the demographic variables of age and gender and the following social-structural variables: race/ethnicity, level of education, relative socio-economic deprivation, and neighbourhood environment.

- Relative socio-economic deprivation

A relative deprivation index was constructed by conducting a principal components' analysis on variables included in the ATQ that related to subjects' socio-economic circumstances, including living conditions and material possessions. This procedure resulted in 10 items being selected. The items were: access to drinking water and electricity; type of toilet facilities; type of dwelling; type of cooking fuel; and ownership of a television, fridge, stove, telephone, and/or couch. The weighted Z-scores of these items were used to create a composite relative deprivation score, with higher scores indicating relatively less socio-economic deprivation.[11]

- Neighbourhood environment

The Neighbourhood Environment Scale (NES; Crum, Lillie-Blanton, & Anthony, 1996) measures neighbourhood disadvantage. Prior research has shown that this scale has high internal consistency and predictive validity (Crum et al., 1996).

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[11] Appendix 4 describes the methods used to construct this index

**Table 4. Domains and measures comprising the ATQ**

| Domain | Variables | Scale and indicators |
|---|---|---|
| Utilization | Use of treatment | Use; type, frequency & amount of treatment; treatment completion |
| Predisposing | Sociodemographic | Age, education, gender, race |
| | Neighbourhood environment | NES; safety, AOD use, and poverty in communities |
| | Relative deprivation | Relative deprivation index |
| | Beliefs/attitudes to treatment | Beliefs about treatment effectiveness, perceptions about access, treatment concerns |
| | Self-efficacy | ADUCE-C, self-efficacy to stop AOD use for > 1 month |
| Need | Evaluated need | Drug problem severity scale based on SCID |
| | Perceived need- internal | Perceived AOD problem, perceived need for treatment |
| | Perceived need- external | Others suggest need for treatment |
| | Readiness to change | SOCRATES scale |
| | Treatment motivation | TCU problem recognition, desire for help & treatment readiness scales |
| Enabling | Affordability | Medical Aid, income, employment status, affordability barrier scale |
| | Competing priorities | Competing priorities: money for food and need to care for others |
| | Awareness | Awareness of services (Yes/No), Number of facilities aware of |
| | Availability | Extent to which alcohol and/or drug treatment available |
| | Geographic access | Distance and time to treatment, Delays in accessing treatment |
| | Treatment appropriateness | Treatment utility scale |
| | Stigma | Stigma consciousness and stigma towards substance abusers scales |
| | Psychological functioning | TCU depression & anxiety scales |
| | Social support | RAND- MOS social support scale, TCU abstinence support scale |
| | Social capital | Neighbourhood trust scale, Social cohesion scale |

For this study, the wording of the NES was adapted for an adult population and item responses were changed to range on a 5-point Likert scale from "strongly disagree" (1) to "strongly agree" (5). As the pilot study obtained a low Cronbach alpha coefficient (.46), 8 items with low inter-item correlations were removed from the scale. For the main study, the 10-item version had good internal consistency, with a Cronbach alpha coefficient of .82 being obtained.

The ATQ also includes items that examine perceived levels of poverty, safety, alcohol use, and drug use in participants' neighbourhoods. Question responses range on a 5-point Likert scale from "very high" (1) to "very low" (5).

- Beliefs about AOD treatment

The 12-item "Beliefs about treatment effectiveness" scale measures community beliefs about the effectiveness of AOD treatment. Developed for this study, items were derived from information provided by key informants in the AOD field. Item responses range on 5-point Likert scale from "strongly disagree" (1) to "strongly agree" (5). Aggregated responses are averaged to give an overall score, with higher scores reflecting more negative beliefs. This scale appears to have good face validity and internal reliability, with Cronbach alpha coefficients of .74 and .81 obtained in the pilot and main study, respectively.

In addition, the 15-item "Community views about access to treatment" scale measures community beliefs about the affordability, availability and appropriateness of existing AOD treatment services as reported by participants. This scale was constructed for the purposes of this study, with items based on information provided by key informants in the AOD field. Item responses range on 5-point Likert scale from "strongly disagree" (1) to "strongly agree" (5). Aggregated responses are averaged to give an overall score, with higher scores reflecting more negative views. This scale has good face validity and internal reliability, with the main study obtaining a Cronbach alpha coefficient of .82.

The 10-item "Treatment concerns" scale measures individual concerns about what happens in AOD treatment. Item responses range on 5-point Likert scale from "to a very small extent" (1) to "a very large extent" (5). Aggregated responses are averaged to give an overall score, with higher scores reflecting greater treatment concerns. This scale was based on items taken from Miller and Tonigan's (1995) "Barriers questionnaire" (Meyers, Miller, Smith, & Tonigan, 2002). Initial findings suggest that this scale has good internal consistency, with the main study obtaining a Cronbach alpha coefficient of .90.

- Psychological predisposing factors

The 20-item Alcohol and Drug Use Self-efficacy Scale, Confidence version (ADUSE-C; Brown, Seraganian, Tremblay, & Annis, 2002) assesses self-efficacy for alcohol and drug abstinence. For each of the ADUSE-C items, participants rate the extent to which they feel confident to abstain from AOD use on a 5-point scale, with responses ranging from "not at all" (1) to "extremely" (5). While the ADUSE-C comprises four subscales (negative affect, social situations, physical or other concerns, and craving and urges), this study only uses the composite confidence score. This is calculated by summing the responses to all scale items (Brown et al., 2002). The ADUSE-C has good construct validity and predicts treatment initiation, relapse potential and post-treatment functioning among people with AOD problems across a range of populations and settings (Brown et al., 2002; Hiller, Broome, Knight, & Simpson, 2000). This study obtained Cronbach alpha coefficients of .97 for the composite scale in both the pilot and main study.

The ATQ also includes an item that examines self-efficacy to stop AOD use for more than one month. Item responses range on a 5-point Likert scale, with higher scores indicating greater self-efficacy to change AOD use.

*4.3.3.2.4. Enabling and restricting factors*

The ATQ includes the following enabling/restricting factors: affordability factors, availability of services, geographic access, service appropriateness, competing priorities, stigma, psychological functioning, social support, and social capital.

- Affordability barriers

Several items examine the affordability of AOD treatment; including questions about monthly income, employment status, and access to medical insurance. A 5-item "Affordability scale" was constructed to measure the extent to which treatment and transport costs act as barriers to access. These items were taken from Miller and Tonigan's (1995) "Barriers questionnaire" (Meyers et al., 2002). Items are rated on a 5-point Likert scale; with responses ranging from "a very small extent" (1) to "a very large extent" (5). Aggregated responses are averaged to give a composite score, with higher scores indicating more cost-related barriers. Although not properly tested, initial findings suggest that the scale has good internal consistency ($\alpha$ = .84).

- Awareness barriers

The ATQ also examines the extent to which participants are aware of AOD services. A single-item question asks participants if they know where to go for AOD services; with responses coded as "yes" (1) or "no" (0). Participants are also asked to list the AOD treatment facilities that they are aware of. Based on responses to this question, the number of known AOD treatment facilities is calculated.

- Availability and geographic accessibility of treatment

Two items examine the availability of AOD services within subjects' communities. Responses to these items are coded as "yes" (1) or "no" (0). In addition, two open-ended questions examine the geographic accessibility of services in terms of distance to treatment and travel time to treatment.

A 3-item "Delays in accessing treatment" scale examines delays in accessing treatment due to distance, gatekeepers, and waiting lists. These items were taken from Miller and Tonigan's (1995) "Barriers questionnaire" (Meyers et al., 2002). Item responses range on a 5-point Likert scale from "a very small extent" (1) to "a very large extent" (5). A composite score is calculated by averaging the responses to the summed items; with higher scores indicating more time-related barriers. Although this scale needs to be tested further, initial findings suggest that it is internally consistent, with this study obtaining a Cronbach alpha coefficient of .72.

- Perceived appropriateness of treatment services

A scale was constructed to examine perceived appropriateness of AOD treatment. A 2-item "Treatment utility scale" examines perceptions that AOD treatment would be useful. For these scales, responses range on a 5-point scale from "a very small extent" (1) to "a very large extent" (5). Composite scores are calculated by averaging the aggregated responses, with higher scores indicating more barriers. Initial findings suggest that these scales are internally consistent, with this study obtaining a Cronbach alpha coefficient of .78 for this measure.

- Competing priorities

The ATQ includes two single-item questions about whether the need to take care of others and/or the need to pay for food and shelter limits access to treatment. Responses for these items are coded as "yes" (1) or "no" (0).

- Psychological functioning

The TCU's 6-item depression and 7-item anxiety scales were also included in the ATQ. For these scales, higher scores indicate greater levels of depression and anxiety. Item responses range on 5-point Likert scales from "strongly disagree" (1) to "strongly agree" (5). Composite scale scores are calculated by averaging the responses to the summed items and transforming the scores so that they range from 10 to 50 (Joe et al., 2002).

The TCU depression and anxiety scales have good construct and convergent validity, with the depression scale validated against the Beck Depression Inventory (Joe, Knezek, Watson, & Simpson, 1991) and the SCL-90 Depression scale (Simpson, Knight, & Ray, 1993) and the anxiety scale validated against the SCL-90 anxiety scale (Simpson et al., 1993). These scales have good internal reliability, with alpha coefficients ranging between .76 and .80 for the depression scale and .78 and .82 for the anxiety scale (Joe et al., 2002; Knight et al., 1994; Simpson et al., 1993). For these scales, both the pilot and main phases of this study obtained Cronbach alpha coefficients that ranged from .81 to .92.

- Stigma-related barriers

The ATQ includes two measures of stigma. The first, the 10-item Stigma Consciousness Scale measures expectations of being judged negatively on the basis of one's AOD use (Ross, Williams, Timpson, Amos, & Bowen, 2005). Item responses range on 10-point Likert scale from "strongly disagree" (1) to "strongly agree" (10). Responses are summed and averaged to give a composite stigma consciousness score, with higher scores reflecting more internalised stigma. Initial studies obtained a Cronbach alpha coefficient of .87 for this scale (Ross et al., 2005). This study obtained Cronbach alpha coefficients of .90 and .84 for the pilot and main study, respectively.

Secondly, as the author was unable to find a measure of stigma towards people with AOD problems, a 16-item "Stigma towards AOD users" scale, was constructed. This measures the extent to which a community is perceived to stigmatise people with AOD problems. Item responses range on 5-point Likert scale from "strongly disagree" (1) to "strongly agree" (5). A composite score is calculated, with higher scores reflecting more perceived stigma within communities. Although not properly tested, initial findings suggest that the scale has good internal consistency, with the pilot and main study obtaining Cronbach alpha coefficients of .83 and .84, respectively.

- <u>Barriers related to social support</u>

The RAND Medical Outcomes Study Social Support Scale (MOS-SSS, Sherbourne & Stewart, 1991) was used to measure availability of generic social support. The 19-item MOS-SSS measures functional dimensions of perceived social support. The MOS-SSS consists of four subscales: the emotional and informational support subscale measures the extent to which others are perceived to express understanding and offer advice and information, the tangible support subscale assesses the extent to which others are perceived to provide material aid, the positive social interaction subscale measures the extent to which others are perceived to be available to do fun things with, and the affectionate support subscale measures the extent to which others are perceived to express affection for the respondent. Respondents are asked to indicate the availability of support, with responses ranging on a 5-point Likert scale from "none of the time" (1) to "all of the time" (5). Higher composite scores indicate greater availability of support (Sherbourne & Stewart, 1991).

The MOS-SSS has good construct and divergent validity, with scales being distinct from measures of loneliness and other aspects of social functioning (Sherbourne & Stewart, 1991; Yu, Lee & Woo, 2004). The MOS-SSS also has good internal reliability, with Cronbach alpha coefficients of .97 to .98 being reported for the composite scale and alpha coefficients of .91 to .96 being reported for the subscales (Westaway, Seager, Rheeder, & Van Zyl, 2005; Yu et al., 2004). In addition, this scale has been used with success in South African studies, by for example Westaway and colleagues. The present study obtained Cronbach alpha coefficients for the composite scale of .96 and .97 in the pilot and main phase, respectively. For the subscales, the alpha coefficients ranged between .80 and .96.

The 9-item TCU social support scale was also included in the ATQ. This scale measures the extent to which others act as external supports for treatment and abstinence from AOD use (Joe et al., 2002; Simpson et al., 1997). Item

responses range on a 5-point Likert scale from "strongly disagree" (1) to "strongly agree" (5). Higher composite scores indicate greater levels of support for treatment and abstinence. Previous studies reported good Cronbach alpha coefficients for this scale, with alpha coefficients ranging between .75 and .95 (Joe et al., 2002; Simpson et al., 1997). This study obtained a Cronbach alpha coefficient of .77.

- Barriers related to social capital

The ATQ includes two indicators of social capital: interpersonal trust and social cohesion. The 17-item Neighbourhood Trust Scale was constructed for the purpose of this study and combines social trust items from various social capital surveys (e.g. Grootaert, Nsrayan, Jones, & Woolcock, 2003). This scale measures the extent to which participants trust others, with responses ranging on a 5-point scale from "strongly disagree" (1) to "strongly agree" (5). Responses are aggregated to form a composite score, with higher scores reflecting greater social trust. This scale has good internal reliability, with the pilot and main study obtaining alpha coefficients of .87 and .86, respectively.

The 5-item Social Cohesion Scale (Sampson, Raudenbusch, & Earls, 1997) was expanded to include an AOD item. Item responses range from "strongly disagree" (1) to "strongly disagree" (5). Responses are aggregated to form a composite measure of social cohesion, with higher scores reflecting greater levels of cohesion. Cronbach alpha coefficients of .76 and .83 were obtained for the pilot and main study, respectively.

*4.3.3.2.5. A note on the use of constructed scales in the ATQ*

Where the author was unable to find scales that measured variables thought to be associated with AOD treatment use in Chapters Two and Three, she was forced to construct measures of these variables. Although not ideal, and while these measures require further psychometric development and testing, initial analyses suggest that these measures are reliable. This is supported by

feedback provided by fieldworkers during the administration of the ATQ. As the ATQ is an interviewer-administered questionnaire, fieldworkers were given instructions to provide feedback on the extent to which items were understood and/or were problematic. This feedback emphasised that participants successfully understood all questions contained in the ATQ and were able to respond without difficulty.

### 4.3.4. Data analysis

All quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS, Norusis, 2007). Reliability analyses were conducted for all psychometric scales. A relative deprivation index was calculated by performing a principal components analysis on all underlying deprivation indicators (see Appendix Four). Following this, descriptive analyses were performed on all study variables.

To examine significant differences between cases and controls on predisposing, enabling/restricting, and need variables, bivariate analyses consisting of Chi-squared tests and *t* tests of means were conducted. Following this, a series of multiple logistic regression analyses were performed, with access to treatment as the dependent variable and significant predisposing, enabling and need variables entered as the independent predictor variables in separate regression equations. To identify which variable domain predicted the greater amount of variance in access to treatment, a hierarchical multiple logistic regression analysis was performed, with each of the enabling/restricting, need for treatment and predisposing domains entered as separate variable blocks. To maintain model parsimony, only variables that were significant at the 0.01 level were included in the final model.

To examine significant socio-demographic differences on the profile of variables associated with treatment use, bivariate analyses were used to identify variables significantly associated with access for each race and gender group. Following

this, multiple logistic regression analyses on access were conducted separately for each race and gender group.

Finally, hierarchical logistic regression procedures were used to explore possible interactions between the enabling and the need for treatment variable domains. More specifically, hierarchical logistic regression procedures were used to explore both mediator and moderator effects. For the latter, this involved the creation of interaction terms.

## 4.4. PHASE TWO

### 4.4.1. Sample characteristics

For this phase, data on the treatment system and access to treatment were collected from multiple informants and multiple sources to improve confidence in the reliability of findings (Babbie & Mouton, 2001). More specifically, a sample frame was constructed from the contact list of the Western Cape Drug Forum, a body that is comprised of local drug action committees, treatment providers, researchers and policy makers.

Local drug action committees (LDACs) are community-based bodies tasked with coordinating all AOD prevention and treatment activities at a local level. LDACs consist of community representatives concerned with AOD use as well as AOD agencies operating in the specified community. It is hoped that LDACs will provide a structure for mobilising around AOD issues in HDCs. The development and initiation of LDACs is the responsibility of the provincial Department of Social Development, which has elected coordinators in each of the six social service district offices to fulfill this mandate. Despite this, LDACs vary in the extent to which they are operational; due to differences in community capacity and resources.

As LDACs, their coordinators, and nonprofit treatment centres focus on coordinating and providing AOD treatment services for HDCs, the researcher

thought these would be the best sources of information on access to and the functioning of the AOD treatment system for these communities. Key informants were purposefully selected according to their knowledge and experience of AOD treatment service delivery in the Cape Town metropole and their experience of working with HDCs.

As data collection only continued until saturation of new themes and information occurred, the final sample consisted of 20 key informants. Informants from various components of the treatment system participated in the study, including clinical managers and senior counsellors at nonprofit AOD treatment facilities (TSPs), substance abuse coordinators (SACs) in the district social service offices that serve the 12 recruitment areas (see section 4.3.1.2.), members of LDACs, and AOD policy makers. Some of these key informants served multiple roles: seven were employed by AOD treatment services, four were involved in LDACs, five were AOD policy makers, and five were substance abuse coordinators in district social service offices located in the recruitment areas.

#### 4.4.2. Procedures

In Phase two, the researcher contacted the identified key informants, informed them about the study, and obtained their written informed consent to participate in semi-structured in-depth interviews. The researcher then arranged a time and place for an interview. The interview was conducted in private by either the investigator or a research assistant with postgraduate training in qualitative interviewing techniques. As all the key informants spoke English fluently, interviews were conducted in this language. These interviews[9] covered broad themes that include perceptions of access to treatment and contextual influences on access for HDCs. The interviews took approximately 90 minutes to complete. Each interview was audio-taped and transcribed verbatim using professional transcription services. Data collection continued until saturation of new themes and information occurred.

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[9] The interview guide can be found in Appendix 5.

#### 4.4.3. The Access to Treatment Interview Schedule

Semi-structured in-depth interviews were used to explore several themes, including (i) perceptions about the structure and functioning of the AOD treatment system in the Cape Town metropole, (ii) the process of accessing AOD treatment for persons from HDCs, (iii) perceptions of factors that enable and restrict access to services for persons from HDCs, and (iv) views on how access to treatment for people from HDCs could be improved. Interviews were loosely guided by an interview schedule based on these four broad themes. The open-ended questions contained in this schedule allowed informants to explore the aspects of the treatment system that were most significant to them. This interview schedule also included probes that were used to elicit more detailed responses from the respondents, where necessary.

#### 4.4.4. Data analysis

Qualitative data were analysed using the Analysis Software for Word-Based Records programme, version 6.4 (AnSWR, Center for Disease Control, 2004). This programme facilitates data organisation and analysis (through ordering codes and establishing relationships between codes), assesses inter-coder agreement, and provides a convenient means of manipulating coded text data (McLellan et al., 2004). Both inductive and deductive content and thematic analysis techniques were used to analyse the textual data (Strauss & Corbin, 1990). Deductive category application (based on broad themes of interest as outlined in the interview guide) was used to develop an initial coding scheme (Strauss & Corbin, 1990). An iterative process of coding and analysis then followed: as coding progressed and new dimensions of meaning emerged in the analysis, new categories of codes were added to the coding scheme. As this inductive category development occurred, all relevant textual data were retrieved and examined for further coding designations. Following the development of a coding scheme, axial coding was used to order and make linkages between codes (Weitzman & Miles, 1995).

Inter-coder reliability was assessed by examining the level of agreement between independent coders. Initially, a shared understanding of the coding system was developed by the investigator coding the first few transcripts with two research assistants. Following this, the research assistants coded the transcripts independently. The investigator then reviewed this coding to establish the level of agreement between the coders and to address any contradictions.

## 4.5. ETHICS

Ethical approval for this study was granted by the Ethics Review Board of the Faculty of Humanities at the University of Cape Town. More specifically, the ethical standards of informed consent, confidentiality, and minimisation of risks to participants were adhered to. For example, to be eligible for this study, all potential recruits and key informants had to provide written informed consent to participate in the project. In addition, throughout this project, all information collected about individual participants and key informants was kept confidential – no personal identifying information was entered into the data analysis and only aggregated data analyses occurred.

For participants, the only risk posed by involvement in this study was the risk of improper disclosure of sensitive information. These risks were minimal as most interview forms did not record personal identifying information; apart from locator forms that were kept in separate locked files with restricted access. Participants were also free to withdraw from the study and to decline from answering any sensitive questions without having to provide reasons for doing so.

Although no financial incentives were given for study participation, participation in this study might have had some benefits for those individuals who desired help for their AOD problems. The research team was able to provide these individuals with referrals to available treatment options. In addition, all participants were provided with resource lists that contained contact details for

self-help groups, treatment facilities and non-government organisations in Cape Town.

## 4.6. SUMMARY

This chapter described the aims and objectives of this study and outlined the mixed methods research design that was used to achieve these objectives. More specifically, this study comprised a quantitative case-control study that examined access to AOD treatment at a population level and a qualitative component that explored contextual influences on access to treatment. The case-control study used the ATQ to collect survey data on predisposing, enabling, and treatment need variables from 555 controls and 434 cases. The qualitative phase consisted of a case study of the nonprofit AOD treatment system and gathered rich descriptive data on contextual (including treatment system) influences on access to treatment from 20 key informants using semi-structured in-depth interviews. This integrative design allowed for the triangulation of data and thus improved the reliability, validity and utility of findings. Results for Phases one and two are presented in Chapters Five and Six respectively.

# CHAPTER FIVE

# RESULTS: PHASE ONE

## 5.1 INTRODUCTION

This chapter presents the results for Phase one. The distribution of predisposing socio-demographic, treatment need and enabling variables are described for cases and controls. Following this, the results of data analyses performed to examine each of the research questions are presented. All statistical tests were two-tailed, with the maximum level of significance set at 5% ($\alpha = 0.05$). Two-tailed tests were used as some of the study objectives were not directional. Some non-significant results are included among the findings, where these results relate to the research questions.

## 5.2. DISTRIBUTION OF PREDISPOSING, ENABLING AND NEED FOR TREATMENT VARIABLES

This section describes the distribution of all predisposing, enabling and need variables among cases and controls and for the overall sample.

### 5.2.1. Distribution of variables that predispose individuals to access AOD treatment

Tables 5 and 6 reflect the distribution of categorical and continuous predisposing variables, respectively.

**Table 5. Proportion (%) of cases and controls by categorical predisposing variables**

| Predisposing factors | | Controls % (n) | Cases % (n) | Total % (n) |
|---|---|---|---|---|
| Gender | Female | 49.7 (276) | 45.6 (198) | 47.9 (474) |
| | Male | 50.3 (279) | 54.4 (236) | 52.1 (515) |
| Race | Black/African | 50.3 (279) | 50.9 (221) | 50.6 (500) |
| | Coloured | 49.7 (276) | 49.1 (213) | 49.4 (489) |
| Education level | < Std 8 | 24.3 (135) | 23.0 (100) | 23.8 (235) |
| | Std 8-9 | 46.3 (257) | 40.3 (175) | 43.7 (432) |
| | ≥ Std 10 | 29.4 (163) | 36.6 (159) | 32.6 (322) |
| Family history of substance abuse | Yes | 47.4 (263) | 49.5 (215) | 48.3 (478) |
| | No | 52.6 (292) | 50.5 (219) | 51.7 (511) |
| Total (N) | | 555 | 434 | 989 |

**Table 6. Descriptive statistics for continuous predisposing variables**

| Predisposing variables | Min | Max | Controls (N = 555) Mean (SD) | Cases (N = 434) Mean (SD) | Total (N = 989) Mean (SD) |
|---|---|---|---|---|---|
| Age | 16 | 53 | 25.43 (5.98) | 24.95 (4.80) | 25.22 (5.50) |
| Relative deprivation | -3.07 | 8.03 | -0.05 (1.21) | 0.07 (1.15) | 0.00 (1.17) |
| Self-efficacy to stop using > 1 month | 1 | 5 | 2.02 (0.99) | 2.34 (1.22) | 2.16 (1.11) |
| ADUSE-C | 1 | 5 | 2.58 (0.74) | 2.55 (1.06) | 2.56 (0.89) |
| Neighbourhood safety | 1 | 5 | 1.71 (0.70) | 2.13 (1.07) | 1.89 (0.90) |
| Neighbourhood alcohol | 1 | 5 | 1.41 (0.56) | 1.75 (0.83) | 1.56 (0.71) |
| Neighbourhood drug | 1 | 5 | 1.39 (0.57) | 1.60 (0.84) | 1.48 (0.71) |
| Neighbourhood poverty | 1 | 5 | 1.49 (0.59) | 1.94 (0.98) | 1.69 (0.82) |
| NES | 10 | 50 | 42.36 (3.43) | 41.42 (5.07) | 41.95 (4.25) |
| Beliefs about treatment effectiveness | 13 | 60 | 31.95 (6.83) | 35.98 (8.29) | 33.71 (7.76) |
| Treatment concerns | 10 | 50 | 26.43 (8.54) | 29.70 (7.71) | 27.86 (8.34) |
| Community views about access to treatment | 1 | 5 | 3.87 (3.80) | 3.64 (3.80) | 3.77 (3.80) |

### 5.2.2. Distribution of need for treatment variables

Table 7 displays the distribution of categorical need for treatment variables among cases and controls. Table 8 reports descriptive statistics for continuous need variables among cases and controls.

**Table 7. Proportion (%) of cases and controls by categorical need variables**

| Need for treatment variables | | Controls % (n) | Cases % (n) | Total % (n) |
|---|---|---|---|---|
| TCUDS screening: drug dependence | Yes | 100.0 (555) | 100.0 (434) | 100.0 (989) |
| | No | 0.0 (0) | 0.0 (0) | 0.0 (0) |
| Think you have an AOD problem? | Yes | 65.2 (362) | 84.1 (365) | 73.5 (727) |
| | No | 34.8 (193) | 15.9 (69) | 26.5 (262) |
| Think you need treatment? | Yes | 57.7 (320) | 79.0 (343) | 67.0 (663) |
| | No | 42.3 (235) | 21.0 (91) | 33.0 (326) |
| Others suggested that you get treatment? | Yes | 71.0 (394) | 90.3 (392) | 79.5 (786) |
| | No | 29.0 (161) | 9.7 (42) | 20.5 (203) |
| Total (N) | | 555 | 434 | 989 |

**Table 8. Descriptive statistics for continuous need variables**

| Need for treatment variables | Min | Max | Controls (N = 555) Mean (SD) | Cases (N = 434) Mean (SD) | Total (N = 989) Mean (SD) |
|---|---|---|---|---|---|
| Age first used drugs | 8 | 39 | 19.25 (3.79) | 18.10 (3.37) | 18.74 (3.66) |
| Drug problem severity (SCID) | 0 | 13 | 10.09 (1.47) | 11.51 (1.49) | 10.71 (1.64) |
| SOCRATES composite | 19 | 95 | 52.99 (13.80) | 67.76 (13.92) | 59.47 (15.67) |
| TCU PR | 10 | 50 | 29.97 (8.21) | 36.88 (6.24) | 33.01 (8.16) |
| TCU DH | 10 | 50 | 32.15 (8.76) | 37.71 (7.66) | 34.59 (8.74) |
| TCU TR | 10 | 50 | 33.19 (5.65) | 32.52 (5.90) | 32.90 (5.77) |

### 5.2.3. Distribution of variables that enable/ restrict AOD treatment use

The distribution of categorical and continuous variables that enable or restrict AOD treatment access is depicted in Table 9 and Table 10 respectively.

**Table 9. Proportion (%) of cases and controls by categorical enabling variables**

| Enabling/restricting variables | | Controls % (n) | Cases % (n) | Total % (n) |
|---|---|---|---|---|
| Medical insurance | Yes | 2.2 (12) | 8.5 (37) | 5.0 (49) |
| | No | 97.8 (543) | 91.5 (397) | 95.0 (940) |
| Legally employed | Yes | 49.9 (277) | 48.6 (211) | 49.3 (488) |
| | No | 50.1 (278) | 51.4 (223) | 50.7 (501) |
| Legal income (Rands) | < 500 | 43.4 (241) | 49.8 (216) | 46.2 (457) |
| | 501-1000 | 36.8 (204) | 19.6 (85) | 29.2 (289) |
| | 1001-2500 | 19.8 (110) | 30.6 (133) | 24.6 (243) |
| Awareness of where to go for help | Yes | 62.5 (347) | 96.3 (418) | 77.4 (765) |
| | No | 37.5 (208) | 3.7 (16) | 22.6 (224) |
| Enough alcohol services | Yes | 0.2 (1) | 1.4 (6) | 0.7 (7) |
| | No | 99.8 (554) | 98.6 (428) | 99.3 (982) |
| Enough drug services | Yes | 0.2 (1) | 1.4 (6) | 0.7 (7) |
| | No | 99.8 (554) | 98.6 (428) | 99.3 (982) |
| Competing priorities- money for food | Yes | 73.5 (408) | 40.1 (174) | 58.8 (582) |
| | No | 26.5 (147) | 59.9 (260) | 41.2 (407) |
| Competing priorities- caring for others | Yes | 51.5 (286) | 31.1 (135) | 42.6 (421) |
| | No | 48.5 (269) | 68.9 (299) | 56.4 (588) |
| Total (N) | | 555 | 434 | 989 |

**Table 10. Descriptive statistics for continuous enabling/restricting variables**

| Enabling/restricting variables | Min | Max | Controls (N = 555) Mean (SD) | Cases (N = 434) Mean (SD) | Total (N = 989) Mean (SD) |
|---|---|---|---|---|---|
| Affordability barriers | 10 | 50 | 38.76 (6.23) | 27.91 (9.46) | 33.99 (9.49) |
| No. of treatment centres aware | 0 | 8 | 1.06 (0.97) | 4.00 (1.84) | 2.35 (2.04) |
| Delays to treatment | 10 | 50 | 37.63 (5.79) | 31.90 (9.76) | 35.11 (8.29) |
| Time to treatment (min) | 1 | 4 | 3.63 (0.58) | 2.84 (0.80) | 3.25 (0.80) |
| Distance to treatment (km) | 1 | 4 | 3.66 (0.55) | 2.72 (0.75) | 3.28 (0.79) |
| Perceived utility scale | 10 | 50 | 24.73 (9.56) | 28.80 (11.13) | 26.52 (10.47) |
| Social trust | 16 | 80 | 46.74 (8.94) | 44.28 (12.34) | 45.66 (10.63) |
| Social cohesion | 1 | 5 | 2.71 (0.62) | 2.75 (0.74) | 2.73 (0.68) |
| Stigma consciousness | 1 | 10 | 7.63 (1.53) | 8.59 (1.64) | 8.05 (1.65) |
| Community stigma | 16 | 80 | 55.30 (7.56) | 62.34 (8.89) | 58.38 (8.88) |
| TCU Abstinence support | 10 | 50 | 35.28 (5.56) | 37.43 (4.66) | 36.22 (5.29) |
| Emotional/information support | 1 | 5 | 3.30 (0.77) | 3.32 (0.79) | 3.31 (0.78) |
| Tangible support | 1 | 5 | 3.38 (0.87) | 3.58 (0.82) | 3.45 (0.85) |
| Affectionate support | 1 | 5 | 3.29 (0.92) | 3.53 (0.89) | 3.40 (0.92) |
| Positive social interaction | 1 | 5 | 3.43 (0.86) | 3.64 (0.83) | 3.52 (0.85) |
| RAND composite scale | 1 | 5 | 3.34 (0.72) | 3.47 (0.74) | 3.40 (0.73) |
| TCU Depression | 10 | 50 | 32.51 (7.35) | 38.31 (7.85) | 35.06 (8.09) |
| TCU Anxiety | 10 | 50 | 34.12 (8.66) | 39.19 (7.90) | 36.34 (8.70) |

## 5.3. VARIABLES ASSOCIATED WITH ACCESS TO AOD TREATMENT

To identify predisposing, enabling and need variables significantly associated with AOD treatment use, Chi-square tests of association were conducted on all categorical variables and odds ratios were used to measure the strength of these associations. Independent sample *t* tests were performed to compare differences in the mean scores between cases and controls on all continuous variables. Where assumptions of homogeneity of variance were violated, *t* tests for unequal variance were performed. Bonferroni-Holm corrections were used to adjust for Type I error due to the use of multiple comparisons and Cohen's d was

used to calculate effect sizes. Results of these analyses are presented separately for each variable domain.

### 5.3.1. Predisposing variables associated with access

#### *5.3.1.1. Associations between categorical predisposing variables and access to treatment*

Results of Chi-square analyses showed that level of education was the only categorical predisposing variable significantly associated with access to treatment (Table 11). For this variable, a higher proportion of cases reported having completed high school.

**Table 11. Results of Chi-square analyses of predisposing variables by access to treatment**

| Predisposing variables | | No access (controls) % (n) | Access (cases) % (n) | $\chi^2$ | df | OR (95%CI) |
|---|---|---|---|---|---|---|
| Gender | Female | 49.7 (276) | 45.6 (198) | 1.65 | 1 | 1.18 (0.92-1.52) |
| | Male | 50.3 (279) | 54.4 (236) | | | |
| Race | Black | 50.3 (279) | 50.9 (221) | 0.04 | 1 | 0.97 (0.76-1.25) |
| | Coloured | 49.7 (276) | 49.1 (213) | | | |
| Level of education | < Std 8 | 24.3 (135) | 23.0 (100) | 6.12* | 2 | |
| | Std 8-9 | 46.3 (257) | 40.3 (175) | | | |
| | ≥ Std 10 | 29.4 (163) | 36.6 (159) | | | |
| Family: AOD abuse | No | 52.6 (292) | 50.5 (219) | 0.45 | 1 | 1.09 (0.85-1.40) |
| | Yes | 47.4 (263) | 49.5 (434) | | | |

* $\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$

#### *5.3.1.2. Continuous predisposing variables and access to treatment*

Results of independent sample *t* tests found that the mean scores on several predisposing variables differed significantly between cases and controls (Table 12).

**Table 12. Results of independent sample *t* tests for continuous predisposing variables**

| Predisposing variables | No access (Controls) (N= 555) Mean (SD) | Access (Cases) (N = 434) Mean (SD) | *t* value | df | Effect size (d) |
|---|---|---|---|---|---|
| Age | 25.43 (5.98) | 24.95 (4.81) | 1.38 | 986 | 0.09 |
| Relative deprivation | -0.05 (1.17) | 0.07 (1.15) | -1.64 | 987 | 0.11 |
| Beliefs about the treatment effectiveness | 31.95 (6.83) | 35.98 (8.29) | -8.03*** | 655 | 0.51 |
| Treatment concerns | 26.43 (8.54) | 29.70 (7.71) | -6.23*** | 987 | 0.40 |
| Community views about access to treatment | 3.87 (0.33) | 3.64 (0.57) | 8.39*** | 832 | 0.79 |
| Neighbourhood safety | 1.71 (0.70) | 2.13 (1.07) | -7.10*** | 708 | 0.48 |
| Neighbourhood alcohol | 1.41 (0.56) | 1.75 (0.83) | -7.44*** | 723 | 0.49 |
| Neighbourhood drug | 1.39 (0.57) | 1.60 (0.84) | -4.45*** | 727 | 0.30 |
| Neighbourhood poverty | 1.49 (0.59) | 1.94 (0.98) | -8.40*** | 672 | 0.57 |
| NES | 42.36 (3.43) | 41.42 (5.07) | -7.93*** | 658 | 0.22 |
| Self-efficacy to stop using > 1 month | 2.02 (0.99) | 2.34 (1.22) | -4.37*** | 828 | 0.29 |
| ADUSE-C | 2.58 (0.74) | 2.55 (1.06) | 0.44 | 739 | 0.03 |

* $\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$

A significant difference was found between cases and controls on the variable "self-efficacy to stop using drugs for more than one month". Compared to controls, cases reported more self-efficacy for abstinence. However, this finding should be interpreted with caution due to the small effect size.[10] Cases also had significantly higher mean scores on the "Beliefs about treatment effectiveness", and "Treatment concerns" scales than controls; suggesting more negative beliefs about the effectiveness of treatment. This finding rejects the study hypothesis that more negative beliefs and concerns about treatment are associated with *not*

[10] Cohen (1988) noted that effect sizes for d of .20 are small; .50 are medium, and .80 are large

accessing treatment. In contrast, controls had significantly higher mean scores on the "Community Views about Access to Treatment" scale than cases. Compared to subjects who accessed services, controls reported more negative perceptions about the availability and accessibility of AOD treatment.

Findings also revealed significant differences between cases and controls for neighbourhood predisposing factors. Compared to cases, controls reported significantly lower mean scores on neighbourhood safety, alcohol and drug use, and poverty. These findings suggest that participants that had not accessed treatment experienced more neighbourhood problems than those who accessed treatment. The finding that cases had significantly lower mean scores on the NES than controls (reflecting lower levels of neighbourhood disadvantage) provides support for this interpretation. Given the small to moderate effect sizes, neighbourhood factors are probably only moderately associated with access.

### 5.3.2. Need for treatment variables associated with access

#### *5.3.2.1. Associations between categorical need variables and access*

Results of Chi-square analyses conducted to identify categorical need variables significantly associated with access are presented in Table 13. Significant associations were found between access and "perceived need for treatment", "perceived (AOD) problem", and "others suggesting the need for AOD services". Participants who thought they had an AOD problem were 2.8 times more likely to access treatment than those who did not think they had a problem. Similarly, the odds of accessing treatment were 2.8 times greater for subjects who reported a need for AOD treatment compared to subjects who did not report this need. These are moderate to strong effects[11] (Rosenthal, 1994). The odds of accessing treatment were almost four times greater for subjects for whom others had

[11] According to Rosenthal (1994), odds ratios ranging between 1 and 2 have a weak or small effect size, 2.5 have a moderate effect size, 4-10 have a strong effect size, and >10 have a very large effect size.

suggested the need for AOD services compared to subjects for whom others had not suggested this need. This is a strong effect (Rosenthal, 1994).

**Table 13. Chi-square analyses of need variables by access**

| Need variables | | No access (Controls) % (n) | Access (Cases) % (n) | $\chi^2$ | df | OR (95%CI) |
|---|---|---|---|---|---|---|
| Think have AOD problem | No | 34.8 (193) | 15.9 (69) | 44.56*** | 1 | 2.82 (2.07-3.85) |
| | Yes | 65.2 (362) | 84.1 (365) | | | |
| Others suggest you need help | No | 29.0 (161) | 9.7 (42) | 55.80*** | 1 | 3.81 (2.64-5.51) |
| | Yes | 71.0 (394) | 90.3 (392) | | | |
| Need AOD treatment | No | 42.3 (235) | 21.0 (91) | 50.36*** | 1 | 2.77 (2.08-3.68) |
| | Yes | 57.7 (320) | 79.0 (343) | | | |

*** $\alpha < .001$

#### *5.3.2.2. Continuous need variables and access*

Results of independent sample *t* tests performed to examine whether the mean scores on continuous need variables differed among cases and controls are presented in Table 14. Significant differences were found between cases and controls for the age at which drugs were first used, with cases reporting a younger mean age than controls. This is probably not clinically significant given the small effect size (Cohen, 1988) and the mean age difference of only one year.

Cases also had significantly higher mean scores on the drug problem severity scale compared to controls; with a large effect being obtained for this scale. This suggests that subjects who accessed treatment had more severe AOD problems than those who did not access services. Cases also obtained significantly higher mean scores on the SOCRATES scale compared to controls. This implies that cases had greater motivation to change their AOD use than controls. Compared to controls, cases obtained significantly higher mean scores for the TCU problem recognition (PR) and desire for help (DH) scales; with strong to moderate effects

being obtained for these scales. Cases thus had greater AOD problem recognition than controls.

**Table 14. Independent sample *t* tests for continuous need variables**

| Need for treatment variables | No access (Controls) (N= 555) Mean (SD) | Access (Cases) (N = 434) Mean (SD) | *t* value | df | Effect size (d) |
|---|---|---|---|---|---|
| Age first used drugs | 19.29 (3.79) | 18.10 (3.37) | 4.96 *** | 987 | 0.32 |
| SCID drug problem severity | 10.09 (1.47) | 11.51 (1.49) | -14.82*** | 895 | 0.96 |
| SOCRATES | 52.99 (13.80) | 67.76 (13.92) | -16.63*** | 987 | 1.07 |
| TCU PR | 29.97 (8.21) | 36.88 (6.24) | -15.04*** | 986 | 0.93 |
| TCU DH | 32.15 (8.76) | 37.71 (7.66) | -10.62*** | 975 | 0.67 |
| TCU TR | 33.19 (5.65) | 32.52 (5.89) | 1.82 | 987 | 0.12 |

* $\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$

### 5.3.3. Enabling/restricting variables associated with access

#### *5.3.3.1. Categorical enabling variables and access*

Results of Chi-square analyses conducted to identify categorical enabling variables significantly associated with access are presented in Table 15.

Although perceived availability of AOD services was not significantly associated with access, almost all cases and controls reported limited availability of AOD treatment in their communities. In contrast, a large effect was found for "awareness of where to go for AOD services", with the odds of accessing treatment being more than 15 times greater for subjects who were aware of where to go compared to those who were unaware. The variables "competing financial priorities" and "need to take care of others" were also significantly and strongly associated with access. The chance of accessing treatment for subjects with competing financial priorities was 24% that of subjects without these needs.

Similarly, the chance of accessing treatment for subjects with competing demands to care of others was 43% that of subjects without these competing demands.

**Table 15. Chi-square analyses of enabling/ restricting variables by access**

| Enabling/restricting variables | | No access (Controls) % (n) | Access (Cases) % (n) | $\chi^2$ | df | OR (95%CI) |
|---|---|---|---|---|---|---|
| Medical insurance | No | 97.8 (543) | 91.5 (397) | 20.94*** | 1 | 4.22 |
| | Yes | 2.2 (12) | 8.5 (37) | | | (2.17-8.19) |
| Legal employment | No | 50.1 (278) | 51.4 (223) | 0.16 | 1 | 0.95 |
| | Yes | 49.9 (277) | 48.6 (211) | | | (0.74-1.22) |
| Legal income (Rands) | < 500 | 43.4 (241) | 49.8 (216) | 41.70*** | 3 | |
| | 501-1000 | 36.8 (204) | 19.6 (85) | | | |
| | 1001-2500 | 19.8 (110) | 30.6 (133) | | | |
| Awareness of where to go | No | 37.5 (208) | 3.7 (16) | 158.73*** | 1 | 15.66 |
| | Yes | 62.5 (347) | 96.3 (418) | | | (9.24-26.55) |
| Enough alcohol tx | No | 99.8 (554) | 98.6 (428) | 5.01* | 1 | 7.77 |
| | Yes | 0.2 (1) | 1.4 (6) | | | (0.93-64.75) |
| Enough drug treatment | No | 99.8 (554) | 98.6 (428) | 5.01* | 1 | 7.77 |
| | Yes | 0.2 (1) | 1.4 (6) | | | (0.93- 64.75) |
| Competing priorities: money | No | 26.5 (147) | 59.9 (260) | 112.33*** | 1 | 0.24 |
| | Yes | 73.5 (408) | 40.1 (174) | | | (0.18-0.31) |
| Competing priorities- care | No | 48.5 (269) | 68.9 (299) | 41.56*** | 1 | 0.43 |
| | Yes | 51.5 (286) | 31.1 (135) | | | (0.33-0.55) |

* $\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$

Significant and strong associations were also found between access and medical insurance, with the odds of accessing treatment more than 4 times greater for those with medical insurance compared to those without medical insurance. In addition, access was significantly associated with legal income. A greater proportion of cases reported a monthly income between R1001 and R2500 (the

highest category) than controls and a higher proportion of controls reported earning less than R1000 per month compared to cases.

#### *5.3.3.2. Continuous enabling variables and access*

Findings from independent sample *t* tests performed to examine whether the mean scores on enabling variables differed among cases and controls are presented in Table 16.

**Table 16. Independent sample *t* tests for continuous enabling variables by access**

| Enabling variables | No access (Controls) Mean (SD) | Access (Cases) Mean (SD) | *t* value | df | Effect size (d) |
|---|---|---|---|---|---|
| Affordability barriers | 38.76 (6.23) | 27.91 (9.46) | 20.66*** | 854 | 1.39 |
| Number of treatment centres aware of | 1.06 (0.97) | 4.00 (1.84) | -30.27*** | 619 | 2.07 |
| Delays in treatment | 37.63 (5.80) | 31.90 (9.76) | 10.83*** | 664 | 0.73 |
| Distance to treatment (km) | 3.66 (0.55) | 2.72 (0.75) | 17.36*** | 766 | 1.15 |
| Time to treatment (min) | 3.63 (0.58) | 2.84 (0.80) | 21.95*** | 769 | 1.46 |
| Perceived utility scale | 24.73 (9.56) | 28.80 (11.13) | -6.07*** | 854 | 0.40 |
| Social trust | 46.74 (8.94) | 44.28 (12.34) | 3.49*** | 761 | 0.23 |
| Social cohesion | 2.71 (0.62) | 2.75 (0.74) | -1.10*** | 842 | 0.06 |
| Community stigma | 55.30 (7.56) | 62.33 (8.89) | -13.17*** | 849 | 0.86 |
| Stigma consciousness | 7.63 (1.53) | 8.59 (1.64) | -9.44*** | 898 | 0.61 |
| TCU Abstinence support | 35.28 (5.56) | 37.43 (4.66) | -6.62*** | 982 | 0.41 |
| Emotional support | 3.30 (0.77) | 3.32 (0.79) | -0.44 | 987 | 0.03 |
| Tangible support | 3.38 (0.87) | 3.58 (0.82) | -3.65*** | 987 | 0.24 |
| Affectionate support | 3.29 (0.92) | 3.53 (0.89) | -4.15*** | 987 | 0.26 |
| Positive social interaction | 3.43 (0.86) | 3.64 (0.83) | -3.96*** | 987 | 0.25 |
| RAND social support | 3.34 (0.72) | 3.47 (0.74) | -2.80** | 987 | 0.18 |
| TCU Depression | 32.51 (7.35) | 38.31 (7.85) | -11.94*** | 987 | 0.77 |
| TCU Anxiety | 34.12 (8.66) | 39.19 (7.90) | -9.61*** | 964 | 0.61 |

* $\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$

Compared to cases, controls reported significantly higher mean scores on the "delays to treatment", "time to treatment", and "distance to treatment" scales. Participants who accessed services experienced fewer gatekeepers and delays in receiving care and had better geographic accessibility (in terms of distances and travel times) than those who did not access treatment. Strong effect sizes were obtained for these variables.

Significant differences between cases and controls were also found for affordability barriers; with controls reporting significantly higher mean scores on this scale. This suggests that subjects who did not access treatment experienced more affordability barriers than those who did access services. Cases also reported knowing of significantly more treatment centres than controls. Strong effects were obtained for these variables. In contrast, cases obtained significantly higher mean scores on the treatment utility scale than controls. This suggests that cases are more likely to perceive treatment to be inappropriate than controls. While this is surprising, it could be a function of dissatisfaction with received services.

While significant differences were found between cases and controls for indicators of social capital (social trust and social cohesion), the effect sizes were too small to draw meaningful conclusions. Cases also differed significantly from controls on measures of abstinence support and on the RAND social support scales. These findings reveal that subjects who accessed treatment had higher levels of abstinence support and general social support compared to controls. When the effect sizes of the support variables were compared, findings support the hypothesis that abstinence support is more strongly associated with treatment use than generic social support. However, these findings should not be over-interpreted due to their low to modest effects.

Cases also differed from controls on measures of psychological functioning; with cases obtaining significantly higher mean scores on depression and anxiety

scales relative to controls. Higher levels of anxiety and depression may be associated with access; supporting the study hypotheses. Finally, stigma also differentiated cases and controls, with cases reporting significantly higher mean scores on the "Stigma towards Substance Abusers" and on the "Stigma Consciousness" scales than controls. Contrary to expectations, greater stigma may be associated with access, especially given the strong effects obtained.

## 5.4. PREDICTORS OF ACCESS TO AOD TREATMENT

A series of multiple logistic regression analyses were performed to identify variables that potentially predict access (Hosmer & Lemeshow, 1989). These analyses allowed the researcher to evaluate the unique effect of multiple variables on access (compared to no access) while controlling for the effects of all other predictor variables. They also allowed the researcher to adjust for the influence of potential confounders. For each variable domain, a logistic regression procedure was conducted with access as the dependent variable. Each of these models adjusted for the potential confounding effect of gender and race. Variables that emerged as significantly associated with access in these three regression models were entered as predictor variables in a single hierarchical logistic regression analysis.

### 5.4.1. Variables on the predisposing domain that predict access

A multiple logistic regression procedure was performed with access as the dependent variable. For this procedure, predisposing variables significantly associated with access in bivariate analyses (see Tables 11-12) were entered as predictor variables. Table 17 shows the logistic regression coefficients, Wald test and odds ratio for each of the significant predictors.

A test of the full model versus the model with the intercept only was statistically significant $\chi^2$ (13; N = 989) = 319.45, $\alpha < .001$; indicating that the predictive value of the model increased when predisposing variables were added. The full model accounted for 37% of the estimated variance in access (Nagelkerke $R^2 = .369$).

According to the Hosmer and Lemeshow test, the model adequately fits the data ($\chi^2$ (8; N = 989) = 6.42, α = .601). The full model was able to correctly classify 61.3% of those who accessed treatment and 84.1% of those who did not access treatment, with an overall success rate of 74.1%.

**Table 17. Logistic regression coefficients with predisposing variables as predictors and access as the dependent variable#**

| Predictor variables | B | Wald (df =1) | OR (95% CI) |
|---|---|---|---|
| Neighbourhood alcohol use | 0.42 | 5.12 (1)* | 1.52 (1.06-2.19) |
| Neighbourhood poverty | 0.64 | 18.16 (1)*** | 1.89 (1.41-2.52) |
| Neighbourhood safety | 0.29 | 7.56 (1)* | 1.33 (1.09-1.64) |
| Community views about treatment | -1.59 | 52.19 (1)*** | 0.21 (0.13-0.32) |
| Beliefs about treatment efficacy | 0.11 | 83.46 (1)*** | 1.12 (1.09-1.15) |
| Treatment concerns | 0.05 | 21.10 (1)*** | 1.05 (1.03-1.07) |

α < .05; ** α < .01; *** α < .001;
# Controlling for confounding effects of gender, race, and place of residence

When the influence of gender and race were controlled for, community views about access, beliefs about treatment effectiveness, treatment concerns, neighbourhood poverty, neighbourhood alcohol abuse, and neighbourhood safety all had significant partial effects on access. In this multivariate analysis, self-efficacy no longer had significant effects on access. This finding rejects the study hypothesis that self-efficacy is associated with access.

For the socio-cognitive predisposing variables, inverting the odds ratio for community views about access revealed that a one-unit rise in the five-point scale increased the odds of not accessing treatment almost five-fold. As perceptions about the inaccessibility of treatment increase, the chances of accessing treatment seem to diminish. Although significant, the effects of beliefs about treatment effectiveness and treatment concerns were much smaller, with a one-point increase in these scales increasing the odds of accessing treatment by a multiplicative factor of 1.1. These findings reject the study hypothesis that

negative beliefs about treatment effectiveness and treatment concerns are associated with *not* accessing AOD treatment.

For social structural factors related to neighbourhood environment, one-unit increases in the neighbourhood safety, alcohol, and poverty scales (reflecting higher levels of safety and lower levels of alcohol abuse and poverty) increased the odds of accessing treatment by multiplicative factors of 1.1, 1.5, and 1.9 respectively. While these were relatively weak effects, findings provide some support for the study hypothesis that lower levels of neighbourhood disadvantage predispose individuals to use services.

### 5.4.2. Need for treatment variables that predict access

A multiple logistic regression procedure was performed with access as the dependent variable and need variables significantly associated with access in bivariate analyses (see Tables 13-14) entered as independent variables. "Self-perceived need for treatment" was excluded from this analysis due to its significant association with "perceived AOD problem" ($\chi^2$ (1; N = 989) = 561.89, $\alpha < .000$; Cramer's $V = 0.75$) which might have confounded results. Table 18 shows the logistic regression coefficients, Wald tests and odds ratios of the significant predictors only.

A test of the full model versus the model with the intercept only was statistically significant $\chi^2$ (7; N = 989) = 449.80, $\alpha < .000$; indicating that the predictive value of the model increased when need for treatment variables were added. The full model predicted 49% of the estimated variance in access (Nagelkerke $R^2$ = .491). However, the Hosmer and Lemeshow test revealed that the model did not fit the data adequately; $\chi^2$ (8; N = 989) = 61.74, $\alpha < .000$. The full model had a sensitivity of 79.0%, a specificity of 83.6%, with an overall success rate of 81.6%.

Results show that the drug problem severity scale, SOCRATES scale, TCU PR and DH scales, the age at which drugs were first used, self-perceived AOD

problems and others suggesting the need for AOD treatment had significant partial effects on access, when controlling for gender and race. A one-unit increase in the drug problem severity scale more than doubled the odds of accessing treatment. This finding supports the study hypothesis that drug problem severity is positively associated with treatment use.

**Table 18. Logistic regression coefficients with need variables as predictors and access as the dependent variable#**

| Predictor variables | B | Wald (df =1) | OR (95% CI) |
|---|---|---|---|
| Drug problem severity (SCID) | 0.80 | 93.00*** | 2.23 (1.89-2.62) |
| SOCRATES composite | 0.08 | 62.94*** | 1.09 (1.06-1.11) |
| TCU problem recognition | 0.06 | 9.74** | 1.06 (1.02-1.10) |
| TCU desire for help | -0.08 | 20.17*** | 0.92 (0.89-0.96) |
| Others suggest you get treatment (Yes) | 1.06 | 19.93*** | 2.89 (1.81-4.60) |
| Perceived AOD problem (Yes) | 1.14 | 17.56*** | 3.12 (1.83-5.32) |
| Age first used drugs | -0.07 | 7.31** | 0.94 (0.89-0.98) |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$;
# Controlling for confounding effects of gender and race

Although significant, the effects of the SOCRATES and the TCU problem recognition scales were smaller, with a one-point rise in these scales increasing the odds of accessing treatment by a multiplicative factor of 1.1. These findings support the study hypothesis that readiness to change and problem recognition are positively associated with treatment use. A small effect was found for the TCU desire for help scale and the age at which drugs were first used, with a one-unit increase in these variables decreasing the odds of accessing treatment by a multiplicative factor of 0.9.

The only other need variables that moderately predicted access were "perceived AOD problem" and "others suggesting the need for help". When holding other variables constant, subjects who perceived an AOD problem had triple the odds of accessing treatment compared to subjects who did not perceive a problem. Similarly, subjects for whom significant others had suggested the need for help

were almost three times more likely to access treatment compared to subjects who did not receive this advice. These findings support the hypothesis that "perceived drug problem" is positively associated with treatment use.

### 5.4.3. Variables on the enabling domain that predict access to treatment

A multiple logistic regression procedure was performed with access as the dependent variable and enabling variables significantly associated with access in bivariate analyses (Tables 15-16) entered as independent variables. Gender and race were also controlled for in the analysis. Table 19 presents the logistic regression coefficients, Wald tests and odds ratios of the significant predictor variables.

**Table 19. Logistic regression coefficients with enabling variables as predictors and access as the dependent variable#**

| Predictor variables | B | Wald (df) | OR (95% CI) |
|---|---|---|---|
| Awareness of AOD treatment centres (Yes) | 1.97 | 10.04 (1)** | 7.20 (2.12-24.43) |
| Number of known treatment centres | 1.87 | 71.31 (1)*** | 6.47 (4.19-9.98) |
| Affordability barriers | -0.17 | 32.86 (1)*** | 0.84 (0.79-0.89) |
| Legal monthly income (Reference >R1001) | | 8.19 (2)* | |
| Income < R500 | -1.10 | 6.51 (1)* | 0.33 (0.14-0.78) |
| Income R500-R1000 | -0.98 | 4.39 (1)* | 0.38 (0.15-0.94) |
| Time to treatment | -2.47 | 25.12*** | 0.09 (0.03-0.22) |
| Social cohesion | 0.85 | 8.66** | 2.34 (1.33-4.13) |
| Social trust composite | -0.08 | 13.72** | 0.92 (0.85-0.96) |
| Competing priorities- money (yes) | -1.61 | 11.10** | 0.20 (0.08-0.52) |
| Perceived utility scale | 0.09 | 18.89*** | 1.09 (1.05-1.14) |
| Community stigma | 0.13 | 34.99*** | 1.14 (1.09-1.19) |

α < .05; ** α < .01; *** α < .001;
# Controlling for confounding effects of gender and race

A test of the full model versus the model with the intercept only was statistically significant $\chi^2$ (21; N = 989) = 1103.94, α < .000; indicating that the predictive value of the model increased significantly when enabling variables were added.

The full model accounted for approximately 90% of the estimated variance in access (Nagelkerke $R^2$ = .902). In addition, the Hosmer and Lemeshow test revealed that the model adequately fits the data; $\chi^2$ (8; N = 989) = 6.13, α = .984. The full model was able to correctly classify 92.4% of those who accessed treatment and 94.8% of those who did not access treatment, with an overall success rate of 93.7%.

The following variables had significant partial effects on access: social cohesion, social trust, community stigma, awareness of where to go for AOD help, number of known treatment centres, competing financial priorities, affordability barriers, perceived utility of treatment, monthly income and travelling time to nearest treatment centre. For the number of known treatment centres, a one-unit increase in the eight-point scale increased the odds of accessing treatment by a multiplicative factor of 6.5, when the influence of other variables was controlled for. Similarly, when holding other variables constant, the odds of accessing treatment were seven times greater for subjects who knew where to go for AOD help than for subjects who were unaware of where to seek help. These findings suggest that awareness has a strong effect on access and support the study hypothesis that awareness barriers are negatively associated with treatment use.

The effect of affordability barriers on access was smaller, with a one-point increase in this scale increasing the odds of not accessing treatment by a multiplicative factor of 1.2. This supports the hypothesis that affordability barriers are negatively associated with treatment use. Findings for competing financial priorities and income provide further support for this claim. The inverted odds ratio shows that the odds of accessing treatment for those without competing financial priorities was five times greater than for subjects with competing financial priorities. In addition, participants who earned less than R500 per month and between R500 and R1000 per month were 33% and 38% at greater risk of not accessing treatment compared to participants who earned between R1000 and R2500 per month. In terms of travel time, the inverted odds ratio

indicates that for every one-unit increase in this scale the odds of not accessing treatment increased by a multiplicative factor of 11. This supports the hypothesis that geographic access barriers are negatively associated with access.

Although significant, the effects of social cohesion and social trust on access were smaller. A one-point increase in the social cohesion scale more than doubled the odds of accessing treatment. This partially supports the hypothesis that social capital is positively associated with treatment use. In contrast, the inverted odds ratio for social trust indicates that a one-unit rise in this scale increased the odds of not accessing treatment by a multiplicative factor of 1.1. Although this finding seems to contradict findings for other indicators of social capital, it should be interpreted with caution given its weak effect.

Finally, although social support and psychosocial functioning indicators were associated with access in bivariate analyses, they were no longer associated with access when controlling for the influence of other enabling variables. This challenges the hypotheses that psychosocial functioning and social support are positively associated with treatment use. The study hypothesis that stigma is negatively associated with treatment use is also challenged by the finding that community stigma towards AOD users was positively associated with treatment use (with a one-unit increase in this scale increasing the odds of accessing treatment by a multiplicative factor of 1.1).

#### 5.4.4. Predisposing, need, and enabling/restricting variables that predict access

To test the study hypothesis that access to AOD treatment among HDCs is inequitable (Aim 1), a multiple logistic regression procedure was performed with access as the dependent variable and significant need, predisposing, and enabling predictor variables (see Tables 17-19) hierarchically entered as block variables. This allowed the researcher to explore the extent to which each variable domain contributed to the variance in access, while controlling for the

influence of other variable domains. Horizontal inequity was determined by examining the significance and odds ratios of non-need variables relative to treatment need. Gender and race were entered as covariates in Block 1 to control for their influence on access. Following this, three logistic regression models were evaluated in hierarchical fashion, beginning only with the enabling variables as predictors (Model 1) and culminating in a multifactorial model that included need, predisposing and enabling variable domains (see Table 20 for test statistics, odds ratios, and 95% CI).

More specifically, enabling variables were entered in Block 2. These were entered as the first block of variables as the BHSU model (Andersen, 1995) suggests that inequitable access occurs when enabling/restricting variables account for most of the variance in access. In Block 3, a need for treatment block was added hierarchically and sequentially to the enabling variable block (Model 2). Finally, a fourth block of predisposing variables was added hierarchically and sequentially to the first three blocks (Model 3). This hierarchical entry of variable domains allowed the researcher to examine whether need variables added anything to the variance in access when non-need factors were held constant.

In comparison to the intercept only model, the addition of gender and race in Block 1 did not substantially improve the predictive utility of the model. In contrast, the enabling variable block substantially improved the predictive utility of the model ($\Delta\chi^2(18; N = 989) = 1101.82, \alpha < .001$). This model demonstrated adequate fit to the data (Hosmer-Lemeshow $\chi^2$ (8; N= 989) = 6.98, $\alpha = .539$) and predicted approximately 90% of the estimated variance in access (Nagelkerke $R^2 = .900$). For this model, ten enabling variables had significant partial effects on access. These were: number of known treatment centres, knowing where to go for AOD help, affordability barriers, income, competing financial priorities, travelling time to treatment, social trust, social cohesion, community stigma, and perceived utility of treatment.

The addition of a block of need for treatment variables in Model 2, while controlling for the effects of enabling variables, was justified as it significantly increased the predictive value of the model; $\chi^2(7; N = 989) = 49.95$, $\alpha < .001$. When compared to the intercept only model, Model 2 was better able to predict access ($\Delta\chi^2$ (25; N = 989) = 1151.77, $\alpha < .001$). Although the general fit of the model to the data remained adequate (Hosmer–Lemeshow $\chi^2$ (8; N= 989) = 6.02, $\alpha = .646$), Model 2 was only able to predict an additional 2.2% of the estimated variance, over and above that predicted by Model 1 (Nagelkerke $R^2 = .900$).

All the enabling variables included in Model 1 remained significantly associated with access in Model 2 and the strength of these associations remained unchanged (see Table 20). This suggests that the enabling variables included in this study operate independently of need to predict access. Although self-perceived problem recognition, others suggesting the need for help, and the TCU problem recognition and desire for help scales were associated with access in earlier analyses (Table 18), these variables were no longer significantly associated with access when controlling for the influence of enabling variables. The only need variables that remained significantly associated with access were readiness to change substance use and drug problem severity. These associations were weak, with a one-unit increase in these scales increasing the odds of accessing treatment by multiplicative factors of 1.1 and 1.9 respectively.

In Model 3, the addition of a predisposing variable block (while controlling for the influence of the enabling and need domains) was justified as it significantly increased the predictive value of the model; $\chi^2$ (7; N = 989) = 39.01, $\alpha < .001$. When compared to the intercept only model, Model 3 was better able to predict access to treatment ($\Delta\chi^2$(32; N = 989) = 1190.77, $\alpha < .001$) although it only predicted an additional 1.8% of the estimated variance, over and above that predicted by Model 2 (Nagelkerke $R^2 = .938$). Model 1 thus accounted for the largest proportion of the estimated variance in access.

**Table 20. Logistic regression coefficients with need, predisposing and enabling/restricting variables as predictors and access as the dependent variable#**

| Predictor variables | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|
| | *Wald (df=1)* | *OR (95% CI)* | *Wald (df=1)* | *OR (95% CI)* | *Wald (df=1)* | *OR (95% CI)* |
| ***Enabling variables*** | | | | | | |
| Aware of treatment (Yes) | 10.61** | 7.46 (2.33-25.01) | 10.97** | 9.33 (2.49-34.96) | 10.52** | 14.46 (2.88-72.71) |
| Number of known tx centres | 70.34*** | 6.27 (4.09-9.64) | 59.36*** | 7.24 (4.37-11.97) | 46.48*** | 8.72 (4.68-16.26) |
| Affordability barriers | 36.46*** | 0.84 (0.79-0.89) | 24.20*** | 0.81 (0.79-0.90) | 17.99*** | 0.82 (0.75-0.90) |
| Income reference >R1001 | 7.89* | - | 6.83* | | 2.58 | |
| Income <R500 | 6.37* | 0.35 (0.16-0.79) | 6.36* | 0.28 (0.11-0.76) | 2.08 | 0.44 (0.15-1.34) |
| Income R501-R1000 | 4.35* | 0.39 (0.16-0.95) | 2.70 | 0.42 (0.15-1.18) | 1.55 | 0.46 (0.14-1.56) |
| Time to treatment | 44.53*** | 0.13 (0.07-0.23) | 37.48*** | 0.10 (0.05-0.21) | 31.16*** | 0.07 (0.03-0.19) |
| Social trust composite | 13.59** | 0.92 (0.89-0.96) | 9.86** | 0.93 (0.88-0.97) | 9.84** | 0.91 (0.86-0.97) |
| Competing priorities- money (Y) | 18.55*** | 0.18 (0.08-0.40) | 13.44*** | 0.18 (0.07-0.45) | 9.54 | 0.18 (1.09-1.27) |
| Perceived utility | 19.56*** | 1.09 (1.05-1.13) | 21.79*** | 1.12 (1.07-1.18) | 9.14** | 1.10 (1.04-1.18) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Social cohesion | 8.10** | 2.24 (1.29-3.91) | 5.63* | 2.21 (1.15-4.26) | 2.95 | 2.15 (0.90-5.14) |
| Community stigma | 34.50*** | 1.17 (1.10-1.23) | 19.84*** | 1.14 (1.08-1.21) | 16.88** | 1.18 (1.09-1.27) |
| ***Need for treatment*** | | | | | | |
| Age first used drugs | | | 3.36 | 0.90 (0.81-1.01) | 7.40** | 0.81 (0.70-0.94) |
| Drug problem severity (SCID) | - | - | 19.30*** | 1.93 (1.11-2.59) | 19.18*** | 2.21 (1.55-3.16) |
| SOCRATES composite | - | - | 3.89* | 1.05 (1.00-1.10) | 1.58 | 1.04 (0.98-1.10) |
| ***Predisposing variables*** | | | | | | |
| Treatment concerns | - | - | - | - | 17.66*** | 1.19 (1.10-1.28) |
| Neighbourhood poverty | - | - | - | - | 6.59** | 3.42 (1.34-8.73) |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$;

# Controlling for confounding effects of gender and race

The general fit of the model to the data remained adequate (Hosmer–Lemeshow $\chi^2$ (8; N= 989) = 1.53, $\alpha$ = .992). The full model had a sensitivity of 92.4%, a specificity of 95.7% and an overall success rate of 94.2%.

When holding the enabling and need variables constant, treatment concerns and neighbourhood poverty were the only predisposing variables significantly associated with access. The addition of enabling and need variables thus seems to attenuate the influence of community views about access, beliefs about treatment effectiveness, neighbourhood safety and neighbourhood alcohol use on access (Table 17). For Model 3, a one-unit rise in the treatment concerns scale increased the odds of accessing treatment, although this association was weak. For neighbourhood poverty, a one-unit increase in this scale (indicating less poverty) more than tripled the odds of access.

For the final model, the only need variables significantly associated with access were age at which drugs were first used and drug problem severity; both of which had relatively weak effects. For drug problem severity, every one-unit increase in the scale doubled the odds of access. In contrast, eight enabling variables had significant partial effects on access. When the influence of other variables was controlled for, a one-unit increase in the eight-point number of known treatment centres scale increased the odds of accessing treatment by a multiplicative factor of 8.7. Similarly, the odds of accessing treatment were almost 15-fold greater for subjects who knew where to go for AOD help than for subjects who were unaware of where to seek help. The effect of affordability barriers on access was smaller, with a one-point rise in this scale increasing the odds of *not* accessing treatment by a multiplicative factor of 1.2. When holding other variables constant, the odds of accessing treatment for those without competing financial priorities was more than five-fold greater than for subjects with competing financial priorities. These findings suggest that affordability barriers and financial concerns impact on access. Travel time remained negatively associated with access, with every one-unit increase in this scale increasing the odds of not

accessing treatment by a multiplicative factor of 14. Although significant, the effects found for social trust, community stigma, and perceived utility of treatment were weak.

In summary, this final model suggests that when controlling for gender, race and the influence of other variable domains, enabling variables (particularly travel time, awareness of AOD help, number of known treatment centres, and competing financial priorities) were more strongly associated with access than need or predisposing variables. When enabling and need for treatment variables were held constant, only the predisposing variable of neighbourhood poverty remained strongly associated with access. Similarly, when enabling and predisposing variables were held constant, the only need for treatment variable that was a moderate predictor of access was drug problem severity. Contrary to previous research findings, the enabling variable domain (Model 1) accounted for the largest proportion of the estimated variance in access, with the addition of need for treatment (Model 2) and predisposing variables (Model 3) only slightly improving the proportion of estimated variance predicted. As more non-need variables are associated with realised access than need variables, and because these non-need variables account for the largest proportion of the variance in realised access, these findings support the hypothesis that access to AOD treatment among HDCs is inequitable.

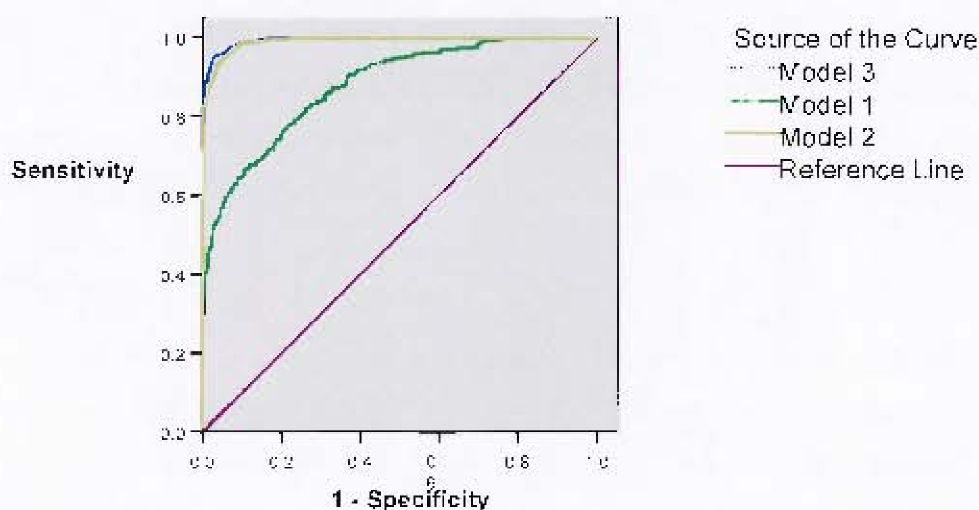
#### *5.4.4.1. Utility of the three logistic regression models*

Receiver–Operator Characteristic (ROC) curve analyses were used to explore the utility of these three logistic regression models for predicting access to AOD treatment. These curves reflect the sensitivity and specificity of the occurrence of access for the different models (see Figure 3).

All three models had better than chance diagnostic performance, with area under the curve (AUC) quantities for Models 1 (AUC = .880; CI = .860-.900) being "high" and for Models 2 (AUC = .992; CI= .989-995) and 3 (AUC = .994; CI

=.992-.997) being "very high" (Swets, 1988). As Model 2 and 3's AUC confidence intervals lay above Model 1, Models 2 and 3 were better at predicting access than Model 1. As the AUC intervals for Model 2 and 3 overlapped, there was very little difference in the predictive utility of these models. These results show that a regression model that includes enabling and need variables (Model 2) is better able to predict access than a model with enabling variables alone (Model 1). In addition, results show that the addition of predisposing variables in Model 3 adds very little to the predictive utility of Model 2.

**Figure 3. ROC curves for Regression Models 1, 2, and 3**




## 5.5. ACCESS TO AOD TREATMENT: SOCIODEMOGRAPHIC DIFFERENCES

This study also examined whether the pattern of factors associated with access differed by race and gender (Aim 3). Should a varied pattern of risk factors emerge, this would reflect a need for interventions that target specific population groups. Information on race and gender-specific risk factors could be used to design culturally and gender appropriate interventions to improve treatment use.

For each race and gender group, Chi-square tests of association were conducted on categorical predisposing, enabling, and need variables by access. For dichotomous variables, odds ratios were calculated to measure the strength of

these associations. Independent sample *t* tests were used to compare differences in the mean scores between cases and controls on continuous predisposing, need, and enabling variables. Variables that emerged as significantly associated with access in bivariate analyses were entered into multivariate logistic regression procedures so that the unique profile of variables associated with access for each race and gender group could be examined.

### 5.5.1. Gender-specific factors associated with access

#### *5.5.1.1. Associations between categorical predictor variables and access for each gender*

Significant findings from Chi-square analyses conducted to identify categorical variables significantly associated with access are presented in Table 21. For both male and female participants, there were no categorical predisposing variables significantly associated with access. For the categorical need for treatment variables, "perceived AOD problem" and "others suggesting the need for AOD help" were significantly associated with access for both genders. For the latter, the odds of accessing treatment increased almost three-fold for male participants and almost six-fold for female participants. The variable "others suggesting the need for treatment" thus appears to have a larger effect on access for women than men.

For the categorical enabling variables, legal income in last month, competing financial priorities, and awareness of where to go for AOD help were significantly associated with access for both genders. For competing financial priorities, an inverted odds ratio revealed that men with no competing financial priorities had 3.3 times greater odds of accessing treatment than men with competing financial needs. Similarly, women without competing financial priorities had almost six times greater odds of accessing treatment compared to women with competing financial demands. For both genders, the odds of accessing treatment were almost 16-fold greater for participants who were aware of AOD services, compared to their counterparts who were not aware of AOD help.

**Table 21. Chi-square analyses of categorical variables associated with access for each gender group**

| Variables | | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | No access (N =279) % (n) | Access (N= 236) % (n) | $\chi^2$ (df) | OR (95%CI) | No access (N = 276) % (n) | Access (N= 198) % (n) | $\chi^2$ (df) | OR (95%CI) |
| ***Need for treatment variables*** | | | | | | | | | |
| Think have AOD problem | No | 27.2 (76) | 12.7 (30) | 16.51(1)*** | 2.57 | 42.4 (117) | 19.7 (39) | 26.89 (1)*** | 3.00 |
| | Yes | 72.8 (203) | 87.3 (206) | | (1.62-4.09) | 57.6 (159) | 80.3 (159) | | (1.96-4.58) |
| Others suggest AOD help | No | 29.0 (81) | 12.3 (29) | 21.34 (1)*** | 2.92 | 29.0 (80) | 6.6 (13) | 36.75 (1)*** | 5.81 |
| | Yes | 71.0 (198) | 87.7 (207) | | (1.83-4.66) | 71.0 (196) | 93.4 (185) | | (3.13-10.79) |
| ***Enabling variables*** | | | | | | | | | |
| Legal income (Rands) | < 500 | 37.3 (104) | 43.2 (102) | 33.46 (2)*** | - | 49.6 (137) | 57.6 (114) | 8.58 (2)** | - |
| | 501-1000 | 42.3 (118) | 19.9 (47) | | | 31.2 (86) | 19.2 (38) | | |
| | 1001-2500 | 20.4 (57) | 36.9 (87) | | | 19.2 (53) | 23.2 (46) | | |
| Competing financial priorities | No | 33.7 (94) | 62.3 (147) | 41.99 (1)*** | 0.31 | 19.2 (53) | 57.1 (113) | 72.65 (1)*** | 0.18 |
| | Yes | 66.3 (185) | 37.7 (89) | | (0.21-0.44) | 80.8 (223) | 42.9 (85) | | (0.12-0.27) |
| Awareness of AOD help | No | 38.4 (107) | 3.8 (9) | 87.39 (1)*** | 15.69 | 36.6 (101) | 3.5 (7) | 71.62 (1)*** | 15.75 |
| | Yes | 61.6 (172) | 96.2 (227) | | (7.73-31.80) | 63.4 (175) | 96.5 (191) | | (7.13-34.80) |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$

#### *5.5.1.2. Associations between continuous variables and access for each gender*

Table 22 presents significant findings from independent sample *t* tests performed to examine whether the mean scores of continuous variables differed among cases and controls for each gender group.

For both genders, significant differences were found between cases and controls on the following predisposing variables: neighbourhood poverty, community views about access, beliefs about treatment effectiveness and barriers related to treatment concerns. For both genders, cases reported lower levels of perceived neighbourhood poverty than controls. For this variable, the effect size was greater for men relative to women. For both genders, cases reported more barriers related to treatment concerns and beliefs about treatment effectiveness than controls. For the former variable, the effect size was greater for women than for men. In contrast, controls reported more negative community perceptions about access to treatment than cases. This effect size was greater for men relative to women.

When need variables were examined, significant differences were found between cases and controls on the SCID drug problem severity, the SOCRATES, and the TCU PR and DH scales. For both genders, cases reported higher levels of drug problem severity, motivation to change AOD use and problem recognition than controls. Moderate to strong effects were obtained on these variables (Cohen, 1988). The effect size for the drug problem severity measure was greater for men than for women, suggesting that drug problem severity is more strongly associated with access for men than for women. However, for the SOCRATES, TCU PR and TCU DH scales, greater effects were obtained for female than for male participants. Motivation to change and problem recognition may be more associated with access for women than for men.

**Table 22. Independent sample *t* tests for continuous variables by access for each gender group**

| Variables | Males | | | | Females | | | |
|---|---|---|---|---|---|---|---|---|
| | No access Controls (N = 279) Mean (SD) | Access Cases (N = 236) Mean (SD) | *t* value (df) | d | No access Controls (N = 276) Mean (SD) | Access Cases (N = 198) Mean (SD) | *t* value (df) | d |
| ***Predisposing variables*** | | | | | | | | |
| Neighbourhood poverty | 1.42 (0.58) | 2.02 (1.04) | -8.30 (513)*** | 0.73 | 1.57 (0.60) | 1.85 (0.91) | -4.04 (472)*** | 0.38 |
| NES | 42.16 (3.23) | 40.53 (5.14) | 4.36 (513)*** | 0.38 | 42.57 (3.60) | 42.48 (4.77) | 0.21 (472) | 0.07 |
| Community views: access | 3.85 (0.35) | 3.55 (0.56) | 7.35 (513)*** | 0.64 | 3.89 (0.30) | 3.75 (0.55) | 3.66 (472)*** | 0.33 |
| Beliefs about treatment effectiveness | 31.76 (6.27) | 35.57 (9.50) | -5.44 (513)*** | 0.40 | 32.14 (7.36) | 36.48 (6.55) | -6.76 (451)*** | 0.46 |
| Treatment concerns | 25.88 (8.52) | 28.52 (8.03) | -3.61 (507)*** | 0.32 | 26.99 (8.55) | 31.11 (7.08) | -5.55 (472)*** | 0.52 |
| Self-efficacy > 1 month | 2.11 (1.01) | 2.22 (1.24) | -1.18 (513) | 0.10 | 1.94 (0.98) | 2.47 (1.17) | -5.39 (472)*** | 0.50 |
| ADUSE-C | 2.66 (0.70) | 2.39 (1.07) | 3.43 (513)** | 0.30 | 2.49 (0.76) | 2.74 (1.02) | -3.03 (472)** | 0.28 |
| ***Need for treatment*** | | | | | | | | |
| Drug dependence severity- SCID | 10.25 (1.32) | 11.75 (0.89) | 14.72 (513)*** | 1.31 | 9.97 (1.52) | 11.36 (1.62) | -9.45 (407)*** | 0.89 |
| Age first used drugs | 18.57 (3.06) | 17.90 (3.33) | 2.38 (482)* | 0.21 | 19.92 (4.31) | 18.33 (3.39) | 4.32 (472)*** | 0.64 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Socrates-composite | 55.93 (12.65) | 65.95 (13.17) | -8.76 (492)*** | 0.78 | 50.03 (14.30) | 69.91 (14.51) | -14.80 (421)*** | 1.38 |
| TCU- PR | 30.94 (8.22) | 36.77 (5.95) | -9.07(513)*** | 0.61 | 29.00 (8.10) | 37.02 (6.57) | -11.48 (472)*** | 1.07 |
| TCU-DH | 33.37 (7.93) | 37.83 (7.57) | -6.48 (513)*** | 0.57 | 30.92 (9.37) | 37.57 (7.79) | -8.16 (472)*** | 0.70 |
| TCU-TR | 34.30 (5.40) | 33.72 (6.39) | 1.10 (513) | 0.10 | 32.08 (5.68) | 31.09 (4.90) | 1.97 (472) | 0.19 |
| ***Enabling/restricting variables*** | | | | | | | | |
| Sigma consciousness | 7.73 (1.48) | 8.21 (1.78) | -3.30 (513)*** | 0.36 | 7.52 (1.57) | 9.04 (1.31) | -11.16 (472)*** | 1.03 |
| Community stigma | 54.69 (7.19) | 60.87 (8.84) | -8.75 (513)*** | 0.77 | 55.91 (7.87) | 64.10 (8.66) | -10.50 (399)*** | 1.00 |
| Abstinence support | 35.69 (5.64) | 38.05 (4.27) | -5.26 (513)*** | 0.47 | 34.86 (5.46) | 36.70 (5.01) | -3.81 (445)*** | 0.35 |
| Social support | 3.31 (0.68) | 3.43 (0.65) | -1.96 (504)* | 0.18 | 3.37 (0.77) | 3.52 (0.83) | -2.07 (405)* | 0.19 |
| Depression | 33.12 (6.65) | 38.79 (7.44) | -9.04 (476)*** | 0.81 | 31.90 (7.96) | 37.91 (8.40) | -7.68 (414)*** | 0.74 |
| Anxiety | 34.64 (8.17) | 40.26 (7.30) | -8.17 (513)*** | 0.72 | 33.59 (9.11) | 37.91 (8.40) | -5.27 (472)*** | 0.49 |
| Number of known tx centres | 2.03 (0.82) | 3.81 (0.80) | -25.08 (502)*** | 2.19 | 2.06 (1.03) | 3.99 (0.86) | -21.48 (472)*** | 2.00 |
| Distance to treatment | 3.54 (0.65) | 2.84 (0.83) | 10.71 (513)*** | 0.95 | 3.72 (0.49) | 2.83 (0.76) | 15.40 (472)*** | 1.44 |
| Time to treatment | 3.57 (0.61) | 2.72 (0.75) | 14.16 (513)*** | 1.25 | 3.76 (0.46) | 2.73 (0.75) | 18.52 (472)*** | 1.72 |
| Affordability barriers | 38.72 (27.60) | 6.46 (9.91) | 15.29 (513)*** | 1.51 | 38.80 (6.01) | 28.27 (8.89) | 15.38 (472)*** | 1.43 |
| Perceived utility barriers | 23.53 (9.20) | 27.39 (11.42) | -4.29 (513)*** | 0.38 | 25.94 (9.77) | 30.48 (10.78) | -4.70 (399)*** | 0.48 |
| Social trust | 45.28 (8.72) | 48.21 (8.92) | 2.38 (513)* | 0.33 | 48.21 (8.93) | 45.81 (8.93) | 2.57 (472)* | 0.27 |
| Social cohesion | 2.65 (0.51) | 2.84 (0.68) | -3.56 (513)*** | 0.32 | 2.76 (0.71) | 2.66 (0.80) | 1.49 (396) | 0.13 |

α < .05; ** α < .01; *** α < .001

For the enabling variable domain, significant differences were found between cases and controls on the stigma consciousness, community stigma, abstinence support, depression and anxiety scales. For both males and females, cases reported higher levels of depression and anxiety, more stigma consciousness and perceived community stigma, and higher levels of generic and abstinence support than controls. For the support scales, weak effects were obtained for both genders. Both males and females obtained strong effect sizes for the community stigma scale, although the effect size was greater for women. For women, a strong effect was also found on the stigma consciousness scale. These findings suggest that stigma may be more closely associated with access for women than for men. Although both genders obtained a strong effect for the depression scale, this was slightly greater for men. For men, a strong effect was also found on the anxiety scale. These findings suggest that psychological functioning may be more closely associated with access for men than for women.

For both males and females, significant differences were found between cases and controls on the number of known treatment centres, distance to nearest treatment centre, travelling time to treatment and affordability barriers scales; with both genders obtaining strong effects on all of these variables. Cases reported shorter distances and travelling times to the nearest treatment centre, fewer affordability barriers and knew of more AOD treatment centres than controls. In addition, significant differences were found between cases and controls on the social trust and treatment utility scales. However, the effect sizes for these variables were small (Cohen, 1998).

#### *5.5.1.3. Predictors of access to treatment for each gender*

To identify the pattern of factors associated with access for male and female participants respectively, access was regressed separately for each gender. To ensure model parsimony, only variables significantly associated with access in initial bivariate analyses (Tables 21-22) and with moderate to strong effect sizes were entered into the analyses. The potential confounding effect of race was

controlled for. Odds ratios and 95% confidence intervals are presented in Table 23 for the significant predictors of access.

For both genders, a test of the full model versus the model with the intercept only was statistically significant; $\chi^2$ (22; N = 519) = 6613.01, $\alpha < .001$ for men and $\chi^2$ (22; N = 474) = 582.96, $\alpha < .001$ for women. This indicates that the predictive value of the model increased when these variables were added. The full model accounted for about 93% (Nagelkerke $R^2 = .930$) and 95% (Nagelkerke $R^2 = .952$) of the estimated variance in access for men and women, respectively. According to the Hosmer and Lemeshow test, the model was a good fit for the data for males ($\chi^2$ (8; N = 515) = 2.95, $\alpha = .938$) and females ($\chi^2$ (8; N = 474) = 1.01, $\alpha = .998$).

When need and enabling variables were held constant, neighbourhood poverty and community views about access had significant partial effects on access for men. These variables were not significantly associated with access for women. For the former, a one-unit increase in the scale resulted in the odds of accessing treatment increasing by a multiplicative factor of 5.7. Males are thus more likely to access services when perceptions of neighbourhood poverty are low. For the latter, a one-unit increase augmented the odds of not accessing treatment by a multiplicative factor of 7.7. This suggests that males are more vulnerable to negative community views about access than females. For females, the only predisposing variable with a significant partial effect on access was beliefs about treatment effectiveness, although the effect of this variable was weak.

For the need variables, the drug problem severity scale, the TCU PR and the TCU DH scales had significant partial effects on access for males, when predisposing and enabling variables were held constant. For men, drug problem severity was the need variable most strongly associated with access, with a one-unit increase in this scale increasing the odds of accessing treatment by a multiplicative factor of 4.2. This association was not found among women. For

women, only the SOCRATES scale and others suggesting the need for help had significant partial effects on access. The odds of accessing treatment increased more than 10-fold for women for whom others had suggested the need for AOD services relative to women who did not receive this advice. This finding highlights the important role that significant others play in women's perceptions of AOD treatment need and help-seeking behaviour. Significant others do not seem to play the same role in AOD help-seeking for men.

While the number of known treatment centres, travel time, affordability barriers and competing financial priorities were significant partial predictors of access for both genders, these enabling variables seem more strongly associated with access for women than for men. When holding other variables constant, a one-unit increase in the number of known treatment centres increased the odds of accessing treatment by a multiplicative factor of 8.4 for women and 7.4 for men. Similarly, a one-unit increase in travel time increased the odds of *not* accessing treatment by a multiplicative factor of 5.3 for men and 50 for women. In addition, every one-unit increase in the affordability barriers scale augmented the odds of *not* accessing treatment by 1.4 and 1.1 times for women and men respectively. For competing financial priorities, the odds of *not* accessing treatment were 5.5 and 50 times greater for men and women with competing priorities respectively, compared to their counterparts without competing financial priorities.

Findings suggest that women from HDCs are more vulnerable to the effects of travel time, awareness and affordability barriers, and competing financial needs on access than men. The finding that awareness of where to go for AOD services and barriers related to delays in accessing treatment (due to waiting lists and gatekeepers) were significant partial predictors of access for women only provides some support for this claim. A surprising finding was that one-unit increases in the community stigma scale augmented the odds of accessing treatment by a multiplicative factor of 3.6. This effect was only found for women.

It is possible that experiences of community stigma propel women to use AOD services in order to reduce their stigmatised behaviours.

**Table 23. Results of multiple logistic regression analyses for each gender, with access as the dependent variable#**

| Predictor variables | Male (N = 515) | | Female (N = 474) | |
|---|---|---|---|---|
| | Wald (df) | OR (95% CI) | Wald (df) | OR (95% CI) |
| ***Predisposing variables*** | | | | |
| Neighbourhood poverty | 9.68 (1)** | 6.65 (1.90-16.80) | 1.85 (1) | 2.57 (0.66-10.09) |
| Community views: access | 4.72 (1)* | 0.13 (0.02-0.82) | 0.69 (1) | 0.35 (0.03-4.14) |
| Treatment Beliefs: effectiveness | 1.54 (1) | 1.07 (0.96-1.19) | 7.62 (1)* | 1.23 (1.06-1.43) |
| ***Need for treatment variables*** | | | | |
| Drug dependence severity | 15.73 (1)*** | 4.15 (2.05-8.38) | 2.07 (1) | 1.52 (0.86-2.67) |
| SOCRATES | 0.57 (1) | 1.03 (0.96-1.10) | 6.74 (1)* | 1.16 (1.04-1.29) |
| Others suggest AOD help (Yes) | 0.86 (1) | 1.34 (0.19-9.28) | 3.99 (1)* | 12.49 (1.04-148.77) |
| TCU-PR | 9.27 (1)** | 1.30 (1.10-1.54) | 0.23 (1) | 0.98 (0.73-1.32) |
| TCU-DH | 6.35 (1)* | 0.82 (0.70-0.96) | 0.03 (1) | 1.01 (0.81-1.26) |
| ***Enabling/restricting variables*** | | | | |
| Awareness of AOD help (Yes) | 2.47 (1) | 5.07 (0.67-38.43) | 4.31 (1)* | 29.84 (1.21-192.59) |
| Number of known tx centres | 28.47 (1)*** | 7.40 (3.54-15.41) | 13.76 (1)*** | 8.42 (2.73-29.54) |
| Travelling time to treatment | 11.22 (1)** | 0.19 (0.07-0.50) | 13.01 (1)*** | 0.02 (0.00-0.17) |
| Competing needs (money) (Yes) | 6.19 (1)* | 0.18 (0.05-0.70) | 11.69 (1)** | 0.02 (0.00-0.20) |
| Delays in accessing treatment | 0.58 (1) | 0.96 (0.87-1.06) | 6.78 (1)** | 1.24 (1.05-1.45) |
| Community stigma | 20.01 (1)*** | 1.31 (1.16-1.48) | 12.33 (1)*** | 3.63 (1.77-7.44) |
| Affordability barriers | 3.90 (1)* | 0.91 (0.83-0.99) | 15.04 (1)** | 0.73 (0.63-0.86) |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$
# Adjusted for race

Although findings show that women and men share a core set of predictors for access, women seem more vulnerable to the effects of enabling/restricting variables than men. Other variations in the profile of predictors of access to treatment for men and women were also found. Perceived community stigma played a (positive) role in women's use of AOD treatment, but was not associated with treatment use for men. Predisposing factors (such as

perceptions of neighbourhood poverty and negative views about access) were associated with access for men but not for women. Although drug problem severity was associated with access for men, this was not the case for women. In contrast, "significant others suggesting AOD help" was associated with access for female rather than male participants.

### 5.5.2. Race-specific factors associated with access

#### *5.5.2.1. Associations between categorical predictor variables and access for each race group*

Table 24 presents significant findings from Chi-square analyses conducted to identify categorical variables significantly associated with access. These analyses were conducted separately for each race/ethnic group.

For both races, there were no categorical predisposing variables significantly associated with access. For the need variables, "perceived AOD problem" and "others suggesting the need for AOD help" were significantly associated with access for both races. The odds of access were almost ten-fold greater for Black/African and 1.6 times greater for Coloured participants who perceived an AOD problem relative to those who did not perceive a problem. The odds of access were more than five-fold greater for Black/African and three-fold greater for Coloured participants for whom others had suggested the need for help relative to those who had not received this advice.

**Table 24. Chi-square analyses of categorical variables associated with access for each race group**

| Variables | | Black African | | | | Coloured | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | No access (Controls % (n) | Access (Cases) % (n) | $\chi^2$ (df) | OR (95%CI) | No access (Controls % (n) | Access (Cases) % (n) | $\chi^2$ (df) | OR (95%CI) |
| ***Need for treatment variables*** | | | | | | | | | |
| Think have AOD problem | No | 31.5 (88) | 4.5 (10) | 57.12 (1)*** | 9.72 | 38.0 (105) | 27.7 (59) | 5.77(1)* | 1.60 |
| | Yes | 68.5 (191) | 95.5 (211) | | (4.91-19.24) | 62.0 (171) | 72.3 (154) | | (1.09-2.36) |
| Others suggest help | No | 28.7 (80) | 8.6 (19) | 31.30 (1)*** | 4.27 | 29.3 (81) | 10.8 (23) | 24.71 (1)*** | 3.43 |
| | Yes | 71.3 (199) | 91.4 (202) | | (2.50-7.31) | 70.7 (195) | 89.2 (190) | | (2.07-5.68) |
| ***Enabling variables*** | | | | | | | | | |
| Legal income (Rands) | < 500 | 57.0 (159) | 56.1 (124) | 15.07 (2)** | - | 29.7 (82) | 43.2 (92) | 27.34(2)*** | - |
| | 501-1000 | 25.1 (70) | 14.0 (31) | | | 48.6 (134) | 25.4 (54) | | |
| | 1001-2500 | 17.9 (50) | 29.9 (66) | | | 21.7 (60) | 31.5 (67) | | |
| Competing needs | No | 25.1 (70) | 50.2 (111) | 33.73 (1)*** | 0.33 | 27.9 (77) | 70.0 (149) | 85.54 (1)*** | 0.17 |
| | Yes | 74.9 (209) | 49.8 (110) | | (0.23-0.48) | 72.1 (199) | 30.0 (64) | | (0.11-0.25) |
| Awareness of AOD help | No | 36.2 (101) | 4.5 (10) | 71.64 (1)*** | 11.97 | 38.8 (107) | 2.8 (6) | 87.45 (1)*** | 21.84 |
| | Yes | 63.8 (178) | 95.5 (211) | | (6.01-23.62) | 61.2 (169) | 97.2 (207) | | (9.36-50.95) |

α < .05; ** α < .01; *** α < .001

For categorical enabling variables, legal income, competing (financial) priorities, and awareness of where to go for AOD help were significantly associated with access for both races. For competing financial priorities, an inverted odds ratio revealed that Black/African participants with no competing financial priorities had three-fold greater odds of accessing treatment than those with competing financial needs. For Coloured participants without competing financial priorities, the odds of accessing treatment were almost six-fold greater than those of their counterparts with competing financial demands. In addition, the odds of accessing treatment were 12-fold greater for Black/African and 22-fold greater for Coloured participants who were aware of AOD related services, compared to their counterparts who were unaware of AOD services.

#### *5.5.2.2. Associations between continuous variables and access for each race group*

For each race group, independent sample *t* tests were performed to explore whether the mean scores of continuous variables differed among cases and controls. Significant findings are presented in Table 25.

For both Black/African and Coloured participants, significant differences were found between cases and controls on the following predisposing variables: neighbourhood poverty, community views about access, beliefs about treatment effectiveness, and barriers related to treatment concerns. For both races, cases reported lower levels of perceived neighbourhood poverty, more treatment concerns, and more negative beliefs about treatment effectiveness than controls. In contrast, controls reported more negative community perceptions about access to treatment than cases. For both races, the effect sizes of these variables were weak to moderate.

When need variables were examined, significant differences were found between cases and controls on the drug problem severity, the SOCRATES, and the TCU PR and DH scales for both races. Cases reported higher levels of drug problem

severity, motivation to change AOD use, problem recognition and desire for help than controls. For Coloured participants, the effect sizes for these variables were moderate and for Black/African participants the effects were strong (Cohen, 1988). This suggests that drug problem severity, readiness to change and problem recognition are more associated with treatment use for Black/African than for Coloured participants.

For the enabling variable domain, significant differences were found between cases and controls on the stigma consciousness, community stigma, abstinence support, and depression scales for both race groups. Cases reported higher levels of depression, more stigma consciousness and perceived community stigma, and higher levels of abstinence support than controls. Black/African participants obtained stronger effects on the abstinence support, community stigma and stigma consciousness scales than Coloured participants. These findings suggest that stigma and abstinence support are more closely associated with access for Black/Africans than for Coloureds. Similarly, Black/Africans obtained larger effects on the depression and anxiety scales than Coloureds. Psychological functioning may be more closely associated with access for Black/African than for Coloured people from HDCs.

For both race groups, significant differences were found between cases and controls on the number of known treatment centres, distance to nearest treatment centre, travel time, affordability barriers and delays in accessing treatment scales; with both groups obtaining strong effect sizes for all of these variables. Cases reported shorter distances and travel times to treatment, fewer affordability barriers, fewer barriers related to delays in accessing treatment, and knew of more AOD treatment centres than controls. Compared to their Coloured counterparts, Black/Africans obtained larger effects on the number of known treatment centres, distance to nearest treatment centre, and travel time to treatment.

**Table 25. Independent sample *t* tests for continuous variables by access for each race**

| Variables | Black/African | | | | Coloured | | | |
|---|---|---|---|---|---|---|---|---|
| | No access (Controls) (N= 279) Mean (SD) | Access (Cases) (N= 221) Mean (SD) | *t* value (df) | d | No access (Controls) (N = 276) Mean (SD) | Access (Cases) (N = 213) Mean (SD) | *t* value (df) | d |
| ***Predisposing variables*** | | | | | | | | |
| Neighbourhood poverty | 1.53 (0.65) | 1.99 (0.95) | -6.42 (498)*** | 0.58 | 1.46 (0.53) | 1.90 (1.02) | -6.14 (487)*** | 0.56 |
| Community views: access | 3.75 (0.24) | 3.55 (0.59) | 5.14 (498)*** | 0.46 | 3.99 (0.36) | 3.73 (0.53) | 6.48 (487)*** | 0.59 |
| Beliefs: treatment effectiveness | 30.86 (6.44) | 34.02 (8.87) | -4.61 (498)*** | 0.41 | 33.05 (7.05) | 38.02 (7.10) | -7.71 (487)*** | 0.70 |
| Treatment concerns | 24.52 (7.30) | 27.86 (8.65) | -4.67 (498)*** | 0.42 | 28.36 (9.27) | 31.61 (6.05) | -4.45 (487)*** | 0.40 |
| ***Need for treatment*** | | | | | | | | |
| Drug problem severity | 10.25 (1.32) | 11.75 (0.89) | -15.34 (498)*** | 1.30 | 9.97 (1.63) | 11.34 (1.50) | -9.57 (487)*** | 0.87 |
| Age first used drugs | 18.59 (3.81) | 17.96 (2.99) | 2.06 (497)* | 0.18 | 19.91 (3.37) | 18.23 (3.72) | 4.96 (453)*** | 0.48 |
| Socrates-composite | 54.14 (10.56) | 71.10 (12.28) | -16.59 (498)*** | 1.49 | 51.84(16.38) | 64.29 (14.68) | -8.71 (487)*** | 0.79 |
| TCU- PR | 29.77 (12.37) | 37.95 (4.05) | -14.83(498)*** | 0.85 | 30.19 (8.90) | 35.77 (7.75) | -7.23 (487)*** | 0.66 |
| TCU-DH | 33.53 (6.79) | 39.10 (6.80) | -9.09 (498)*** | 0.82 | 30.76(10.20) | 36.27 (8.24) | -6.43 (487)*** | 0.59 |
| TCU-TR | 34.99 (5.40) | 32.96 (4.38) | 4.52 (498)** | 0.41 | 31.38 (5.32) | 32.07 (7.12) | -1.22(487) | 0.11 |

| ***Enabling/restricting variables*** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Stigma consciousness | 7.31 (1.48) | 8.48 (1.88) | -7.83 (498)*** | 0.70 | 7.95 (1.51) | 8.70 (1.33) | -5.71 (487)*** | 0.52 |
| Community stigma | 53.23 (6.55) | 61.47 (8.51) | -12.22 (498)*** | 1.10 | 57.38 (7.94) | 63.23 (9.20) | -7.38 (419)*** | 0.69 |
| Abstinence support | 35.63 (3.81) | 38.01 (3.43) | -7.35 (490)*** | 0.65 | 34.92 (6.88) | 36.83 (5.61) | -3.29 (487)** | 0.30 |
| Social support | 3.38 (0.68) | 3.50 (0.69) | -1.93 (469) | 0.17 | 3.30 (0.77) | 3.44 (0.79) | -2.00 (450)* | 0.18 |
| Depression | 30.38 (6.45) | 38.79 (7.63) | -13.10 (431)*** | 1.20 | 34.67 (7.57) | 37.81 (8.06) | -4.38 (441)*** | 0.40 |
| Anxiety | 30.25 (8.12) | 39.75 (7.24) | -13.62 (498)*** | 1.22 | 38.02 (7.33) | 38.61 (8.51) | -0.81 (419) | 0.07 |
| Number of known tx centres | 0.65 (0.68) | 4.14 (1.95) | -27.87 (498)*** | 2.50 | 1.47 (1.05) | 3.86 (1.70) | -19.10 (487)*** | 1.74 |
| Distance to rehab | 3.74 (0.49) | 2.64 (0.73) | 20.09 (498)*** | 1.81 | 3.52 (0.65) | 3.04 (0.81) | 7.00 (396)*** | 0.66 |
| Time to treatment | 3.70 (0.50) | 2.53 (0.64) | 22.83 (498)*** | 2.06 | 3.63 (0.60) | 2.92 (0.80) | 10.83 (380)*** | 1.02 |
| Affordability barriers | 39.81 (5.81) | 30.73 (9.75) | 12.92 (498)*** | 1.16 | 37.70 (6.48) | 24.98 (8.19) | 19.20 (487)*** | 1.75 |
| Perceived utility barriers | 23.69 (9.12) | 26.33 (10.13) | -3.03 (498)* | 0.28 | 25.78 (9.89) | 31.36 (11.55) | -5.75 (487)*** | 0.52 |
| Delays:accessing tx | 35.32 (4.77) | 30.87 (8.48) | 7.40 (498)*** | 0.67 | 39.96 (5.79) | 32.96 (10.85) | 9.17 (487)*** | 0.83 |
| Social trust | 47.91 (8.75) | 44.74 (13.60) | 3.16 (498)** | 0.28 | 45.55 (8.98) | 43.81 (10.89) | 2.57 (472)* | 0.26 |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$

These findings suggest that awareness and geographic access barriers are more closely associated with access for Black/Africans than for Coloureds. In contrast, compared to their Coloured counterparts, Black/Africans obtained smaller effect sizes for affordability and delays in accessing treatment. This implies that affordability and treatment delay barriers are more closely associated with access for Coloured than for Black/Africans. Although significant differences were found on the social trust and treatment utility scales, the effect sizes for these variables were small.

#### *5.5.2.3. Predictors of access for each race group*

To identify the pattern of factors associated with access for Black/African and Coloured participants respectively, access was regressed separately for each race group. To ensure model parsimony, only variables significantly associated with access in initial bivariate analyses and with moderate to strong effect sizes were entered into the analyses (Tables 24-25). The potential confounding effect of gender was adjusted for. Odds ratios and 95% confidence intervals for significant predictors are displayed in Table 26.

A test of the full model versus the model with the intercept only was statistically significant; $\chi^2$ (21; N = 500) = 628.91, $\alpha < .001$ for Black/African and $\chi^2$ (21; N = 489) = 592.98, $\alpha < .001$ for Coloured participants. The full model accounted for about 96% (Nagelkerke $R^2 = .959$) and 94% (Nagelkerke $R^2 = .942$) of the estimated variance in access for Black/African and Coloured participants respectively. According to the Hosmer and Lemeshow test, the model was a good fit for the data for Black/African ($\chi^2$ (8; N = 500) = 1.63, $\alpha = .990$) and Coloured participants ($\chi^2$ (8; N = 474) = 1.41, $\alpha = .994$).

Among Coloured participants, the only predisposing variables that had significant partial effects on access after controlling for the influence of the other variable domains were neighbourhood poverty and beliefs about treatment effectiveness. For the latter, a one-unit increase in the scale augmented the odds of access by

a multiplicative factor of 5.7. For Coloureds, lower perceptions of poverty appear to increase the likelihood of access. For Black/Africans, none of the predisposing variables had significant partial effects on access.

**Table 26. Results of multiple logistic regression analyses for each race, with access as the dependent variable#**

| Predictor variables | Black/African (N= 500) | | Coloured (N = 489) | |
|---|---|---|---|---|
| | Wald (df) | OR (95% CI) | Wald (df) | OR (95% CI) |
| ***Predisposing variables*** | | | | |
| Neighbourhood poverty | 0.79(1) | 2.21 (0.39-12.58) | 6.56(1)** | 5.66 (1.50-21.31) |
| Treatment Beliefs: effectiveness | 3.51(1) | 1.18 (0.99-1.41) | 5.88(1)* | 1.20 (1.04-1.39) |
| ***Need for treatment variables*** | | | | |
| Drug dependence severity | 6.64(1)** | 3.30 (1.33-8.19) | 2.43(1) | 1.57 (0.89-2.76) |
| SOCRATES | 5.44(1)* | 1.16 (1.02-1.30) | 4.76(1)* | 1.10 (1.01-1.20) |
| Others suggest AOD help (Yes) | 5.09(1)* | 46.86 (1.65-132.71) | 0.10(1) | 1.36 (0.20-9.28) |
| Think you have an AOD problem | 1.67(1) | 56.93 (0.12-260.53) | 4.56(1)* | 18.17 (1.27-260.00) |
| TCU-DH | 7.82(1)** | 0.78 (0.65-0.92) | 0.29(1) | 0.95 (0.77-1.16) |
| ***Enabling/restricting variables*** | | | | |
| Awareness of AOD help (Yes) | 2.17 (1) | 10.21 (0.46-225.33) | 4.33 (1)* | 10.21 (1.15-90.99) |
| Number of known tx centres | 14.72(1)*** | 13.51 (3.57-51.04) | 24.31(1)*** | 11.14 (4.27-29.05) |
| Travelling time to treatment | 7.16 (1)** | 0.05 (0.01-0.45) | 10.11 (1)** | 0.15 (0.05-0.48) |
| Competing needs (money) (Yes) | 1.04 (1) | 0.39 (0.06-2.40) | 16.82 (1)*** | 0.01 (0.00-0.10) |
| Stigma consciousness | 0.72 (1) | 1.25 (0.75-2.10) | 11.86 (1)** | 3.78 (1.78-8.07) |
| Community stigma | 3.16 (1) | 1.12 (0.99-1.26) | 18.35 (1)** | 1.37(1.19-1.58) |
| Delays to treatment barriers | 3.83 (1)* | 1.18 (1.03-1.98) | 0.55 (1) | 1.04 (0.94-1.14) |
| Affordability barriers | 6.01 (1)* | 0.89 (0.82-0.98) | 17.70 (1)*** | 0.71 (0.60-0.83) |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$
# Adjusted for gender

When holding enabling and predisposing variables constant, more need variables were significantly associated with access for Black/African than for Coloured participants. For Black/Africans, the SCID drug problem severity scale, significant others suggesting the need for treatment, the SOCRATES scale and the TCU DH scale had significant partial effects on access. For Black/Africans,

the drug problem severity measure was strongly associated with access, with a one-unit increase in this scale augmenting the odds of accessing treatment by a multiplicative factor of 3.3. The odds of treatment access increased more than 40-fold for Black/Africans for whom others had suggested the need for AOD services relative to those who did not receive this advice. For Coloured participants, only the SOCRATES scale and "self-perceived AOD problem" had significant partial effects on access; with the odds of accessing treatment increasing 18-fold for participants with a self-perceived problem relative to those with no perceived problem.

While the number of known treatment centres and travel time to treatment were significant partial predictors of access for both races, these enabling variables appear more closely associated with access for Black/African participants than for Coloureds. A one-unit increase in the number of known treatment centres increased the odds of accessing treatment by a multiplicative factor of 13.5 for Black/Africans and 11.1 for Coloureds. Similarly, every one-unit increase in travel time augmented the odds of not accessing treatment by a multiplicative factor of 20 for Black/Africans and 6.6 for Coloureds. These findings suggest that, relative to their Coloured counterparts, Black/Africans from HDCs are more vulnerable to geographic access and awareness barriers. Yet, this claim appears to be contradicted by the finding that awareness of where to go for AOD services was only significantly associated with access among Coloured participants. This anomalous finding could be due to this variable referring to awareness of a broad range of AOD services rather than awareness of AOD treatment services specifically.

Among Coloured participants, a surprising finding was the positive association between stigma and access. Every one-unit increase in the stigma consciousness scale (reflecting more internalised stigma) increased the odds of accessing treatment by a multiplicative factor of 3.6. It is possible that internalised experiences of stigma relating to AOD problems may actually push

Coloured participants to access AOD treatment. Another surprising finding was that affordability barriers and competing financial priorities had significant partial effects on access for Coloured participants only. This does not mean that Black/African participants had fewer competing financial priorities than their Coloured counterparts, especially given findings that only 30% of Coloured cases reported competing financial priorities compared to 50% of Black/African cases; OR = 0.43 (95% CI: 0.29-0.64). Instead, this finding may be due to the fact that almost equal proportions of Black/African cases and controls reported competing financial priorities (see Table 24).

Although findings show that Black/African and Coloured participants share a core set of predictors for access, Black/Africans may be more vulnerable to the effects of awareness and geographical access barriers. For each race group, variations in the profile of predictors of access were found. Perceived community stigma and stigma consciousness played a (positive) role in Coloured participants' use of AOD treatment, but was not associated with treatment use among Black/Africans. Affordability barriers and competing financial priorities were only associated with access for Coloured participants. Predisposing factors (such as perceptions of neighbourhood poverty) were associated with access for Coloured participants but not for their Black/African counterparts. A range of need variables (including drug problem severity and others suggesting the need for treatment) were associated with access for Black/Africans, with fewer need variables being associated with treatment use among Coloured participants.

## 5.6. MEDIATORS AND MODERATORS OF PREDICTORS OF ACCESS TO TREATMENT

This study also explored possible interactions between the BHSU model's variable domains (Aim 4). The following sections explore the enabling/restricting domain's mediating and moderating effects on the association between treatment need and AOD treatment access.

### 5.6.1. Mediation of the association between need and access

To test the hypothesis that enabling variables mediate the association between need for and access to treatment (Aim 4), a hierarchical logistic regression was conducted, using methods recommended by McMillen, Scott, Zima, Ollie, Munson, and Spitznagel (2004). This involved monitoring changes in the odds ratios which occurred when the block of enabling/restricting variables was added to the regression equation. More specifically, predisposing variables were entered as covariates in Block 1 to control for their influence on access to treatment. Following this, two logistic regression models were evaluated in hierarchical fashion, beginning only with the need for treatment variables as predictors (Model 1) and sequentially adding the enabling/restricting variables (Model 2). Table 27 presents the Wald tests and odds ratios for variables significantly associated with access only.

Overall, the need for treatment variables did not maintain their level of significance with the inclusion of a subsequent block of enabling variables. Only two of the seven need variables remained significantly associated with access. This suggests that while there is still some independence across underlying constructs of the BHSU model, the enabling/restricting variable domain appears to account for a significant part of the effect of need for treatment factors on AOD treatment use.

**Table 27. Logistic regression coefficients with need and enabling/restricting variables as predictors and access as the dependent variable#**

| Predictor variables | Model 1 | | Model 2 | |
|---|---|---|---|---|
| | *Wald (df=1)* | *OR (95% CI)* | *Wald (df=1)* | *OR (95% CI)* |
| ***Need for treatment variables*** | | | | |
| Drug dependence severity | 86.28*** | 2.46 (2.04-2.98) | 13.36*** | 1.79 (1.31-2.45) |
| SOCRATES composite | 25.93*** | 1.06 (1.04-1.09) | 1.92 | 1.03 (0.99-1.08) |
| TCU problem recognition | 5.91* | 1.06 (1.01-1.11) | 2.63 | 1.10 (0.98-1.26) |
| TCU desire for help | 4.27* | 0.96 (0.92-0.99) | 0.13 | 0.98 (0.88-1.09) |
| Others suggest help (Yes) | 15.94*** | 3.00 (1.75-5.15) | 1.24 | 2.07 (0.58-7.40) |
| Perceived AOD problem (Yes) | 10.14** | 2.71 (1.47-5.01) | 0.00 | 0.96 (0.21-4.37) |
| Age first used drugs | 4.33* | 0.95 (0.90-0.99) | 6.31* | 0.85 (0.74-0.96) |
| ***Enabling/restricting variables*** | | | | |
| Aware of treatment (Yes) | - | - | 10.28*** | 10.46 (2.49-43.92) |
| Number of known tx centres | - | - | 47.95*** | 5.39 (3.33-8.68) |
| Affordability barriers | - | - | 14.35*** | 0.88 (0.83-0.94) |
| Delays to treatment | - | - | 8.61** | 0.91 (0.85-0.97) |
| Income =R500-R1000 (Yes) | - | - | 7.70** | 0.28 (0.16-0.69) |
| Time to treatment | - | - | 37.65*** | 0.09 (0.04-0.20) |
| Social trust composite | - | - | 5.72* | 0.95 (0.92-0.99) |
| Competing needs- money (Y) | - | - | 9.88** | 0.24 (0.10-0.59) |
| Perceived utility scale | - | - | 7.76** | 1.07 (1.02-1.13) |
| Community stigma | - | - | 20.66*** | 1.16 (1.09-1.23) |

α < .05; ** α < .01; *** α < .001;
# Controlling for predisposing variables

### 5.6.1. Moderators of the association between need and access

To test the hypothesis that enabling variables moderate the association between need for and access to treatment (Aim 4), a hierarchical logistic regression analysis was conducted, using procedures outlined by Holmbeck (1997) and Frazier, Tix, and Barron (2004). Two logistic regression models were evaluated. The first model was the main effects model (described in section 5.4.4). The

second model expanded the first model to include a final block of interaction terms that were entered in a stepwise fashion. These interaction terms were the products of drug problem severity (the only need variable strongly associated with access when other variables were controlled for) and moderator variables. In this analysis, enabling variables significantly associated with access in Table 20 were conceptualised as moderator variables. Following Frazier and colleagues' (2004) recommendations, all continuous predictor and moderator variables were standardised prior to entry into the regression equation. The final model allowed the researcher to examine the relative contribution of these interactions to access, while controlling for the main effects of the predictor and moderator variables. Table 28 presents the logistic regression coefficients and Wald tests for variables significantly associated with access only.[3]

The addition of a block of interaction variables in Model 2, while controlling for the main effects of the predictor variables was justified as it significantly increased the predictive value of the model; $\chi^2(2; N = 989) = 27.56$, $\alpha < .001$. Although Model 2 predicted a greater proportion of the estimated variance in access to treatment (Nagelkerke $R^2 = .947$) than Model 1 (Nagelkerke $R^2 = .936$), the difference in the proportion of variance estimated by each model was negligible. The entry of the interaction between drug problem severity and travel time in step one and drug problem severity by affordability barriers in step two accounted for an additional 0.7% and 0.4% of the estimated variance in access respectively.

[12] Logistic regression coefficients may differ from Table 20 due to the use of standardised continuous variables

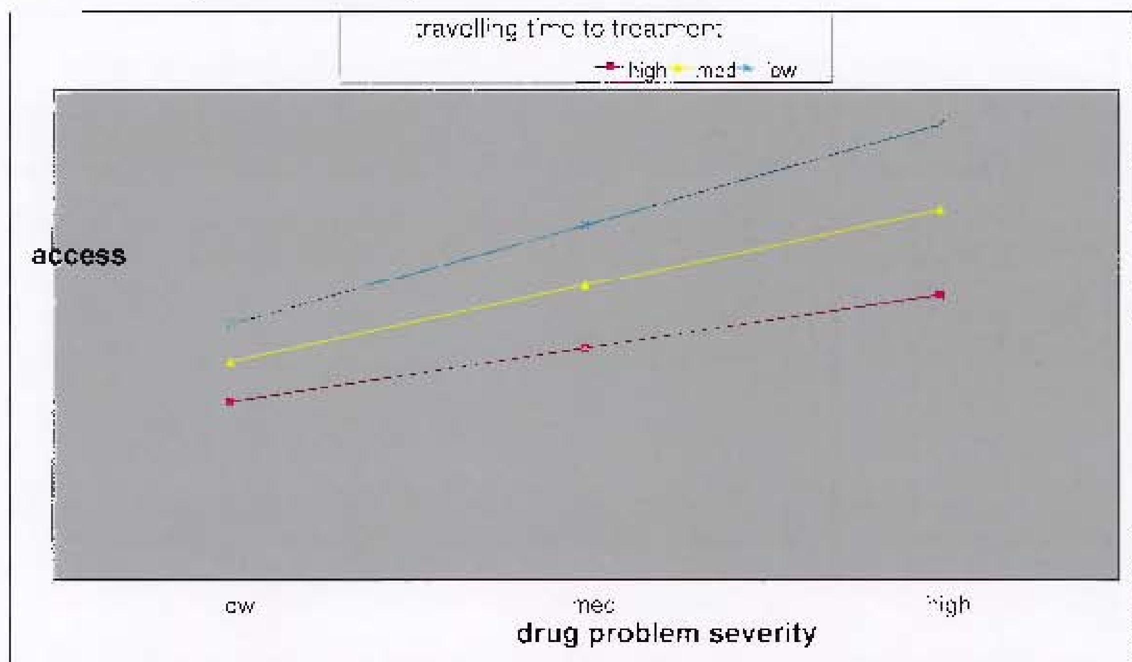
**Table 28. Results of hierarchical logistic regression with enabling variables as moderators #**

| *Variables* | *Model 1* | | *Model 2* | |
|---|---|---|---|---|
| | *B* | *Wald (df=1)* | *B* | *Wald (df=1)* |
| ***Predisposing*** | | | | |
| Treatment concerns | 1.18 | 14.66*** | 1.53 | 18.03*** |
| Neighbourhood poverty | 0.99 | 6.85** | 1.10 | 7.82** |
| ***Need for treatment*** | | | | |
| *Drug dependence severity | 1.15 | 18.94*** | 6.79 | 18.08*** |
| Age first used drugs | -0.19 | 6.85** | -0.29 | 8.98** |
| ***Enabling variables /moderators*** | | | | |
| Aware of treatment (Yes) | 2.71 | 10.98** | 3.02 | 11.70** |
| Number of known tx centres | 2.86 | 56.63*** | 3.10 | 52.17*** |
| *Affordability barriers | -1.99 | 24.53*** | -10.37 | 13.21*** |
| *Time to treatment | -2.04 | 31.64*** | 6.61 | 5.46* |
| Competing priorities- money (Y) | -1.64 | 8.77** | -1.88 | 8.78** |
| Social trust scale | -1.05 | 13.20** | -1.16 | 14.60*** |
| Perceived utility scale | 1.06 | 9.67** | 1.06 | 8.95** |
| Community stigma | 1.49 | 18.45*** | 1.63 | 18.55*** |
| ***Interactions*** | | | | |
| Drug dependence severity x affordability | - | - | 0.07 | 8.43** |
| Drug dependence severity x travel time | - | - | -1.02 | 9.17** |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$;
# Controlling for gender and race

Findings reveal a significant interaction between drug problem severity and travel time, with the association between drug problem severity and access varying according to the time taken to travel to the nearest AOD treatment centre. Findings suggest that shorter travel times to treatment enhance the association between drug problem severity and treatment use (Figure 4), with access being more likely when drug problem severity is high and travel time to treatment is short than when drug problem severity is high and travel time to treatment is lengthy.

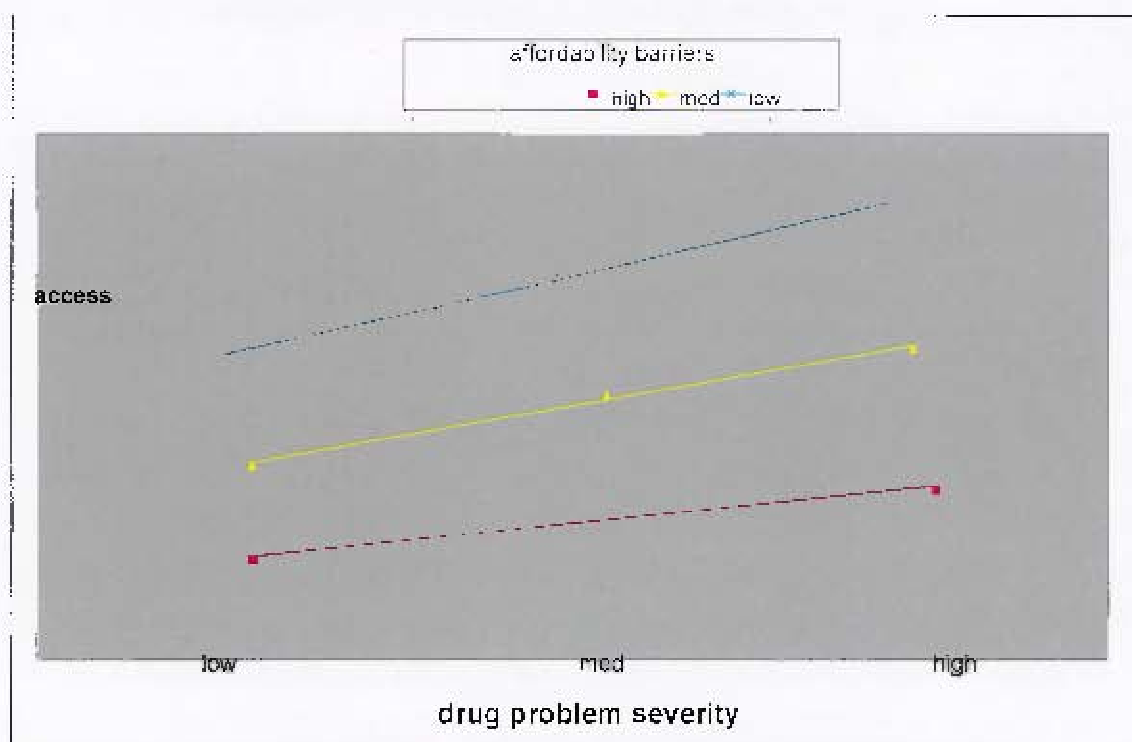
**Figure 4. Moderating effect of travel time on the association between drug problem severity and access**




Findings also reveal a significant interaction between drug problem severity and affordability barriers. Findings suggest that fewer affordability barriers enhance the association between drug problem severity and treatment use (Figure 5), with access being more likely when drug problem severity is high and affordability barriers are low than when drug problem severity is high and affordability barriers are high. Taken together, these findings provide some support for the hypothesis

that the association between need for treatment variables and access is moderated by the presence of enabling/restricting variables.

**Figure 5. Moderating effect of affordability barriers on the association between drug problem severity and access**




### 5.6.2. Moderators of the association between enabling variables and access

To test the hypothesis that enabling variables such as affordability barriers, awareness, and competing financial priorities moderate the association between travel time to treatment and access (Aim 4), a hierarchical logistic regression analysis was conducted, using procedures outlined by Holmbeck (1997) and Frazier et al. (2004). Two hierarchical logistic regression models were evaluated: a main effects model (Model 1) and a model that expanded on the main effects model to include interaction terms (Model 2). These interaction terms were the products of travel time to treatment (a strong predictor of treatment access in the main effects model when all other variables were controlled for) and the

aforementioned moderator variables. Model 2 allowed the researcher to examine the relative contribution of these interactions to access, while controlling for the main effects of the predictor and moderator variables. Findings from these analyses are presented in Table 29.

Variables significantly associated with access in the main effects model, remained associated with access in Model 2. The direction of these associations also remained unchanged. Only two interaction terms were significantly associated with access in Model 2: affordability barriers and number of known treatment centres (an indicator of awareness of treatment services).

The addition of this block of interaction variables in Model 2, while controlling for the main effects of the predictor variables was justified as it significantly increased the predictive value of the model; $\chi^2(2: N = 989) = 46.26, \alpha < .001$. Although Model 2 predicted a greater proportion of the estimated variance in access to treatment (Nagelkerke $R^2 = .953$) than Model 1 (Nagelkerke $R^2 = .934$), the difference in proportion of variance estimated by each model was very small. The interactions between travel time and affordability barriers and travel time and number of known treatment centres (awareness) only accounted for an additional 1.4% and 0.5% of the estimated variance in access respectively. For Model 2, the general fit of the model to the data remained adequate (Hosmer–Lemeshow $\chi^2$ (8: N= 989) = 1.01, $\alpha = 0.998$).

Taken together, these findings provide some support for the hypothesis that the association between time to treatment and access is moderated by other enabling/restricting variables.

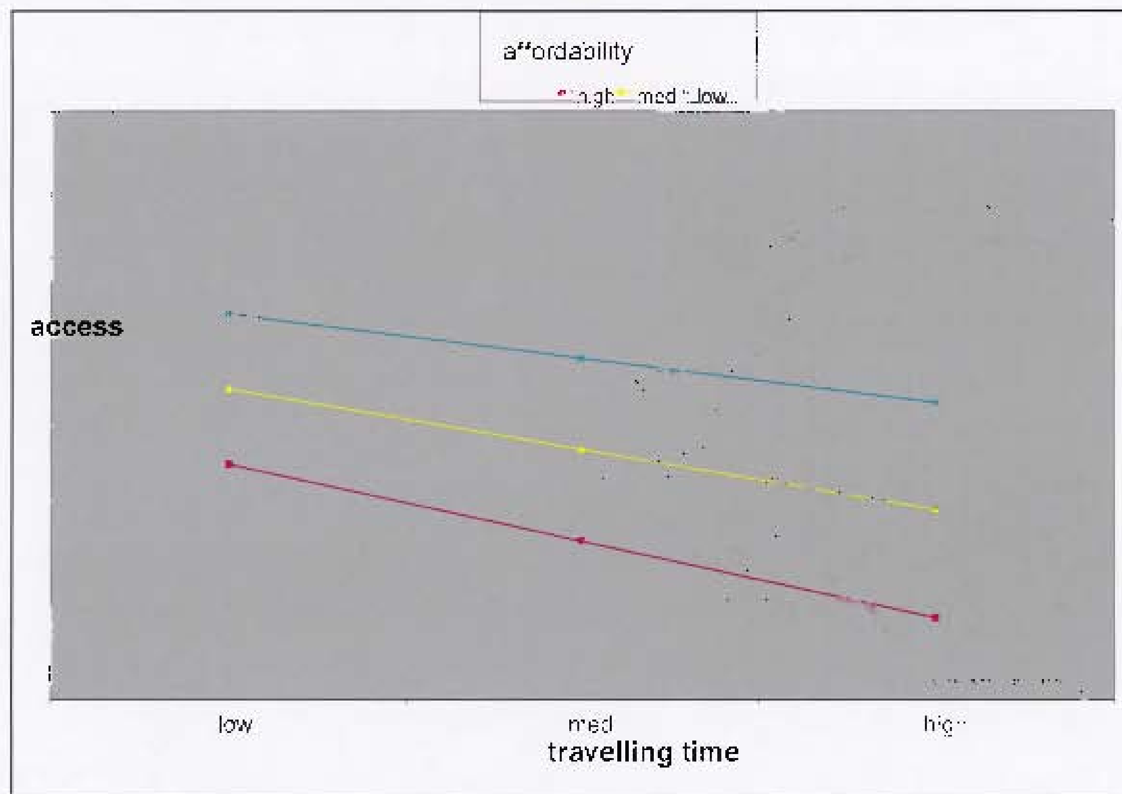
Table 29. **Results of hierarchical logistic regression with enabling variables as moderators #**

| *Variables* | *Model 1* | | *Model 2* | |
|---|---|---|---|---|
| | *B* | *Wald (df=1)* | *B* | *Wald (df=1)* |
| ***Predisposing*** | | | | |
| Treatment concerns | 1.17 | 6.88*** | 0.26 | 19.72*** |
| Neighbourhood poverty | 0.18 | 18.54*** | 1.26 | 5.44* |
| ***Need for treatment*** | | | | |
| Drug dependence severity | 1.07 | 17.50*** | 1.15 | 13.52*** |
| Age first used drugs | -0.25 | 11.49** | -0.24 | 7.87** |
| ***Enabling variables /moderators*** | | | | |
| Aware of treatment (Yes) | 2.39 | 9.12** | 3.37 | 9.51** |
| *Number of known tx centres | 4.13 | 45.95*** | 4.96 | 37.13*** |
| *Affordability barriers | -1.81 | 21.07*** | -3.65 | 27.63*** |
| *Time to treatment | -2.16 | 38.78*** | -3.69 | 35.87*** |
| Competing priorities- money (Y) | -1.54 | 9.65** | -2.34 | 10.59** |
| Social trust scale | -0.75 | 9.10** | -0.77 | 6.34* |
| Perceived utility scale | 0.93 | 8.80** | 1.20 | 9.53** |
| Community stigma | 1.55 | 22.95*** | 2.03 | 21.14*** |
| ***Interactions*** | | | | |
| Travel time x affordability barriers | - | - | -2.92 | 27.63*** |
| Travel time x known treatment centres | - | - | -1.76 | 5.24* |

$\alpha < .05$; ** $\alpha < .01$; *** $\alpha < .001$;
# Controlling for gender and race

Findings suggest an interaction between travel time and affordability barriers, with the association between travel time and treatment access varying according to the extent to which affordability barriers are experienced. Findings suggest that affordability barriers enhance the association between travel time and treatment use, with travel time having more of a negative impact on service use when affordability barriers are high than when they are low. When affordability barriers are high, the relationship between access and time to treatment is strong and negative (Figure 6).

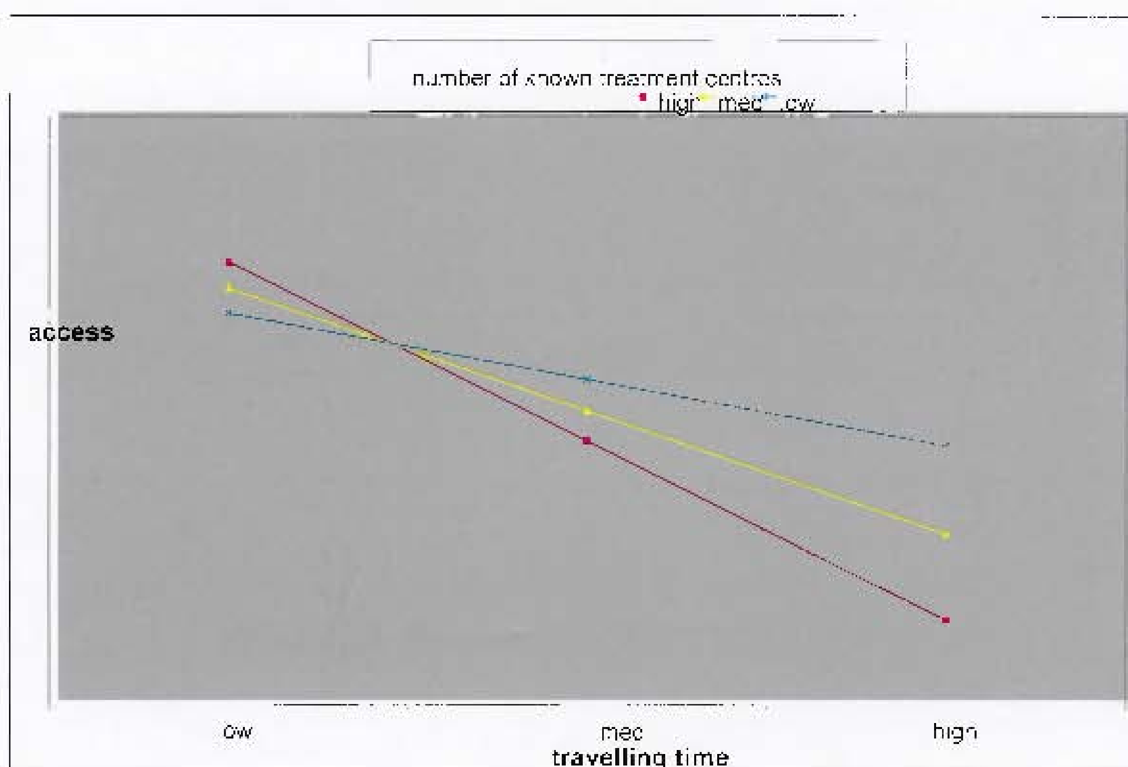
**Figure 6. Moderating effect of affordability barriers on the association between travel time and access**




Findings also reveal a significant interaction between travel time and number of known treatment centres, with the association between travel time and access varying according to the number of known AOD treatment centres. When the number of known treatment centres is high, the relationship between access and

travel time to treatment is strong and negative (Figure 7). However the buffering effect of awareness on the association between travel time and access appears to dissipate as travel time increases. In other words, individuals from HDCs are more likely to access treatment under conditions of high awareness of AOD services (i.e. a large number of known treatment centres) and low travel time than under conditions of lengthy travel times to treatment and any level of awareness.

**Figure 7. Moderating effect of number of known treatment centres on the association between travel time and access**




## 5.7. SUMMARY

This chapter presented the results of quantitative analyses conducted to address study aims one through four. The relationships between predisposing, enabling and need for treatment variable domains and access to treatment were examined through the use of multiple logistic regression analyses. Secondly, the extent to which access to AOD treatment was equitable was examined via hierarchical

logistic regression procedures. Thirdly, socio-demographic differences in the profile of variables associated with access were explored using separate multiple logistic regression procedures for each race and gender group. Finally, potential interactions between the BHSU variable domains were explored using hierarchical logistic regression procedures to identify moderator and mediator effects. The following chapter presents findings from the qualitative component of the study. Findings from both study phases are discussed in relation to the study aims in Chapter Seven.

# CHAPTER SIX

# RESULTS: PHASE TWO

## 6.1. INTRODUCTION

This chapter presents the results for Phase two. The major findings from this phase were that (i) political influences hampered strategic planning for AOD service delivery; (ii) the allocation of state (financial) resources for AOD services was limited with the result that there was a lack of capacity within AOD treatment services to meet demand; (iii) limited resources impacted negatively on the quality and range of services provided; (iv) limited resources and poor planning impacted on timely access to treatment; (v) political influences and limited resources impacted on perceptions of AOD services and the use thereof within HDCs; and (vi) the context of HDCs influenced the uptake of AOD services.

## 6.2. POLITICAL INFLUENCES ON AOD SERVICE DELIVERY

Two broad political influences on AOD treatment delivery were identified: the lack of strategic planning around AOD service delivery and the state's limited allocation of resources for AOD services.

### 6.2.1. Limited planning for AOD service delivery

According to most (18 out of 20) key informants, the state's failure to develop an effective strategic plan for AOD service delivery indirectly influenced access to treatment for persons from HDCs by contributing to community perceptions that effective services were not available and geographic access barriers to treatment. As respondents remarked:

> There is no strategy to pull it all together. [LDAC 1]

(We need) to try and get people on board and try and help to see if one can develop a proper strategic plan per region, per area, per suburb. I think the second thing going along with that is, and I don't want to throw stones, but I think the Department of Social Services really battles to play their role... [TSP 2]

#### *6.2.1.1. Limited capacity for service planning*

Key informants noted that the lack of an effective strategic plan for addressing AOD problems was predicated on several factors. Firstly, although basic understanding of the prevalence of this problem had "dramatically improved", key personnel within state social services lacked the capacity to respond effectively to communities' AOD related needs:

> Um, look, government is doing what it's capable of doing, which isn't enough. And they're not capacitated to do enough. They don't have any specialists ... pure specialists in the substance abuse field. They just don't. Other than in the health department and it is social services who are the lead department. And they're not capacitated at all.... They'll have a certain body of knowledge but it's not in any way a form of knowledge which will be able to drive any processes or make any informed decisions. [LDAC 2]

> If I come now and I say we must do something about the substance abuse thing in X area, they will say what about a march? Because that's how they see how the problem can be combated, and we know that's only half the truth. [SAC 1]

#### *6.2.1.2. Limited information impacted on the distribution of services*

Secondly, key informants noted that the state lacked adequate information on HDCs' AOD related needs and gaps in service delivery. As one key informant noted:

> ...even to identify needs and gaps (in service delivery) because often, the department will take the initiative and say, okay they want some training here or they identify certain needs but I know they don't have very good needs analysis in the province... [TSP 1]

This lack of information hampered government's ability to allocate resources appropriately for treatment. According to key informants, it contributed to an uneven dispersion of resources; with some communities being relatively over-served while others remain underserved, despite similar needs. In addition, it led to service duplication, with government and NGOs often providing similar services in the same communities:

> Somebody, somewhere, some person or persons need to take the role of co-ordinating services within areas and identifying gaps, as ... has mentioned now there is another treatment centre in Community Y. I know Community Y is a big area and there is a need, but then who will serve the other areas where the service is nonexistent? [TSP 4]

> I have been really amazed to see that within Community A, the department has agreed to also offer treatment centre X posts in Community A, when there are various other suburbs which there is no service...I am just saying that there is an uneven spread of resources. [TSP 3]

This obviously leads to duplication of services as well, if you are providing prevention in the same areas as well. You go to a couple of schools and they go to the same schools.... [TSP 2]

### *6.2.1.3. Limited consultation impacted on service planning*

Thirdly, findings suggested that this lack of information was partly due to the state's failure to consult with AOD service providers and researchers; even though state-provider partnerships could strengthen the state's capacity to address AOD problems effectively. As respondents remarked:

The department will strategise and they will have their own agenda, and then they will decide, okay this year we have got x amount we would like to spend on substance abuse ...but that is without any consultation with people in the field. They could say, listen let's just sort of get ideas together. So there is no partnership where there is kind of an opportunity for us to also give input to the department, say listen we think that will work or let's try it this way ... all I want to say is it is without any consultation with anyone in the NGO sector. [TSP 1]

....Never, as far as I know have they come to anyone of us and said, listen let's just plan together. They decide, the minister or whoever, they have got x amount to spend and they want to do a project. [TSP 5]

Nobody has consulted anybody else; nobody knows what's going on in that area. So there's nothing pulled together. There's duplication of services, there's confusion around programmes that are offered....
[LDAC 3]

Although some key informants acknowledged that consultation did occur, they expressed concern over the state's style of consultation which they viewed as time-limited; also because of the state's top-down approach to interacting with

service providers and communities. Several key informants believed that consultation occurred for the sake of consultation; with the state "just hear(ing) what they want to hear" and not listening to service providers' views or community needs. Key informants were of the opinion that there were few opportunities to influence the state's service delivery plans:

> ...I don't think that enough time is allowed for consultation. So you'll get a phone call and will be expected to solve a situation in a five minute chat. So you're expected to solve the tik (methamphetamine) problem in community X and provide strategies in a five minute conversation. Or you're given a day to produce a written proposal on how you'd do that. [TSP 6]

> Things work a lot better if needs are identified by the community and it's a bottom-up process...The problem happens when an area is identified by government, even by national departments, as one where there is a need. And money is given for people to go and do work in that area. But it's very much a top-down approach [TSP 2]

> I think that is important... It's to start with your community, to start with their need, to identify who the community leaders are and to involve them right from the very beginning, and not just coming in with your own plans and ideas [TSP 5]

Key informants also experienced difficulties in influencing the state's service delivery plans, due to what they perceived to be "fixed political agendas." According to key informants, these agendas sometimes took precedence over community needs. This was reflected in statements that the government placed more importance on perceptions that it was acting for their benefit than service outcomes; the government only took action when it was politically opportune to do so:

I think a lot of the time there's a bit of an Elastoplast attitude where you just want to cover it up or you just want to be seen to be doing something. And a lot of money goes down the drain that way...Part of the government's agenda is definitely to make an impact in communities. But part of the agenda is also to be seen to be making an impact, and there's less of an emphasis on the impact being made as opposed to being seen. [TSP 2]

... And sometimes its pure political being seen to be doing something about substance abuse because it's a major community thing and it's had lots of publicity. So often your choice of geographic area is not based on the need, it's based on the community which has the loudest voice. Or it's based on whatever political party is in power at the time, where their greatest need is for votes. [TSP 6]

Key informants also believed that these political agendas drove the state's tendency to seek "quick fixes" to AOD problems within HDCs. According to key informants, the state's desire for "quick fixes" rather than "sustainable solutions" limited the impact of state led AOD interventions in HDCs:

People's frustration is just, if you look at the past two years, the amount of money that went from the various departments to training people without any proper follow up plan, or to make things sustainable.... And sometimes, I feel the department is very short sighted and they try and look at quick fixes and there is no way you can do that in this field. [TSP 4]

If you think in terms of community development, in one area that was identified, they want us to change the community within 6 months and we said no... it is nothing to have all those projects in place and it can be

completed within six months, but there is no sustainability. So they don't have a sustainable plan in place and that is why the impact is lacking.

[TSP 1]

#### *6.2.1.4. Lack of intersectoral collaboration impacted on service planning*

Fourthly, key informants perceived the state's failure to develop an effective AOD strategy as predicated on a lack of "intersectoral collaboration" between government departments on AOD issues. For example:

> You don't see anything really materialising on the ground level, where the three departments (health, education, social services) actually say okay, this is how together we are going to address the problem practically.
>
> [TSP 3]

> There's complete fragmentation. Nobody is collaborating with anybody else at all. [LDAC 1]

> In my opinion I think there's an attempt to work together but there is a lack in that regard. I mean, we've had social clusters dealing with substance abuse which have involved representatives from a high level, from every government department. But it still has struggled. [TSP 5]

According to key informants, this had led to "fragmented services" being delivered which also informed perceptions of state-led interventions for AOD problems being ineffective:

> And also they (community) can see the different departments are not working together. So that's already a negative thing from government's side. [SAC 1]

#### *6.2.1.5. Lack of accountable leadership impacted on service delivery*

Fifthly, almost all key informants commented on a "leadership deficit" within the state welfare sector; characterised by a failure to take responsibility for ineffective AOD services.

> At the end of the day, what is really needed is a person or a single person or department, where the buck stops. Yes, somebody needs to be accountable, because it is public money that is involved. [TSP 7]

Key informants believed that the state's lack of accountability had increased community resistance to new and limited the use of existing state supported services for AOD problems:

> The lack of (government) leadership and the inability to implement effective interventions in communities has actually made the community quite resistant. It's made them resistant and very angry. It's made them resistant to effective treatment. [LDAC 2]

#### *6.2.1.6. Unintended consequences of poor service planning*

Whatever the reasons, key informants agreed that poor service planning had resulted in the poor spatial distribution of AOD treatment resources in the state and nonprofit sectors. All key informants viewed the poor spatial distribution of services as having contributed to geographic access barriers for people from HDCs. According to key informants, these geographic access barriers included lengthy distances to travel to treatment and long travel times. While key informants believed that these were significant barriers to treatment use in all HDCs, they felt that they were most salient in Black/African communities:

> It is not acceptable to expect people to travel from Gugs and Khayelitsha (Black/African communities) to Suburb A... that's also quite far geographically. So I think you do need to space centres." [TSP 6]

Those rehabs, these institutions are too far. I assist the parents on the first day, that is the procedure, just to show them where. But I can't transport everyday because I have a lot of people to help. (INT: Is it too far for them to travel in distance or is it too expensive for them?) RSP: Both, it is too far to go there and it is expensive. [SAC 4]

Besides costs it's time consuming. To X they have to take a taxi to a station they have to take a train to Y, and then get another train from Y to X. And from X to Treatment centre A, they have to take another taxi... And it's a lot of money and its time consuming. If the appointment is for nine o'clock it means they must catch a train here at six o'clock to be able to make it in time." [SAC 5 from a Black/African community]

Key informants believed that these barriers restricted the uptake of services due to the limited availability of public transport and the costs associated with public transport in HDCs. This is reflected in the following statements:

It's a problem getting in here, getting the family here. There are no taxis. It's not that far from the train station but it's far enough. The nearest station is 8km; it's definitely too far. The big problem is that taxi's refuse to stop here." [TSP 5]

It sounds like it is accessible in terms of the bus route or taxi route, accessible by train, but yet people don't have the money to access our offices... because of people coming from a poor community doesn't have money to come by taxi, so that in itself is a big problem. During the day, the taxis are not freely available, because most of the time, taxis wait until they are full and whatever, so your public transport is not that reliable.

[TSP 3]

In addition, almost all (18) key informants believed that the uneven distribution of AOD services and fragmented service delivery had undermined HDC's confidence in the effectiveness and quality of state and nonprofit AOD services and had contributed to a perception in HDCs that effective treatment for AOD problems was non existent and that it "didn't really help to go to rehab". Key informants believed that these negative perceptions of AOD services hampered treatment use. As one key informant noted:

> When people hear that you are going to rehab they say "Why do you want to go, rehabs don't work." [TSP 4]

In summary, these findings suggest that the politics around service planning (located within the BHSU's contextual domain) influenced perceptions of the availability and effectiveness of AOD services within HDCs (located within the BHSU's predisposing domain), as well as geographical access to treatment (an enabling/restricting resource within the BHSU). Findings also suggest that the politics around service planning influenced the state's allocation of resources for affordable AOD treatment services; discussed below.

#### 6.2.2. Limited allocation of state resources for AOD services

Although the implementation of strategic plans is contingent on the state allocating sufficient resources to AOD treatment services, key informants perceived this allocation of resources to be limited. According to key informants, the state's limited financial support for AOD treatment stemmed partly from a preference for prevention rather than treatment initiatives. Key informants believed that this preference was underpinned by a perception that treatment was generally ineffective:

> In the field of substance abuse, prevention and training are far more 'sexy' to funders than treatment. And treatment has got a very bad rap. People firstly think it's their own fault and they must deal with the consequences,

> and secondly people think that there isn't a high success rate. This is a misconception. [TSP 3]

> People like the notion of prevention work. People like the notion of capacity building. What people forget is that there will always, always be a need for treatment. And that treatment is a prevention programme in itself - in terms of preventing crime, preventing domestic violence. It's allowing a person to reach their potential. We often describe treatment as tertiary prevention in terms of trying to access funding, but it's extremely difficult. It's much easier to get money for prevention and training. And in the long run often this is less effective than treatment; it has a lower impact on the community. [TSP 5]

Irrespective of the reason, key informants noted that the state's limited allocation of financial resources to the AOD treatment system hampered access to treatment for persons from HDCs by restricting the availability of affordable, publicly-funded services. All key informants commented on the limited availability of treatment facilities:

> See substance abuse is one of the...the biggest problems in our society. And it's getting worse. And the thing is, since the beginning up till now, there's only been these few [treatment centres]. You don't see them grow, you don't see them expand. But really when you look at the problem in whole, the rehab centres it's too little. [TSP 4]

> If all the addicts had to decide, I want to go for rehabilitation, out of my own and I want to come clean, then by all means we have a problem because now, how many rehabs have we got? Not enough. [LDAC 3]

> There's not enough treatment facilities for people. [SAC 4]

Apart from this, findings suggested that the state's limited allocation of funding to the nonprofit and state AOD service sectors influenced (i) the extent to which financial and personnel resources within the AOD treatment system were available for service delivery and (ii) the organisational infrastructure of the AOD treatment system. These treatment system influences on AOD service uptake are discussed in the following section.

## 6.3. TREATMENT SYSTEM INFLUENCES ON AOD TREATMENT UPTAKE

Two treatment factors emerged as influences on access to AOD treatment: resource allocation within the nonprofit AOD treatment system and the organisational infrastructure of this system. The following sub-sections examine these treatment system influences.

### 6.3.1. Resource allocation within the AOD treatment system

Findings suggest that the state's limited allocation of financial resources to existing AOD services restricted their capacity to provide affordable services and to meet the growing demand for treatment within HDCs. Together these factors contributed to delays in accessing treatment and affected the quality, range and appropriateness of AOD services available.

#### *6.3.1.1. Limited capacity to provide affordable services*

Even where services were available, the state's limited allocation of resources to nonprofit treatment facilities hindered their capacity to provide affordable (i.e. free or low cost) services to clients from HDCs. Key informants felt that limited financial resources impacted on their financial sustainability, including their ability to cover the basic costs of delivering AOD services to the poor. For several service providers, this created a tension between remaining financially viable (through charging clients for treatment) and providing free services to indigent clients; with the pressures of financial survival sometimes leading to poor, uninsured clients being refused treatment. For the poor, this hindered access to services:

They can't afford to give a bed for about 3 to 5 weeks to a patient without money. You have not got money, we can't afford to have you on... that is basically the reality. [LDAC 4]

Financially we're restricted. How do you say no? You can't. And then what happens to us, because we've got overheads that need to be covered? So I think that's one of our main constraints. We've had meetings with government. We've been through the mill. All they did was say we're doing great work. We don't need that. If we wanted we could have patted ourselves on the back. We need to know how government can assist organisations like ourselves. Other organisations are struggling which are also catering for the underprivileged. [TSP 7]

How do you feed them? How do you feed twenty people...And of that twenty people, maybe three are on medical aid. Medical aid only pays out after treatment. So how do you feed twenty people and still cover your water and electricity and all those things? [TSP 4]

With all our bills we're living on hope and fear. How are we going to cover this? [TSP 1]

According to key informants, these concerns about financial sustainability had led to treatment providers' competing for funding. In some instances, this had led to unhealthy competition and "infighting" among service providers:

There's definitely infighting among service providers. I think there's infighting amongst NGO's in general. In the field that they do sometimes see each other as competing for the same funding. I think that's in general for NGO's but in particular in the field of substance abuse. [TSP 2]

> There is a very unhealthy competitive kind of environment. For some reason, people think that there is money in terms of rendering substance abuse services and there are very limited resources. So people are very ... there is resistance to really work together, because everyone is trying to protect themselves, trying to protect the resources, and there is not always a willingness to share... [TSP 3]

Key informants believed that this "unhealthy competition" hampered service delivery by making it difficult for service providers to pool their knowledge, experience and scarce resources to find joint solutions to the challenges of service delivery. Beyond this, key informants believed that "infighting" had damaged the reputation of AOD treatment services; and consequently the use of these services by HDCs. As one key informant remarked:

> It (infighting) does affect service delivery because some of the organisations will not refer. Because if I'm in rivalry with you or I don't think you're using your budget or money that you have effectively, why must I refer to you? ...It affects organisations' reputations and it affects their service delivery as well. And referral. So ja. And resources. Because we could have used each other's resources but now we have to struggle on our own. [TSP 1]

Apart from this, all key informants commented that the state's limited allocation of financial resources restricted the number of personnel within treatment facilities and district social service offices. This restricted the number of people that could be served and service providers' capacity to expand their coverage to meet the increased demand for services; thus limiting access to care:

> And I think, obviously if we can be also capacitated to a larger extent to meet the demand, it will make things much easier for us. So I think we

> know what to do, we can do that, but we need support, we need the money to actually put that into place. [TSP 5]

> I think staff shortage is one of the major areas of concern, because with limited funding, you cannot really expand or get hold of the necessary resources that you would like. [TSP 1]

> I have thirty beds that are unused completely simply because I can't afford to... And of course I can't open those beds up unless I've got staff. Paid staff. And that's the whole story of the situation. [TSP 7]

> We don't have the infrastructure. We don't have the capacity. We know what we're supposed to do but we don't have the people, the manpower. We just don't have it. [SAC 2]

Key informants also remarked that the lack of personnel within both the district social service offices and state-subsidised treatment facilities, coupled with a growing demand for services, had increased the caseloads of already overburdened service providers:

> One other thing, we've got a very high caseload, so we are sometimes unable to supervise them when they come from rehabilitation into our areas. It's very much difficult. [SAC 3]

> But the thing is person power ... And we are only two social workers, Xhosa-speaking social workers, here for the whole of K community. [TSP 5]

> So on average we see about six people per day. But because of the other clients we do see, if they have a crisis, they also tend to be here as well. Or other people that want information. And if the person is crying or needs

to be seen to, then you have to see them. So it might be more than that. That's just the average... Plus you have your cases that is running already. [TSP 2]

Key informants believed that these staff shortages in nonprofit treatment facilities resulted in personnel performing activities unrelated to treatment. Similarly, in the state social work sector, staff shortages resulted in SACs having to perform multiple activities unrelated to AOD problems. In both sectors, these competing demands further diminished capacity to provide AOD services:

> Because even if you want to train people, it means from our side, it is our senior staff that already do have a lot of other responsibilities which need to shift some of the responsibilities to do that. [TSP 1]

> I was the only one, the only person that was here, then I was supposed to help with the community and the case work. That was a difficulty for me. [TSP 6]

> You know, this substance abuse is actually a secondary function. It's not my primary function. Just to find a balance between the two is nerve-wracking... And besides that your managers also say, look you have to focus on your primary work as well. Substance abuse is not the alpha and omega. [SAC 2]

> At times it becomes very difficult. If I can give an example, I need to go out and do drug and substance abuse training, my supervisor is going to growl and say; how can you go, you are the only crisis worker, how are we going to cope without you, you can't go and stuff like that because there is not enough staff. [SAC 4]

According to almost all (19) key informants, high caseloads (and pressure within the state and NGO sector to provide services to all who required them) impacted negatively on service quality:

> Understand that really there is a shortage of staff and this area we find ourselves in is overpopulated, there is a lot of people here ... At times you can see our waiting room here is full, full and these people they need to be served by today and they must be at home by the time we knock off. So do you think really that we are producing quality service, I doubt it. [SAC 5]

#### *6.3.1.2. Limited availability and delays in accessing treatment*

Apart from limiting the number of places available for poor indigent clients in the nonprofit treatment sector, key informants perceived the limited availability of low cost treatment slots as having contributed to delays in accessing treatment in a timely manner; due to lengthy waiting periods for affordable treatment slots. For example, key informants remarked:

> Yes there are state facilities that are free but the problem is, the disadvantage is this, they have to wait for a long time. They are being put on a waiting list. [TSP 6]

> It was in November and they were saying they're not going to take on anybody now until February the first. That makes people think where to now? Where can I put my child? Because they are charging R500 a month. And parents they feel they can afford that, because it's a monthly thing that you pay. Treatment centre X charges according to your income, but they are full, full, full. [LDAC 3]

According to key informants, an unintended consequence of these lengthy waiting periods for affordable treatment places was diminished motivation for

treatment. Several key informants believed that this acted as a barrier to treatment uptake:

> For a state patient you will get in, in three months or so ... (By that time) they've often relapsed in such a state that they're unwilling to come for treatment. We often say that when we get an application there's a therapeutic window of opportunity. And it's so sad when that window passes. [TSP 7]

> You tell a mother that is in distress about her son or daughter that is on methamphetamine .... You try and tell that lady that, you know what, I know that you have not got the funding to send your child for rehabilitation although he needs it ... it is going to take you at least three or four months before they will be able to admit him free of charge. He would have been put on a waiting list, by which time what's the point? He'll have committed more crimes, he may have overdosed. [LDAC 4]

#### *6.3.1.3. Availability of an appropriate range of services*

All key informants perceived the impact of the limited availability of affordable services on treatment uptake to be greatest for poor people with severe AOD problems who required intensive inpatient services; with affordable inpatient services seen as less available and having lengthier waiting periods for available treatment places than less intensive outpatient services. As such, key informants argued that people with more severe AOD problems often struggled to access treatment of the appropriate intensity and duration, and were forced to use less appropriate outpatient services. These findings suggest that for people with severe AOD problems, an appropriate range of services might not be available:

> Then looking at the need, I think the problem that we have is to get inpatient facilities. We are really struggling to get places. And even if though we do apply, what I have experienced recently is, last year in

> October I started to apply for someone who was really in need of going to inpatient. He was only admitted this year in March. [TSP 1]

> We still experience difficulty in getting people from under-resourced areas into inpatient treatment. In fact it's not an ideal situation to be treating heroin clients on an outpatient basis anyway. [TSP 3]

According to key informants, the state's limited allocation of resources to the public health sector compounded these difficulties in accessing inpatient services. More specifically, key informants noted that limited resources restricted the availability of medical detoxification services for people with AOD problems. As key informants remarked:

> It's supposed to be easy because I spoke to all the health institutions, all the major day hospitals and community clinics within our area, and all of them agreed that they must give assistance. And they even have a protocol when the person is coming there. They will assess and see whether there's a need for detox there, and then they will arrange the detox. Whether its happening is another question. People still do have difficulties... [SAC 2]

> We have experienced problems with detox, access to detox. Although there is a good partnership with us and the various health clinics, it is still difficult to access detox. [TSP 4]

Key informants believed that the limited availability of detoxification services stemmed directly from the limited allocation of resources to the public health sector. According to key informants, this resulted in detoxification services competing with other, more prioritised, medical conditions for limited bed space, staff time, and medical supplies:

One of the issues, briefly, is detox. There is an instruction that every hospital had to have detox beds. Now that is fine, except that I have to sit in the hospital in a high trauma area, where they have to decide whether to give this bed to detox or whether to give this to a casualty that has just walked in, that is where the problem lies. That's one of the things for those who can't pay. People who can pay we say go straight to the medi-clinic or the clinic, whatever it is, and get yourself detoxed. That is one of the big issues. [TSP 5]

The subject's first reaction might be to go to casualty. They're not going to see you straight away because you're not a casualty. It's not like your arm is severed and there's blood. So you are actually the last person that they will assist if someone else needs the bed or needs to be assisted. So that person sits there and waits until somebody can help them. Although they're withdrawing actively, they may have physical symptoms, they're not going to be helped as quickly. And there might not be medication available for your withdrawal. [TSP 6]

Key informants believed that the limited availability of detoxification services restricted access to inpatient treatment for people with severe AOD problems as detoxification was often a prerequisite for entry into AOD inpatient treatment. As key informants reported:

The inpatient treatment requires us to have detox. They don't accept the person without it. So when you get to the rehab centre they turn the person away if they get there and they're still withdrawing. Because they don't have a medical team to look after the person. [TSP 7]

They (inpatient treatment centres) don't take them in when they not detoxed. Now where else (do they go)? [SAC 4]

Similarly, key informants believed that the limited availability of mental health services restricted access to inpatient treatment for people with co-occurring AOD and psychiatric problems. According to key informants, many inpatient facilities required clients with co-occurring psychiatric disorders to be stabilised prior to admission. However, key informants perceived state mental health services as being unwilling or unable to treat AOD-related psychiatric difficulties. Key informants reflected on how clients were referred back and forth from the AOD to the mental health treatment system; with neither system willing to accept responsibility for the client. For these clients, this contributed to difficulties in accessing AOD treatment; illustrated below:

> I have this guy now; he's a psychiatric patient of ten years at X community health care. So his family brought him, and I'm waiting for ...treatment centre to let him be admitted. But at one stage he got so berserk man, he did strange things. And I thought to myself, no man, he was a psychiatric patient and he's still getting medication. So I phoned the psychiatric nurse and she said the person can come in for assessment. But they sent that person back home and said no there's nothing wrong. I'm so convinced there is something wrong... The whole of the interview he was like fiddling and staring and gnashing on his teeth, and I thought no this man needs some psychiatric intervention. But they just say it's not a psychiatric case, it's because of the alcohol. They say its withdrawal symptoms...and you can see there's something wrong with this person but from their perspective there's nothing wrong." [SAC 5]

> The psychiatrist will say to the mother, we are not equipped to work with the drug addicts. If you were normal and you went in a mental state, we can handle you. But not this person. [LDAC 4]

Apart from this, key informants also noted that limited personnel and high caseloads within both the state and nonprofit sectors restricted the range of AOD

services that could be offered to clients; with detoxification and aftercare services generally not provided. Key informants believed that this restricted range of services impacted negatively on treatment outcomes and contributed to negative perceptions of AOD treatment in HDCs:

> And I think the frustration for people is that they don't always understand that we can only offer them limited services. [TSP 6]

> Even if a person has been rehabilitated from whatever, at the end of the day that person who is coming out of the rehabilitation centre back to the community, and whose duty is it to monitor that person? We social workers can, but we can't promise and say, that is our duty. We have got lots of other things. [SAC 4]

> I do not believe you can just rehabilitate the person and then throw him back into society. It doesn't work that way. The re-integration period that takes place, that's talking about aftercare...And I don't think a lot of rehabilitation centres in fact do that; when the person's time is up they say go home. [TSP 7]

In summary, these findings shows how funding allocation shapes the resources available within the nonprofit AOD treatment system; particularly the supply of AOD services. Restricted financial and personnel resources seem to affect treatment uptake by limiting service availability (a provider related enabling resource within the BHSU) and by informing negative perceptions about the quality of available services (a predisposing variable within the BHSU). Findings also point to how limited resources within the AOD treatment system influence the range and appropriateness of services available and contribute to delays in accessing care. As such, these findings suggest that treatment system resources shape the organisation of the AOD treatment system. These organisational influences on AOD treatment use are discussed below.

### 6.3.2. Organisation of the AOD treatment system

Findings suggest that the state's limited allocation of financial resources to existing AOD services influenced the staffing infrastructure within AOD treatment facilities as well as the process of accessing care. According to key informants, these factors hampered AOD treatment use by contributing to difficulties in accessing services and by affecting perceptions of the quality of AOD services.

#### *6.3.2.1. Fragile and unstable organisational infrastructures*

Key informants noted that within both the state welfare and nonprofit treatment sectors limited financial resources contributed to fragile and unstable organisational infrastructures – characterised by low levels of staff retention and variable skills to provide quality services.

##### *6.3.2.1.1. Remuneration, burnout and staff retention*

Several key informants described how poor remuneration for staff, due to limited financial resources, contributed to high levels of staff turnover. As one key informant noted:

> In the experience of the X treatment centre as an NGO, our salaries aren't very high. As a result we tend to get social workers straight out of Varsity. They spend two or three years here during which we train them up, and then we lose them. We lose them either to private inpatient clinics who pay a good three times what we pay our counsellors, or we lose them to Britain. So it's more about difficulty in staff retention. [TSP 2]

Apart from poor remuneration, key informants perceived burnout to be a significant contributor to low levels of staff retention. Within both the state welfare and nonprofit AOD treatment sectors, key informants viewed high caseloads, a sense of being overburdened, and an inability meet the demand for

services within HDCs as playing a role in poor staff morale and high levels of burnout. This is reflected in the following remarks:

> We're very lucky that we've got a set of core staff that is like the spine of the organisation. But around that we have a high staff turnover and part of it is due to the nature of the work - that it is demanding work with a high rate of burnout. [TSP 2]

> Because of who we are we sit with huge guilt. I walk here to my house, get into bed and I hear the people on the other end of the phone calls, and it's actually soul destroying. I sit up and night and... I sit here and try to work out these wonderful schemes of how I can connect this all together. [TSP 5]

> I hate the part of telling the mother that does not have money, that we can't help. [TSP 6]

> They (counsellors) are sort of coping. Not really, but I think we try and stretch them to the limit. I think what we are trying to say to them is that do the best that you can do with the limited time. Because you cannot be all over for everybody. [TSP 1]

> I still have my case load and I'm the coordinator of substance abuse. I had a meeting last night till half past nine. Monday night till nine o'clock in the evening, because you have to do it outside of your normal duties and office hours. And it's putting extra strain and pressure on you. There's no-one extra to help us and support us and that for me is really a weakness. [SAC 1]

Key informants expressed concern that these high levels of staff turnover diminished the skills set of the organisation and impacted on service providers' capacity to deliver quality AOD services:

> There is not consistency and I think in this work that we find ourselves we need consistency because I can't work with more that 20 people a year. You find that it is not easy to replace those who were good. Really, it is hampering us, it has a major impact on us and it keeps us out of focus so we need government to do something about that. [SAC 5]

*6.3.2.1.2. Knowledge and skills to provide quality services*

Findings also suggest that limited knowledge and AOD service delivery skills hampered the delivery of effective AOD treatment services. For example, within the social welfare sector, key informants remarked that a lack of AOD related knowledge directly affected SACs' capacity to provide effective AOD services. This is articulated by the following comments:

> So I was sort of forced to work in substance abuse, and it's not my passion. You need to be equipped and in university you get generic social work training. You focus more on child abuse and all that stuff. So I'd feel more confident in that field. [SAC 2]

> For me it's just I'm not confident in terms of even running a drug group, because I don't have that knowledge. [SAC 3]

> You know what happens here at the office... you get a social worker that does everything, but there's not a specialised person that deals with this. Drug/ substance abuse is really a specialised field... [SAC 5]

Similarly, many (17) of the key informants commented on a lack of knowledge and skills among AOD service providers. They informants perceived this lack of

knowledge to be most prevalent among smaller, unregulated community based organisations (CBOs) that had arisen to meet the growing demand for AOD services (and the limited availability thereof) in HDCs. Although these organisations provided AOD counselling and aftercare services, several key informants perceived these service providers to have limited knowledge of AOD problems and few skills to treat these problems. As they reflected:

> So there is other smaller organisations that do provide drug treatment but I don't think they have the necessary skills for what we deal with... [TSP 3]

> And whether they do it for money or out of the best of intentions, they don't educate themselves in terms of best practise or what we've learnt from research since the 1950's. And I think they do a lot of harm. They're using approaches which research indicates runs the risk of increasing drug abuse instead of decreasing it. We've got people counselling, and their only qualification is that they're recovering addicts. Which I think is problematic. [TSP 2]

> They are setting themselves up as drug counsellors and setting up NPOs (nonprofit organisations), which is not a difficult thing to do...They're unskilled, they're not capacitated. [LDAC 1]

Key informants believed that limited financial resources contributed to this lack of capacity among CBOs; with several respondents commenting that CBOs tended to employ "lay counsellors" or "recovering addicts" instead of costly professional staff. Concern was expressed over how this limited knowledge impacted on the quality and effectiveness of services provided by these organisations:

> So I took on F... that worked in Pick 'n Pay, and I trained her in correction therapy, she is battling and I took Aunty F... that was doing community work over the years. She is battling. I have got all these people, I have

trained so many people, but none of them are really professional, and they are battling... I will no longer take anyone from the street to be trained as a counsellor. [TSP 6]

People come to us because others have failed, and they will say to us, listen I need professional treatment because where I was they treated me like a dog; or it was just lectures; or it was just talk, talk, talk, and I learned nothing. [TSP 5]

Quality is really very variable. And it sounds like there are services where as in fact there aren't. Because you've this little Aunty Fatima that wants to help because of her nephew, and sets herself up as a treatment expert. [LDAC 1]

When you hear the stories that is going on within the treatment centres. There is a will power and there is commitment to do something right but I think they lack the relevant necessary training. Like the story of yesterday when the guys came. They reported yesterday that they actually beat their heads to the ground and then they had to say "I'm not going to go to the shebeens, I'm not going to go buy drugs". That kind of stories. Punitive...the only conclusion that I can get to is maybe a lack of training. [SAC 5]

Key informants were of the opinion that this lack of training and limited knowledge not only impacted on the quality of services provided, but also entrenched negative perceptions of the AOD service sector. For instance, several key informants outside of the treatment sector held negative perceptions about the effectiveness of AOD treatment services:

And really, my experience with rehabs or our traditional rehabs we send our clients to, the success rate is very minimum. They're coming back for

two days, for one week and then they relapse again. It's really scary to send the people and then they come back and that happens. So I have my own doubts regarding the rehab centres. [SAC 3]

So that's the experience that people do have. Either it's not successful, ineffective, or they have an approach that is not evidence-based. [SAC 4]

In addition, several key informants expressed concern that the use of punitive and ineffective treatment approaches entrenched fears about the process of AOD treatment. For example, key informants commented on "concerns about a lack of control over yourself and what's going to happen to you once men in white coats take over the whole process", client beliefs that "it's a jail and you cannot go out", and concerns that they were going "to be controlled, these people (were) going to hit me." Key informants believed that these negative perceptions and fears about treatment tended to hamper treatment uptake.

In summary, findings suggest that limited state funding for AOD treatment facilities hindered facilities' capacity to provide effective services by contributing to fragile and unstable organisational infrastructures within the AOD service sector. Limited resources for adequately remunerating staff and burnout due to high caseloads contributed to high levels of staff turnover, which reduced facilities' capacity to deliver quality services. Limited resources for skills development also hampered the delivery of effective services. Key informants perceived poor staff retention and variable skills to be significant contributors to negative perceptions of the quality and effectiveness of AOD treatment services. As such, these factors could restrict AOD treatment uptake.

#### 6.3.2.2. The process of accessing treatment

Findings also suggest that the complex process of accessing state-funded AOD treatment services restricted the uptake of these services by people from HDCs. Key informants were in agreement that lengthy referral procedures and the presence of "bureaucratic red tape" served to delay access to nonprofit AOD services. This is evidenced by the following comments:

> The process is so long. [TSP 1]

> There's some red tape things and bureaucracy. It seems excessive from the start. [SAC 3]

According to key informants, this lengthy referral process was underpinned by a lack of a structured referral pathway. Key informants noted that as the referral pathway was unclear, persons were often referred to several organisations before they were able to obtain assistance. This further delayed treatment entry. As key informants reflected:

> There's no structured referral pathway at all. [LDAC 2]

> So perhaps I think government is not doing enough in terms of a better structure and a smaller way of referral...By the time they come here they have been sent by various organisations. So NICRO sent them here or the court sent them to social services who sent them to the day hospital who sent them here. So they get sent from pillar to post. [TSP 5]

> So it's being sent from this place to this place to this place, nowhere to help...From point A to B and land up to Z and back again to point A. [TSP 6]

Key informants also described the referral pathway as being multi-staged with gatekeepers controlling access at each step. According to key informants, these gatekeepers further delayed treatment entry by requiring certain bureaucratic procedures to be completed prior to referring the potential service user to the next stage in the referral pathway. Several key informants provided detailed examples of how these gatekeepers delayed the referral process. For instance, clients requesting state-funded inpatient treatment had to be referred by a state social worker. This necessitated the production of reports on the client's medical status, need for treatment, and financial status. Social workers also required evidence that outpatient services had been used and had not been effective. Key informants reflected that the need for these reports, combined with caseloads and staff shortages in social work offices, contributed to these bureaucratic requirements taking several weeks to complete:

> There are the gatekeepers. There's a process they have to go through. So what happens there is they then go to social services or to their local hospital who refers them to social services. Social services then need to dig up reports. If somebody says I am a drug addict please help me, then the social worker has to write a report, they have to consult doctors and the dominee (Reverend) and everybody in the area to see whether that person is. That person gets put on a list, and they get called up, maybe, to go to D... rehabilitation centre. [LDAC 3]

> We need to know what intervention has been done on that particular person... you cannot just accept a person who say, place me at D..., I have got this problem. You have to check what efforts did the person undertake.... If a person has done nothing then normally we refer it back to an outpatient centre. If the outpatient centre feels, no we have done our part and there has been no change, they are supposed to be doing a formal referral to us. After this, if a person comes for placement then that person will see the intake social worker and then it takes the social worker

> not even a day to get the referral through the supervisor. At times it gets stuck... it all depends on the number of cases the person does have. If it is so urgent, then the supervisor has to write on your allocation to attend to this urgently. It takes a month or more than a month, depending on who is doing what. At times you will find that the cases get stuck when it comes to supervisor, the supervisor is on leave. And then it is going to take some time to be allocated once the supervisor is back. [SAC 4]

According to key informants, complex eligibility requirements also contributed to delays in accessing treatment. As mentioned previously, key informants noted that many facilities would not accept clients unless they had completed a hospital-based detoxification and unless they had been psychiatrically stabilised; should this be required. Key informants viewed this requirement as a further obstacle to treatment entry due to the limited availability of detoxification and psychiatric services. As one key informant noted:

> Detox becomes a problem. That's the first thing he encounters, detox... Next problem... Even if we shortcut everything and said bring him in and have an interview, we have to be careful that he is in fact psychiatrically stabilised to come in for treatment...And that is the sad part abut the fact that we can't say 'bring him in, we'll put him in detox for a week and we'll work the process through.' We can't do that. That is the saddest fact of all. If only we had some facility like that. He may find after detox that he needs primary care in a medical institution; he needs to be psychiatrically stabilised. But unfortunately all this is not possible in this facility. [TSP 5]

Key informants also noted that even if the person was eventually accepted into an inpatient facility, they still encountered a waiting period for their admission date:

From there we refer you to D..., because that's the only available state treatment centre. Depending on their waiting list, which is about a month to two months, then the person will get an answer to go in." [TSP 2]

When they do get here for help, what is maybe discouraging for them is perhaps the waiting list. [TSP 4]

Key informants believed that these delays in accessing treatment due to complex referral pathways, gatekeepers, eligibility requirements and waiting lists impacted negatively on AOD treatment uptake. Several key informants described how potential service users abandoned attempts to access treatment when faced with these organisational barriers to treatment entry:

Ja. Yes, it's true. They just ran away. When you come there then they are not there. Because it takes so long. [SAC 5]

People fall by the wayside. [TSP 7]

That that poor guy out there, as willing as he is to stand for treatment, he's up against it. And what can he do? [TSP 5]

In summary, findings revealed that organisational barriers such as waiting lists, eligibility requirements and gatekeepers not only delayed access to treatment for people from HDCs, but also limited the uptake of needed AOD services. These organisational barriers also informed community responses to AOD treatment; specifically the belief that effective services were not available. These community responses and their impact on AOD treatment uptake are discussed in the following section.

## 6.4. THE CONTEXT OF HDCS AND AOD TREATMENT UPTAKE

Another major finding was that the context of HDCs informed the uptake of AOD treatment services. More specifically, the following factors emerged as influences on access to AOD treatment: disempowerment around AOD treatment use within HDCs, community environments conducive to AOD use, and limited social trust in AOD service providers. These influences relate to the enabling/restricting variable domain of the BHSU. The following sub-sections examine these influences on AOD treatment uptake.

### 6.4.1. Disempowerment around AOD issues

According to most (18) key informants, HDCs in Cape Town were characterised by high levels of learned helplessness and disempowerment around AOD issues:

> I do believe that our parents in our community they don't know what to do when a child has a problem with the substance abuse. They don't know what to do because these children are too much for parents, they carry guns... [SAC 2]

> Some parents say to me "we know there's a place that is selling drugs to our children, but there's nothing we can do." [SAC 5]

> A complete disempowerment, this is the way life is going to be. Absolute hopelessness about the future. [LDAC 3]

Key informants believed that this disempowerment hindered AOD treatment seeking behaviour by creating a culture of silence around AOD problems and the need for treatment services:

> And if she is using drugs, what would the parents do? If she is, so what? Well, not 'so what' but rather not go there because then the parents got to take some sort of action." [LDAC 2]

> Families don't know what to do; the school doesn't know how to deal with it. So it's easier just to be quiet about it and silent about it than saying this is unacceptable, because the next step would be, what do we do now? [TSP 3]

#### *6.4.1.1. Disempowerment and limited awareness of AOD services*

Findings suggested that this disempowerment around AOD issues partly stemmed from a limited awareness of where to access AOD services. More specifically, all key informants noted that limited knowledge of AOD problems and limited awareness of where to seek help for these problems hampered the uptake of AOD services by people from HDCs. According to one key informant, this limited awareness entrenched feelings of hopelessness and despair:

> Poor people...lack of information and knowledge. That's also a constraint. People are sitting there, hopeless and in a situation of despair. It's unnecessary; if they can only come to us we will assist and can assist in some way or another. [TSP 5]

While key informants noted that this limited awareness of AOD services was present to a greater or lesser extent in all HDCs, they perceived this limited awareness of where to go for help to be more prevalent in Black/African communities than Coloured communities. This is reflected in the following remarks:

> Many people who live in informal settlements are completely ignorant that there is treatment available. There's a huge problem out there. And not only that, the understanding in the communities that this is a disease is non-existent. [TSP 2]

> And in the Black communities they have no idea about treatment at all. When we were doing our community development work there, they were really pleased to hear about the support groups and they wanted to know how they could get them started in their communities. They were fascinated to know that it was an illness. [LDAC 4]

#### *6.4.1.2. Disempowerment and limited awareness of when to seek help*

Key informants were also of the opinion that disempowerment arose from a limited awareness of when to access AOD services. Key informants observed that rather than seeking treatment when the AOD problems were relatively mild, people from HDCs only tended to seek treatment once the AOD problem had become severe. As one key informant noted:

> I think when you talk to these people, when they really get worried is when psychotic things...Or criminal activity. You know with tik (methamphetamine), for example, it was fine with the family when he used. It's not fine anymore when he sees things coming out of the walls...Or he's stealing...I think it's about a serious lack of early intervention. [TSP 1]

According to key informants, an unintended consequence of this delay in treatment seeking was that it tended to compound feelings of disempowerment:

> The other thing is that people by that time are so desperate they want something to be done. They don't want (outpatient) counselling, they want this person to be sent away. [SAC 1]

> What you find is that people normally wait until the last moment to come here, when the problem is now out of...out of...do you see? Then they come and then they want the child to be sent away immediately because they can't take it any longer. [SAC 5]

I also think at that time when the parent comes and complains about the child then the situation is already very, very bad. She says I have had enough! Just do something; just send him away that is the first thing they say "send them away". [TSP 3]

Almost all key informants believed that these feelings of helplessness and of being unable to cope with the AOD problem led to attempts to "transfer the problem" onto AOD service providers. According to key informants, this resulted in a desire for inpatient rather than outpatient services within HDCs. This is reflected in the following remarks:

Our people, obviously due to lack of understanding of addiction, believe they should have an inpatient clinic. I think also because of lack of knowledge, not being able to handle the problem. So, let's just make it someone else's problem for a while, and when he is cured, then bring him back. [TSP 6]

They also have the belief that people have to go away for treatment. [LDAC 2]

According to key informants, these attempts to "transfer the problem" and limited "ownership" also impacted on family and broader community support for AOD treatment processes. Key informants commented that family members struggled to assume "ownership" and responsibility for their part in the recovery process:

Once the child is here then the parents will stand back. Now it is no more my problem it is the social workers problem. Because they feel, what can I do? [TSP 1]

I'm bringing the problem to you, you need to fix it. And it's not on. It's their child; they need to take ownership of the problem at the end of the day. [SAC 2]

Because, the parents' perception is, here is my child with a problem, I am putting it on the institution's lap. And once that problem comes back to me, I expect my child to be clean. [TSP 4]

Our community, they just want to pass the buck and give you the responsibility. They don't want to take ownership, because it's very difficult, it's very challenging to stay with the person that is an addict. [SAC 5]

Key informants viewed this pattern of "transferring responsibility" as problematic as they believed it contributed to families (and broader communities) failing to fulfill their supportive role during the treatment process; which according to key informants had potentially negatively impacts on treatment outcomes. As they noted:

The parents don't understand that he is playing an integral part in that child's recovery process. Because he needs to be the support structure. [LDAC]

I think total unrealistic expectations. They need to be part of the recovery process, because they have been part of the problem and they also need to go through certain changes as a family system...and all of a sudden they expect this person to change and be completely recovered and without also realising how they can form part of the supporting network afterwards. [TSP]

Apart from this, key informants also noted that this dynamic was problematic due to the limited availability of and lengthy waiting periods for inpatient services. According to them, these two factors not only contributed to a sense of hopelessness about the availability of affordable and effective services, but also hampered the uptake of relatively more available but less desirable outpatient services. For example:

> I think often there's a tendency in the community to say that there's no help out there. When it's just not help to their liking. So I think there is in reality a lack of treatment capacity, but at the same time there'll always be to some extent a perception in the community that there's not enough treatment. [TSP 2]

> Sometimes when people come here they come hoping that I'm going to get inpatient help of some time kind, an inpatient alcohol or drug treatment centre. People feel disappointed sometimes because we cannot provide that. [TSP 3]

#### *6.4.1.3. Disempowerment and limited awareness of the treatment process*

Key informants also believed that this disempowerment arose from a limited awareness of how to access AOD services within HDCs. They felt that this limited awareness hampered access to services, as depicted below:

> The way I assess it, they do want their children to go to rehab but the only thing they don't know is the procedure. If a parent experience that a child has got a problem and they are sick and tired of all those things they come to us and, please I want to take my children to this place but they don't know and understand the procedure... [SAC 1]

Related to this, key informants also noted that people from HDCs often had misconceptions about the treatment process. Limited knowledge of the treatment process often resulted in unrealistic expectations about treatment; including a belief that a single treatment episode should "cure" the individual. Key informants were of the opinion that these misunderstandings contributed not only to feelings of helplessness about the availability of effective services but also to community perceptions that "treatment does not work." As such, these misperceptions restricted both community support for treatment and treatment uptake. As they commented:

> I think they have unrealistic expectations of treatment. That the person comes here once and they're fine. So when the person perhaps comes three times and in the fourth week they relapse, it's like, but we expected you to be ok and you're not. So that is the misconception about treatment, it doesn't work. [TSP 7]

> ...they expect a silver bullet, they expect their family member to come back better. And when it doesn't work like that and they relapse, everybody goes into a tailspin." [SAC 5]

### 6.4.2. Community environments conducive to AOD use

Key informants also reflected on how the context of HDCs was often conducive to AOD use. They believed that neighbourhood environment, a community predisposing variable within the BHSU, contributed to high levels of AOD use within HDCs. All key informants noted that poverty, lack of recreational facilities, and other socio-economic problems fostered widespread drug use; with drugs being viewed as a coping mechanism in these communities. To illustrate:

> There are a host of socioeconomic problems. And that, with a lot of people together, and then here comes the drug lord, because there is a lot of people, there is nothing to do. We don't earn enough money, but we

can fix you up with a hit or two. And you can get high on something, and at least you are going to do something that is going to be nice, for the start, until addiction strikes... [LDAC 2]

> It's a way of coping. It's a way of coping. Everybody uses drugs, everybody gets high. [TSP 4]

According to key informants, this association between poverty and drug availability stemmed from what they believed to be a commonly held perception of drug trafficking offering a means of financial survival in an environment with limited employment options. As one respondent noted:

> Every second house there's drug merchants. That is what the problem is. Because there is more and more dealers going out, it's a quick way of making money. Selling this heroin, selling this tik. [LDAC 3]

While key informants believed that this perception of drug merchants being a resource against poverty was present in all HDCs, they felt that this perception was most prevalent in Coloured communities. They expressed concern that this perception of drug merchants hampered the development of social cohesion around AOD issues and consequently the use of AOD treatment services. This is reflected in the following comments:

> Those specific merchants support maybe the aunty next door. They're dependent on them. They get bread or money or whatever. I don't know, it's more a cycle, the whole poverty thing in the community contributing to people being dependent on drug merchants. [SAC 5]

> And the of course, why must I go to rehab when the merchant is paying my mom's bills? It happens and drug pushers are actually doing that, to the extent where they hand out groceries. If you're living in a poor area

> and somebody is going to offer you groceries, why would you bother? Why would I send my son (to rehab)? [TSP 7]

Apart from the influence of poverty, key informants were of the opinion that a "culture of drug use" and community norms supportive of AOD use also hampered community support for and social cohesion around the uptake of AOD services within HDCs. However, they perceived this normalisation of AOD use to be much more salient in Coloured than in Black/African communities; with key informants noting that larger enclaves of Black/African communities frowned upon the use of AODs than in Coloured communities. Key informants serving predominantly Coloured communities believed that drug use was part of community culture and was viewed as "part of life" by community members. This is illustrated through the following remarks:

> It was part of the culture in the Cape Flats. [TSP 7]

> I find that... it's different from our (Black) areas. In our areas it's not accepted. It's really not accepted, especially with young people. But in Coloured areas it seems as though it's something that's not so bad in the community. In one family you will find the grandmother is abusing liquor, the mother, the father, the children, everybody here. At one stage I was shocked to find that almost the whole family is using drugs. [SAC 3]

Key informants believed that this normalisation of AOD use within Coloured communities not only reduced social cohesion around AOD issues, but also diminished the value that these communities' attached to treatment. This hindered treatment uptake, as depicted below:

> Nobody accepts it, but nobody says anything. Like the parents don't accept it, the teachers don't accept it, the police don't accept it. But what do we do, when the community feels its part of life? [SAC 2]

What I find especially with the use is that it has become something that just 'is' in the community. I think the idea is that its part of life. So if it's part of life, why are you people going on like that? Why is my mother finding a problem with it? So that is I think a common belief...Why must I be here when a whole neighbourhood is using? So what difference can you make if I am coming here? So because of normalisation it does become a problem for them to be at a treatment centre. [TSP 4]

In contrast to Coloured communities, key informants perceived traditionally Black/African communities as being more willing to mobilise around social issues and as having greater levels of social cohesion. They believed that Black/African communities were more willing to work together to resolve their AOD problems than people from Coloured communities. Several key informants serving predominantly Coloured areas provided examples of how community groups struggled to act cohesively around AOD issues but tended to fight among each other for status, power and resources. These contrasts are reflected below:

In our Black communities, if you invite them over they can come together against whatever. I think the community is also willing to come to board to help with what we are trying to do now. [SAC 1]

In the community you get the different community organizations working against one another, but they're both working for drugs. You know? With the drug problem at the end of the day. So this competition is also happening in the community now. [SAC 2 serving predominantly Coloured communities]

**6.4.3. Limited social trust in AOD treatment services**

According to key informants, social trust, another component of social capital, also appeared to affect AOD treatment uptake for people from HDCs. They

believed that low levels of social trust in the quality, effectiveness and intentions of state and nonprofit service providers undermined AOD treatment use by HDCs. While key informants believed that limited social trust in service providers was present in all HDCs, they felt that this perception was most salient in Coloured rather than in Black/African communities. In part, this stems from perceptions that "outside" organisations do not understand the community and cannot be trusted to work in the best interests of the specified community:

> There's still people who're saying why are you coming now? ...and you get all the recognition at the end of the day. You know, so you're coming from outside, you weren't here from the beginning. [SAC 2]

> They are seen as outsiders... then the people still ask who the social workers are? We don't see them in M.... community. Things like that. That is where the hostility comes from. [SAC 5]

Key informants were of the opinion that this "insider/outsider" perspective within some Coloured communities emerged from feelings of having being exploited by "external" organisations, which were thought to be "making money from our distress." As one key informant noted:

> Because, people say, why is the government, why are they paying an organisation like X. Why can't they let us also to do the job? So why must they get the money? That is the perception, which is fair. So now that is the sentiment of the community. They need people like me to buy into their concept, because I go into my community and I tell my community, these people want to use you and you need to open your eyes. [LDAC 1]

Key informants also believed that this the historical context of AOD service delivery in many of these Coloured communities had contributed to this "insider/outsider" perspective being formed. It was noted that many Coloured

communities had a history of having ineffective and poor quality AOD services delivered to them by "external" organisations. According to key informants, this resulted in these communities being less receptive to "outside" interventions, including the provision of treatment services by professional facilities. As they commented:

> So we have had an organisation, for example, they've advocated vitamins which can cure substance abuse. Obviously this is problematic and I think that communities are therefore less receptive after that, when they've received that kind of thing and have been let down to that degree. I think that's part of the problem. [TSP 2]

> But that's because they've had so many people come in and tell them what to do. Government started the tik task team. That fell apart. They had X organization in, they had Y organisation in. They've had all sorts of different people in and nothing's happened. [LDAC 4]

Key informants believed that this "insider/outsider" perspective within Coloured communities diminished the value that these communities attached to professional AOD treatment services, reduced community support for these services, and consequently hindered AOD treatment uptake. In fact, several key informants felt that community members were more likely to approach other community members for help than use external service providers:

> They don't respect...they think very little of them coming in the community. They think they're better equipped than anybody else to do the job because they're from the community and all that stuff. That's sad on the one side, because you need to recognise the professional people as well. You will obviously have to come to them when you have to refer a person to a treatment centre at the end of the day. Or maybe you need training or

> basic counselling skills or whatever, then you will have to tap into those resources. [SAC 4]

> (Communities) feel they're better equipped to deal with the problem in the area. For example if people come to them in the evening for drug counselling, then they want to do it. [SAC 5]

Findings revealed that this lack of social trust extended beyond AOD service providers to include provincial government departments responsible for the coordination and management of AOD services. According to key informants from these communities, this lack of social trust in the state stemmed mainly from the state's failure to fulfill their promises of effective solutions to the AOD problems facing many poor communities in Cape Town. Key informants also noted that the state's delivery of "sub standard and ineffective" services to these communities had contributed to low levels of social trust. They reflected that communities felt "let down" and "betrayed" by the state; mostly because these interventions were perceived as having had little impact on AOD problems within communities. This is portrayed below:

> But it is not impacting...and the department is saying look, we are going to have this and that glamorous thing that is going to take place, that is going to ease the impact (of drugs) and will create work. Look at the day hospital and look at the police station and look at the courts, mothers sitting outside and you see the guys appearing in the Magistrate's Court. 95% of those people that is being charged, somehow or the other are linked to drugs, or to get their hands on drugs...So did it impact? No. [LDAC 3]

> They are raising expectations in the community. Likewise, in about 2003 the (provincial) Premier came to X community and he said, this is what is going to happen in X community. Channel 3, Special Assignment (the media) were there. You know, it was quite exciting, and people really

> thought that this is what is going to happen, things are going to change... Hulle maak 'n klomp promises. And that is it. Now you ask yourself what has happened ever since after that. What has happened? Did it impact that problem?" [TSP 6]

These findings show how the context of HDCs in the Cape Town metropole informed and shaped community responses to AOD treatment and consequently treatment uptake. These findings also highlight that community responses to AOD treatment are not uniform across HDCs, but are shaped by community dynamics including disempowerment and limited awareness of where when and how to access treatment as well as community culture and norms around AOD use, drug availability, and poverty. All of these factors appeared to influence the extent to which communities act cohesively around AOD issues. Finally, findings point to the role of social trust in informing the use of AOD treatment services; particularly in Coloured communities. Poor quality services and unkept promises of service delivery contributed to low levels of trust in service providers and limited the use of services provided by "external" organisations; consequently affecting treatment uptake. Community factors thus appear to interact with political and treatment system factors to influence the use of AOD treatment services by people from HDCs.

### 6.5. SUMMARY

In summary, this chapter presented findings from the qualitative analyses conducted to address study aims two through five. In general, there was uniformity in the views of all the key informants. Findings suggest that within the environmental/contextual domain of the BHSU, both political and treatment system factors influenced access to care. The politics around service planning influenced perceptions of the availability and effectiveness of AOD services within HDCs, as well as geographical access to treatment. Service planning also influenced the state's limited allocation of funding to the AOD service sector. This limited allocation of funding affected (i) the availability of financial and

personnel resources for AOD treatment services and (ii) the infrastructure of the treatment system. Findings suggest that these contextual factors interacted to influence community perceptions about the availability, quality and appropriateness of existing AOD treatment services, and ultimately treatment uptake.

Secondly, findings point to how the context of HDCs influenced AOD treatment use. Disempowerment within communities, social norms supportive of AOD use and limited social trust served to hamper AOD treatment uptake. These influences are all located within the enabling/restricting variable domain of the BHSU. Thirdly, findings suggest that these community influences were underpinned by the state's style of interacting with communities (a contextual factor), poverty, and negative perceptions of treatment quality (a predisposing factor). As such these findings suggest that several of the variable domains of the BHSU interact to influence the use of AOD treatment services.

Findings also highlight potential differences between Black/African and Coloured communities regarding their awareness of AOD services as well as on indicators of social capital (norms supportive of treatment, social trust, and social cohesion). Finally, taken together these findings point to how access to AOD treatment is multiply determined. These multiple influences on access, together with constraints on treatment capacity in the AOD treatment system, highlight the challenges of delivering AOD services in resource-poor settings. As Chapter Seven integrates findings from Phases one and two, it provides a deeper analysis of these challenges to delivery.

# CHAPTER SEVEN

# DISCUSSION

## 7.1. INTRODUCTION

Despite the high burden of harm associated with AOD problems in South Africa (Parry et al., 2005), reports of the growing need for AOD services by HDCs in Cape Town (Myers & Parry, 2005), and international evidence of the benefits of AOD treatment (Gossop et al., 2001), findings from this study of multiple barriers to AOD treatment use suggest that AOD treatment is difficult to access for people from HDCs in the Cape Town metropole. This study is the first to provide evidence of inequities in access to AOD treatment among HDCs in the Cape Town metropole. It is also the first to identify a broad range of personal, community, provider and contextual factors associated with the use (and non-use) of AOD treatment services by people from these HDCs.

More specifically, this chapter integrates findings from the quantitative case-control study and the qualitative phase into a unitary discussion about access to AOD treatment for people from poor HDCs in Cape Town. The first part of this discussion centres on inequities in access to AOD treatment for people from HDCs; thereby addressing the first aim of the study. The second part of the chapter uses Andersen's BHSU model as an organising framework to describe factors associated with the use and non-use of AOD treatment services by people from HDCs. Gender and race differences in the profile of variables associated with AOD treatment use are also outlined and linkages between the different variable domains described. This part of the discussion addresses study aims two through four. The final section discusses the extent to which the BHSU model is a useful framework for studying access to AOD treatment in a low resource country setting such as South Africa; thereby addressing study aim five.

## 7.2. IS ACCESS TO AOD TREATMENT EQUITABLE?

Prior to South Africa's first democratic elections in 1994, the AOD treatment system was characterised by inequitable access to treatment and inequitable quality of care. In apartheid South Africa, race was a major determinant of access to health and social resources, including access to AOD treatment. During this era, services for Black/African and Coloured populations were limited and sociopolitical factors hampered access to treatment for these HDCs.

Not only were state-subsidised treatment services inadequate, but treatment facilities were also poorly distributed. Most services were concentrated in urban areas historically reserved for Whites and apartheid laws which restricted movement made these services inaccessible to black[13] South Africans. In addition, there were major disparities in the quality and reach of AOD services available to HDCs compared to those available for privileged White communities (Parry, 1997; Parry and Bennetts, 1998). Not only were fewer treatment services delivered to black communities, but services that were available tended to be of inferior quality and less comprehensive compared to AOD treatment services available to White communities (Parry, 1997).

Since South Africa's transition to democracy in 1994, the state health and social welfare sectors have sought to redress these inequities in AOD service delivery. Improving access to AOD services for HDCs has become a priority of the NDOSD (NDOSD, 1997) which has also worked hard to develop a clear policy framework for addressing this issue. This policy framework prioritises service provision to vulnerable and historically underserved population groups and includes a National Drug Master Plan and an amended Substance Abuse Bill that is under discussion in parliament at the time of writing (NDOSD, 2006). Despite the importance given to the issue of equity in South Africa, there is little systematic evidence for the extent to which access to AOD treatment in post-

[13] Here black South Africans refers to both Black/African and Coloured persons, as mentioned in Chapter One

apartheid South Africa is equitable. Findings from this study make an initial contribution to the equity debate and provide a baseline for assessing the impact of efforts to facilitate equitable access to AOD treatment for people from HDCs in the country.

More specifically, this study examined horizontal equity, or the extent to which AOD treatment use is determined by need for treatment rather than non-need factors (Morris, Sutton & Gravelle, 2005). Findings from a hierarchical logistic regression procedure confirmed the study hypothesis that there is horizontal inequity in AOD treatment use among HDCs in the Cape Town metropole. Results found that need for AOD treatment was not the principal determinant of AOD treatment use among people from HDCs. For these population groups, enabling/restricting barrier variables accounted for the largest proportion of the variance in access and were more strongly associated with access than indicators of AOD treatment need. These barriers included affordability considerations, geographic access barriers and awareness barriers. This finding paints a picture of horizontal inequity, where individuals from HDCs with the same treatment needs do not consume AOD treatment equally.

Support for this claim of horizontal inequity was provided by findings from the qualitative phase. Key informants provided rich information on how AOD treatment was difficult to access for people from HDCs and proposed a number of reasons for these difficulties in accessing AOD treatment that included affordability concerns and geographic access barriers as well as structural constraints within the AOD treatment system (such as the limited availability of affordable services). These non-need barriers dominated the qualitative data and few key informants mentioned the role of treatment need in facilitating AOD treatment use. Taken together, these findings show that horizontal inequities in access to AOD treatment remain. Unless non-need barriers to access are reduced, the use of AOD treatment services will remain limited by people from HDCs – regardless of treatment need.

Finally, in terms of horizontal inequity, access to AOD treatment appears more inequitable for women from HDCs than for men from the same communities. After controlling for indicators of AOD treatment need, multiple logistic regression analyses found more need variables were associated with access for men than women and a broader range of enabling/restricting variables were associated with AOD treatment use among women from HDCs relative to men. In addition, stronger associations were found between affordability barriers, competing financial priorities, awareness barriers, geographic access barriers and treatment use for women relative to men. These findings imply that more horizontal inequity in AOD treatment use exists among women from HDCs relative to men; with women in these communities appearing most vulnerable to the effects of barriers on AOD treatment use. Compared to men, women from HDCs do not seem to have equal opportunities to access AOD treatment when needed.

In contrast, the extent to which horizontal inequities in AOD treatment use exist between the race groups is less clear. After controlling for AOD treatment need, multiple logistic regression analyses found stronger associations between awareness and geographic access barriers and treatment use among Black/African persons from HDCs relative to their Coloured counterparts. Although affordability barriers and competing financial needs were strongly associated with access among Coloured participants, these were only weakly associated with access among Black/Africans. This finding is counterintuitive, especially given the finding that a higher proportion of Black/Africans had competing financial priorities than Coloured participants and documented evidence of Black/African communities being relatively more socially disadvantaged than their Coloured counterparts (Sawyer, Wechsberg, & Myers, 2006). A possible explanation for this finding may lie in the fact that Black/Africans had relatively homogenous responses on measures of affordability barriers and competing needs; irrespective of their use of AOD

services. This reduced the possibility of detecting any measurable association between these barrier variables and access for this population subgroup.

While these findings imply that access to AOD treatment might be relatively more inequitable for women and Black/African persons from HDCs than for men and Coloured persons, this interpretation of the data remains tentative and should be treated with caution. As this study's matched design did not allow the researcher to explore whether gender and race were associated with AOD treatment use, further research that examines this question (and whether possible under-use by these population subgroups is due to need or non-need factors) is required to confirm these claims.

Findings from the qualitative phase were also suggestive of vertical inequity in AOD treatment use for people from HDCs. There is vertical equity when individuals with different levels of need consume appropriately different amounts of services (Morris et al., 2005). Although findings from the case-control study suggest that individuals with more severe AOD problems were more likely to use AOD treatment, this does not reflect the difficulty that individuals with relatively severe AOD problems have in accessing an appropriate range of treatment services. The qualitative data brought these difficulties to light. Key informants noted that persons with severe AOD problems (who required detoxification and/or treatment for co-occurring psychiatric problems in addition to AOD treatment) experienced more difficulty in accessing AOD treatment than persons with less severe problems. Key informants perceived these difficulties to be a result of the limited availability of state detoxification and mental health services as well as the limited availability of nonprofit inpatient AOD treatment facilities. Although nonprofit outpatient services are relatively more available than inpatient facilities, these services often are not appropriate for people with severe AOD problems (Kosanke, Magura, Staines, Foote, & Deluca, 2002). Findings also suggest that these difficulties in accessing appropriate levels of AOD treatment were disproportionately experienced by poor people from HDCs and were not

experienced by people from more affluent areas who could afford to pay for private detoxification, mental health and inpatient AOD services. Taken together, these findings allude to the presence of vertical inequity within the AOD treatment system.

Contrary to findings from previous studies employing treatment use as an indicator of equity (van Doorslaer et al., 2000), this study found evidence of horizontal and vertical inequity in the use of AOD treatment services by people from HDCs in Cape Town. These findings suggest that despite efforts to transform the AOD treatment system since 1994 and a policy framework that emphasises equitable access to services, inequities in AOD treatment use remain. Greater effort is needed to develop AOD services that are responsive to the needs of HDCs. While specific recommendations for improving equity and reducing non-need barriers to access are provided in Chapter Eight, a policy challenge will be to make these initiatives work. The usual thought is that inequities will be addressed by providing improved and additional services; but this might not happen immediately. Other studies have found that interventions to improve equity often first reach individuals who are relatively better off and only later affect the poorest sectors of communities (Raine, Hutchings, & Black, 2003). Strategies to address inequity should therefore target the poor specifically. Whether these strategies are effective in reducing inequities is an important question for future research (Morris et al., 2005). Further research that confirms the strength of these relationships and examines whether these inequities are greater for people living in HDCs relative to people living in more affluent areas is also required.

## 7.3. FACTORS ASSOCIATED WITH ACCESS

Findings identified a range of need for treatment, predisposing, enabling and contextual variables associated with AOD treatment use by people from HDCs. The role of each of these variable domains in determining treatment access is described below.

### 7.3.1. Need for treatment variables associated with access

This study found significant associations between several need for treatment indicators and AOD treatment use within HDCs. Significant positive associations between indicators of perceived treatment need and AOD treatment use were found. These indicators included self-perceived AOD problems, externally perceived AOD treatment needs, readiness to change AOD use, and motivation for AOD treatment. For these indicators, the strongest associations with AOD treatment use were found for self-perceived and externally perceived AOD problems; although these associations were only moderate. Although a weak association was found between readiness to change AOD use and realised access, this significant association still supports the study's hypothesis that readiness to change is a predictor of AOD treatment use. Moreover it is consistent with findings from research conducted in other country settings (Kertesz et al., 2006; Weisner et al., 2001).

A surprising finding was that only one aspect of treatment motivation (namely problem recognition) was significantly positively associated with AOD treatment use. The other aspects of treatment motivation were not associated with AOD treatment use in the expected direction. More specifically, desire for help was negatively associated with treatment use (although this was a weak association) and treatment readiness was not significantly associated with AOD treatment use. These findings conflict with evidence from earlier research which suggests that all three components of AOD treatment motivation are positively associated with AOD treatment use (Griffith et al., 1998; Knight et al., 2000; Schell et al., 2005). As treatment readiness did not differentiate between the use and non-use of AOD treatment, this suggests that even if people from HDCs are ready to enter AOD treatment, they might not be able to access these services. This explanation is supported by the finding that need for treatment variables were generally weak predictors of realised access in multivariate models of access.

More specifically, when predisposing and enabling/restricting variables were controlled for in hierarchical logistic regression procedures, most of the treatment need variables did not retain their significant associations with access. The only need variables that remained significantly associated with AOD treatment use were indicators of evaluated AOD treatment need; specifically drug problem severity and age at which drug use started. For these variables, greater drug problem severity and earlier initiation into drug use were associated with an increased likelihood of AOD treatment access. These findings are not only in line with findings from previous research (Kertesz et al., 2006; Tucker et al., 2004; Weisner et al., 2002), but are also supported by findings from the qualitative data.

Findings from the qualitative phase confirmed an association between drug problem severity and AOD treatment use; with key informants remarking that people from HDCs only sought AOD treatment once their drug problems had become severe. Within HDCs, limited awareness of when AOD problems require treatment contributed to this relationship between drug problem severity and AOD treatment use by delaying timely access to services. This is cause for concern as our findings suggest that delaying treatment use until drug problems are severe may hamper access to appropriate treatment. According to key informants, severe AOD problems often require inpatient services that are relatively less available, less affordable and less accessible than less intensive outpatient services. Given this context, people with severe AOD problems from HDCs might experience multiple barriers to accessing AOD treatment appropriate for their needs. This explanation is supported by quantitative findings of enabling/restricting barriers moderating the association between need for treatment and AOD treatment access. For example, findings showed that the strength of the association between treatment access and drug problem severity was moderated by the presence of affordability and geographic access barriers, with people with severe AOD problems less likely to access services under

conditions of high affordability and geographic access barriers than under conditions of low barriers.

In summary, the quantitative findings show that people from HDCs with the greatest AOD needs were most likely to access treatment. This reflects the appropriate use of AOD treatment services to meet genuine AOD needs rather than the inappropriate overuse of services. Despite this appropriate use of services, findings from the qualitative phase suggest that the AOD services received by these individuals might not be suitable for their level of problem severity. Given that service appropriateness is closely linked to treatment outcomes (Ball, 2007; Gossop et al., 2001; Schmidt, Greenfield, & Mulia, 2006, 2006), interventions that address these shortcomings within the AOD treatment system are crucial. Although building more inpatient treatment facilities might be one means of improving the availability of appropriate services for people with severe AOD problems, a more cost-effective route would be to improve the early identification of AOD problems in HDCs. Early identification of AOD problems might facilitate access to appropriate treatment by reducing the need for inpatient treatment. Such interventions might also decrease the multiple barriers that hamper people with more severe AOD problems from accessing treatment. Finally, even though indicators of AOD treatment need were only weakly associated with AOD treatment access, they remain important determinants of treatment use for people from HDCs.

### 7.3.2. Predisposing variables associated with access

In keeping with the BHSU model, this study also explored whether predisposing demographic, socio-structural, attitudinal-belief and socio-cognitive variables were associated with realised access to AOD treatment among HDCs in Cape Town. While several of these predisposing variables were significantly associated with access in bivariate analyses, when considered together in a multiple logistic regression model, many of the variables were no longer associated with access.

#### *7.3.2.1. Predisposing socio-demographic variables*

This study found no significant associations between AOD treatment use and the socio-demographic variables of gender, race/ethnicity, age, level of education, and relative deprivation. These findings are not surprising given that prior research on AOD treatment entry found few consistent associations between these variables and treatment access (Hajema et al., 1999; Hser et al., 1998). Nonetheless, it is possible that gender and race differences in the likelihood of accessing AOD treatment exist within HDCs – especially given findings that Black/Africans and women consistently comprise a small proportion of the client population at AOD treatment facilities compared to the other race groups and men, respectively (Myers et al., 2004). Despite this possibility, this study's matched design ruled out an examination of gender and race/ethnicity differences in the likelihood of AOD treatment access, although a comparison of the profile of predictors of access for each race and gender group was possible.

The only socio-demographic variables significantly and positively associated with access in this study were neighbourhood alcohol use, poverty, and safety measures. These findings suggest that lower levels of neighbourhood poverty and alcohol use and higher levels of neighbourhood safety predisposed people from HDCs to use AOD treatment services. While these variables had relatively weak associations with treatment access, these associations were in the expected direction and provide some support for the study hypothesis that lower levels of neighbourhood disadvantage within HDCs are associated with a greater likelihood of AOD treatment access. Further support for this hypothesis emerges from the finding that when the influence of the need for treatment and enabling/restricting variable domains was controlled for in hierarchical logistic regression procedures, neighbourhood poverty remained significantly associated with access to AOD treatment, with lower levels of neighbourhood poverty increasing the likelihood of AOD treatment access.

Findings from the qualitative phase not only confirmed this association between poverty and AOD treatment use, but also provide possible explanations for this relationship. These findings suggest that neighbourhood poverty is closely linked to neighbourhood disorder within HDCs. According to key informants, impoverished environments fostered the availability and use of drugs, with drug use viewed as a means of coping with the stresses of socio-economic disadvantage. This perception is supported by previous South African findings of strong associations between psychological stress, poverty and AOD use in HDCs (Kalichman et al., 2006). Key informants also postulated that within HDCs, the drug trade was sometimes viewed as a means of financial survival and as a buffer against poverty. According to key informants, these factors contributed to community norms supportive of AOD use. Rather than directly restricting AOD treatment access, key informants emphasised how neighbourhood disorder undermined social capital for AOD treatment use. Key informants understood neighbourhood disorder to fuel social influences supportive of AOD use and dilute community support for AOD treatment use.

While these findings should be treated with caution given that they are based on key informants' perceptions and do not necessarily reflect the reality of HDCs, they do correspond with findings from previous health services research. This research highlighted the role that poverty and disorderly neighbourhoods play in hampering the use of health services (Gage, 2007; Law et al., 2005; Prentice, 2006) and the formation of social capital (Altschuler et al., 2004). As this prior research did not examine the role that neighbourhood environments play in facilitating access to AOD treatment specifically, this study makes a valuable contribution to understandings of AOD treatment use by reflecting the important contribution that social environments make to the use and non-use of AOD services in a low resource setting. As such, this study underscores the importance of environmental and community initiatives to improve access to AOD services in such settings. For example, efforts to foster the socio-economic development of HDCs, to reduce neighbourhood disorder, and to curtail the drug

trade could help facilitate the use of AOD treatment services by people from these communities. While such efforts fall outside the ambit of current attempts to reform the AOD service delivery system, they would form an important part of broader policy initiatives to reduce AOD problems within HDCs.

#### *7.3.2.2. Predisposing attitudinal-belief variables*

While all of the predisposing attitudinal-belief variables were significantly associated with AOD treatment use among people from HDCs, not all of these associations were in the expected direction. More specifically, the community views about access to treatment measure was strongly and negatively associated with AOD treatment use, reflecting that perceptions of greater community concern about the affordability, availability and accessibility of services decreased the likelihood of AOD treatment use. Unexpectedly, greater treatment concerns and more negative beliefs about the value of treatment increased the likelihood of AOD treatment use. Moreover, this association between treatment concerns and AOD treatment use remained significant, even when the need for treatment and enabling/restricting variable domains were controlled for in a hierarchical logistic regression procedure. This finding is particularly surprising in the light of previous research which identified treatment concerns as a barrier to AOD treatment use (Appel et al., 2004; Simpson & Tucker, 2002).

The only plausible explanation for this finding is that a recall bias may have occurred during data collection. It is possible that cases might have had negative treatment experiences and received unsatisfactory treatment services. This would have biased their recall of their treatment experiences and possibly led to negative evaluations of AOD treatment services. This explanation is partially supported by findings from the qualitative phase. These findings did not support a positive association between treatment concerns and AOD treatment use. Instead, the qualitative data clearly illustrated how negative perceptions about treatment hampered AOD treatment use. According to key informants, these

perceptions included beliefs that treatment did not work and fears of being hurt and punished whilst in treatment. While unrealistic expectations of treatment being able to "cure" AOD problems and limited understandings of what constitutes appropriate and effective treatment for AOD problems seem to contribute to these negative beliefs, key informants recognised that treatment system factors played an important part in fuelling these concerns. According to key informants, several of the smaller AOD treatment facilities serving and frequented by people from HDCs were known to use unethical and punitive treatment approaches and few of these facilities used evidence-based models of care. Key informants argued that these approaches entrenched negative perceptions of AOD services which acted as barriers to treatment uptake. Support for these claims of unethical and punitive practices stems from previous South African research which examined AOD treatment practices (Louw, 2006). These findings suggest that efforts to counter negative perceptions about treatment need to address the quality and type of care provided by the AOD treatment system as well as community expectations regarding AOD treatment services. Guidelines for such efforts are provided in Chapter Eight.

In summary, findings from the quantitative phase support Andersen's (1995) contention that predisposing variables are relatively weak determinants of health services use, with only two predisposing variables significantly associated with access to AOD treatment in multivariate analyses. Although findings from the quantitative phase suggest that treatment concerns are positively linked to AOD treatment use, this finding probably arises from a recall bias due to the retrospective study design (Grimes & Schulz, 2002), especially as qualitative data suggest that negative beliefs and concerns about treatment hamper rather than facilitate AOD treatment access. Despite this, findings illustrate the ways in which specific features of the social environment of HDCs are important determinants of AOD treatment use. Findings from the qualitative phase suggest that much of the environment's influence on AOD use stems from its influence on the presence of community enabling resources, particularly social capital. This

supports Andersen's (1995) hypothesis that predisposing social environments are important influences on enabling resources. These enabling resources are discussed in the following section.

### 7.3.3. Enabling/restricting resources associated with access

Some of this study's most notable findings relate to the role that enabling/restricting variables played in determining AOD treatment use for people from HDCs. In the quantitative phase, several enabling/restricting variables were strongly and significantly associated with AOD treatment use after controlling for the influence of the need for treatment and predisposing variable domains. In addition, these enabling/restricting variables accounted for the largest proportion of the variance in AOD treatment access and had stronger associations with realised access than either the treatment need or predisposing variables. Findings from the qualitative phase confirmed these significant associations and revealed how these variables interact to influence AOD treatment use. Taken together, these findings suggest that enabling/restricting variables have strong independent effects on access to AOD treatment for people from HDCs in the Cape Town metropole. While many enabling variables had significant associations with access, the following sections discuss only those variables with moderate to strong associations with AOD treatment use.

#### *7.3.3.1. Personal enabling/restricting variables*

In this study, several personal enabling/restricting variables were significantly associated with AOD treatment access. These variables refer to people's awareness of AOD treatment services and their ability to use these services.

##### *7.3.3.1.1. Having the means to use AOD treatment services*

Even though earlier research identified strong associations between medical insurance, employment status, and treatment access (Appel et al., 2004; Green-Henessey, 2002), this study found no significant associations between these variables and AOD treatment use for people from HDCs in Cape Town. These

findings are not surprising given that almost equally high proportions of cases and controls did not have medical insurance (over 90%) and were unemployed (approximately 50%). In contrast, a significant association was found between income and AOD treatment access in bivariate analyses, with people earning more than R1000 per month having greater odds of AOD treatment access relative to people earning less than this amount. However, this significant association disappeared when treatment need and predisposing variables were controlled for in multivariate analyses. This limited association between income and access might be due to the fact that all study participants were low income earners. As such, the income categories used in this study might have been meaningless due to their restricted range. This restricted range probably prevented us from detecting a measurable association between income and access. Nonetheless, this study does provide some preliminary support for the hypothesis that income is positively associated with AOD treatment use.

Additional support for the role of financial barriers in limiting AOD treatment use stems from the finding of a significant negative association between affordability barriers and realised access, after controlling for the influence of predisposing and treatment need variables. For people from HDCs, higher treatment and transport costs thus diminish the chances of accessing AOD treatment services. This finding is consistent with findings from earlier research which identified the direct costs associated with treatment and the indirect costs associated with transport to treatment as barriers that restrict AOD treatment use (Hser et al., 1998; Tucker et al., 2004).

In keeping with documented evidence from the USA on competing financial demands acting as barriers to AOD services use (Appel et al, 2004; Gelberg et al., 2000; Hser et al., 1998), this study found that the presence of competing financial priorities (such as the need to pay for food and shelter) was significantly and strongly associated with the non-use of AOD services after adjusting for predisposing and need for treatment variables. Specifically, the odds of not

accessing treatment were almost six-fold greater for people from HDCs with competing financial priorities relative to those without these competing demands.

Earlier research findings pointed to competing financial demands being particularly salient barriers for vulnerable population groups, such as poor women (Gelberg et al., 2000; Schober & Annis, 1996). Findings from this study support this contention. Although affordability barriers and competing financial priorities were significant predictors of access for men and women, these variables were stronger determinants of access for women from HDCs than for men. In addition, a greater proportion of female controls reported competing financial priorities than their male counterparts. These findings suggest that women from HDCs are more likely to experience competing financial priorities and are more vulnerable to the effects of affordability and competing financial priorities than men. This might be due to the fact that women in South Africa often do not have access to an independent income to pay for treatment and also because of the patriarchal structure of African society, where men often control women's incomes (Tolhurst & Nyonator, 2006).

The qualitative findings provide some explanations for these observed associations between financial barriers and AOD treatment access. These findings suggest that people with no medical insurance and limited financial resources often struggled to access care due to the limited availability and lengthy waiting periods for affordable, nonprofit AOD treatment services in Cape Town. These delays in accessing AOD treatment did not occur at private for profit AOD treatment facilities which were relatively more available but unaffordable to people with low incomes and no medical insurance (Edelstein, Weber, & Pillay, 1997; Mills et al., 2004). Key informants perceived similar difficulties in access to detoxification services. According to key informants, free detoxification services were largely unavailable in the public sector, but these services were readily available in the private health care system - if one could afford to pay for such services. These findings suggest that for people from

HDCs, financial barriers to AOD treatment access seem closely linked tied to the availability of affordable treatment options in the region. Studies of mental health services use have found similar linkages between personal financial barriers and the structure of the service system (Feinson & Popper, 1995). These contextual influences on AOD treatment use are discussed more thoroughly in section 7.3.4.

*7.3.3.1.2. Awareness of AOD treatment services*

Findings revealed that awareness of AOD treatment services was an important enabling resource for people from HDCs. More specifically, awareness of where to go for AOD help and the number of known AOD treatment centres were strongly and positively associated with AOD treatment use after controlling for the influence of predisposing and need for treatment variables. In keeping with previous research (Hser et al., 1998; Lennings, Kenny, & Nelson, 2006; Porter et al., 2002), greater awareness of AOD treatment services increased the likelihood of accessing AOD treatment for people from HDCs.

In keeping with earlier research which identified limited awareness of AOD treatment as a particularly important barrier for women (Grant, 1997), this study found stronger associations between awareness variables and realised access for women than for men. These results imply that women from HDCs are more vulnerable to the effects of not knowing where to go for AOD help than men. While the reason for this finding is unclear and requires further investigation, it is possible that other factors contribute to the strong association between awareness and AOD treatment access for women. One such factor might be women's social networks. The role that significant others play in facilitating treatment use for women has been well documented, with positive social networks supportive of AOD treatment use buffering against the effects of limited awareness of services on AOD treatment use (Deri, 2005; Ensign, 2003, Hatton, 2001). Positive social networks might buffer women against the risks of limited awareness by providing information on available treatment options and by actively help seeking on behalf of their members (Sayre et al., 2004). Partial

support for this explanation is provided by the finding that "others suggesting the need for AOD help" significantly increased the odds of accessing treatment for women, but not for men. This suggests that women are more likely to access treatment when others suggest the need for help. However, as this study did not examine whether the presence of supportive social networks interacted with awareness variables to influence access, this explanation remains tentative and should be investigated further.

When race differences in the profile of variables associated with access were examined, awareness of AOD help was significantly associated with AOD treatment use among Coloured participants only. While this finding is surprising, it could be due to this variable measuring awareness of AOD services broadly and not measuring awareness of AOD *treatment* services specifically. Black/African participants might have been aware of other AOD services (such as indigenous healers) that were not closely linked to the use of formal AOD treatment services. This explanation appears supported by the finding that when awareness of AOD *treatment* services was examined, stronger associations were found between the number of known treatment centres and access for Black/African than Coloured persons. Black/African participants also knew of fewer AOD treatment centres than Coloureds. Black/Africans thus seem more vulnerable to the effects of awareness barriers and have lower levels of AOD *treatment* awareness than their Coloured counterparts. Qualitative findings confirm this, with key informants noting that awareness of where to go for AOD treatment was lower among Black/African than among Coloured people from HDCs. This is probably due to the fact that AOD awareness and prevention programmes in the city have targeted Coloured rather than Black/African communities, as they have assumed that Black/African communities have low levels of AOD problems (Sawyer et al., 2006). Whatever the reason, these findings highlight the need for efforts to improve awareness of AOD treatment services in HDCs, especially among Black/Africans and women.

The qualitative data not only confirmed that awareness of where to go for treatment is critical to realised access, but also identified several other dimensions of awareness that influence whether people from HDCs access AOD treatment. According to key informants, these included awareness of when AOD treatment is needed, of what constitutes appropriate and effective AOD treatment, and of how to access treatment. Several of these dimensions and their associations with AOD treatment use have already been discussed (see sections 7.3.1 and 7.3.2). Awareness of how to access available AOD treatment is closely linked to the complex and unstructured referral pathway (an AOD treatment system factor discussed in section 7.3.4). Key informants argued that limited awareness of the referral process and the bureaucratic requirements for treatment entry often contributed to delays and difficulties in accessing treatment

Taken together, these findings suggest that limited awareness of when, where, and how to access AOD treatment hampers people from accessing appropriate treatment in a timely manner. Policy makers and service providers should therefore place a high priority on information and referral programs designed to increase knowledge of services and how to access them. Findings suggest that these efforts may be particularly important for improving the use of AOD treatment services by women and Black/African persons from HDCs. Specific recommendations for improving each of these dimensions of awareness are provided in Chapter Eight.

#### *7.3.3.2. Community enabling/restricting variables*

Community enabling/restricting variables associated with AOD treatment access included enabling/restricting resources within HDCs as well as provider-related enabling/restricting variables.

##### *7.3.3.2.1. Resources within HDCs*

Even though earlier research documented strong positive associations between social capital and health services use (Hendryx et al., 2002; Lee, 2005; Prentice,

2006), the quantitative component of this study found only weak associations between social support, social cohesion and social trust (indicators of social capital) and AOD treatment use for people from HDCs in Cape Town. Measures of social support were not significantly associated with AOD treatment use while social trust showed a curious negative relationship to AOD treatment use. In contrast, while social cohesion initially showed a positive relationship with AOD treatment use, this relationship was no longer significant after adjusting for the predisposing and treatment need variables. While these findings are surprising and contradict the study hypothesis that indicators of social capital are positively associated with AOD treatment use, they should be treated with caution. It is possible that the social trust and social cohesion scales used in this study were not sufficiently sensitive to detect associations between social capital and AOD services use; particularly as the study used generic measures of social capital rather than social capital measures referring to AOD treatment use specifically.

In contrast, the qualitative data illuminated the linkages between social support, social capital and AOD treatment use within HDCs. Firstly, key informants proposed that high levels of disempowerment hampered social cohesion around AOD issues in HDCs. Key informants perceived this disempowerment as stemming from the social environment of HDCs (see section 7.2.2.); with poverty and the widespread availability of AODs contributing to the normalisation and acceptance of AOD problems as a "way of life." There seem to be few positive social influences and networks that enable these communities to cohere around AOD problems, exchange information and advice on AOD treatment, and support the use of AOD treatment services. Key informants viewed these factors as barriers to AOD treatment use. These perceptions concur with documented evidence that collective efficacy is impeded by a lack of community consensus around social issues, the failure to develop social norms supportive of service use, and disorderly social environments (Gage, 2007; Sampson, 2003).

Nonetheless, HDCs in the Cape Town metropole are not uniform entities and key informants perceived collective efficacy for AOD treatment use to be lower in Coloured than in Black/African communities. Reasons provided for this included the established gang culture within Coloured communities which was seen as a contributing factor to social disorder, drug availability and a culture of drug use. This perception is supported by evidence of a culture of drug use in Coloured communities and findings linking Coloured gangs to drug trafficking and violent crime (Haefele, 2003; Jensen, 2001; Redpath, 2001). Beyond this, key informants noted that efforts to provide positive (anti-drug) social influences in Coloured communities had been largely unsuccessful due to community organisations forming factions and being unable to work collectively on AOD issues. In many ways, Coloured communities in Cape Town seem fractured and these divisions have hampered community efforts to address AOD problems. While the reasons for these divides are unclear, they do point to the urgent need for community development initiatives. Without cohesive communities, it is quite likely that future efforts to address AOD problems within Coloured communities will remain unsupported and unsuccessful.

In contrast, key informants perceived Black/African communities as having fewer norms supportive of drug use and more potential to act collectively around AOD issues. This might stem from the collectivist nature of Black/African communities which place a great emphasis on maintaining connectedness with others and harmony within the in-group (Matsumoto, 1996; Mwamwenda, 1994). This collectivist outlook was clearly demonstrated during the apartheid era where Black/African communities mobilised around social issues that affected their communities (Bähre , 2007; Nel, Binns & Motteux, 2001). While social cohesion in Black/African communities might enhance collective efficacy for AOD treatment use, it should not be taken for granted. In Cape Town, Black/African communities are experiencing rapid social change due to urbanisation, migration, and the eroding of traditional values (Smith, 2005). As this has been linked to reductions in social capital (Ballard et al., 2005; Lyons & Snoxxel, 2005), efforts

are needed to maintain and enhance this enabling resource within Black/African communities.

Secondly, key informants proposed that low levels of social trust toward treatment providers and the state hampered AOD treatment use by people from HDCs. Key informants argued that this limited social trust stemmed from negative perceptions about the quality of available AOD treatment services (see section 7.2.2) as well as the state's style of interacting with HDCs; with the state failing to consult with HDCs around AOD issues, having a top-down approach to interacting with communities, and not delivering on its promises to HDCs. According to key informants, low levels of social trust have contributed to some HDCs developing an insider/outsider perspective in which they have refused to support AOD services imposed from "outside" the community. This dynamic seems particularly prevalent in Coloured communities which have been the target of several unsuccessful intervention efforts in recent years. For example, the state implemented an AOD campaign in several Coloured communities in 2006. This campaign consisted of community outreach, screening and brief interventions for individuals with AOD problems, and linkages to appropriate care. As this campaign was implemented without consulting the target communities, it was poorly supported and very few individuals made use of the free services available (Provincial Department of Social Development, personal communication, 15 May 2007). Secondly, the state provided funding for a well-established treatment facility to open a satellite office in a large Coloured community with high levels of unmet treatment need. As the state did not consult with community leaders prior to implementing this service, this low-cost service has been under-utilised by community members; even though other AOD treatment services in the area have lengthy waiting lists (Cape Town Drug Counselling Centre, personal communication, 7 July 2007). Further support for these perceptions is provided by documented evidence of an association between trust in treatment providers and the use of health services (Russel, 2005).

Summarising, these findings suggest that social capital around AOD use makes important contributions to AOD treatment access by people from HDCs. In keeping with Altschuler, Somkin, and Adler's (2004) findings, this study showed that social trust and social cohesion were not strong independent predictors of AOD treatment use, but appear to interact with predisposing factors (such as the social environment and negative perceptions about services) and systemic factors (such as the quality of care provided) to influence AOD treatment use. Similar findings have been found in studies examining the role of social capital in facilitating the use of services for chronic health conditions (e.g. Stafford et al., 2007). As findings show that social capital is not uniform across communities but is informed and shaped by the characteristics and history of each community, interventions to improve social trust and social cohesion should take the unique context of each community into account. Attempts to rebuild trusting relationships between HDCs, the state, and service providers might also assist in building social capital for AOD treatment use. Further recommendations for these interventions are provided in Chapter Eight.

*7.3.3.2.2. Provider- related enabling /restricting resources*

Corresponding to evidence from other studies of AOD services use (Beardsley et al., 2003; Fortney et al., 1995; Schmitt et al., 2003), this study found strong negative associations between distance and travel time to treatment (two geographic access barriers) and AOD treatment use for people from HDCs in Cape Town. These findings indicate that greater distance and travel time to treatment decreased the likelihood of AOD treatment use in this sample. As these two geographic access barriers were strongly correlated with each other, only travel time to treatment was included in multivariate models of access. This variable was chosen as it reflects not only distance to treatment but also barriers associated with available transport (Rössler, Riecher, Loffler, & Fatkenheuer, 1991) which are considered important for the accessibility of services (Gruen et al., 2001; Iredale, Jones, Gray, & Deaville, 2005). Results from the multivariate

analyses demonstrated a rapid decline in the probability of obtaining AOD treatment as travel time to treatment increased. This effect remained robust even after controlling for need and predisposing variables and other factors known to influence receipt of AOD services such as affordability barriers, competing financial priorities, and income. In fact, this enabling variable was one of the strongest determinants of AOD treatment use for this sample.

In addition, results indicated gender and race differences on the extent to which travel time was associated with AOD treatment use. Stronger associations were found between travel time and AOD treatment use for women than for men; suggesting that lengthy travel times disproportionately affect access to AOD treatment for women from HDCs relative to men. The finding that women from HDCs have more affordability barriers and competing financial priorities than men provides a possible explanation for this difference. For these women with multiple financial barriers, lengthy travel times might be unaffordable due to the costs associated with public transport. Support for this explanation arises from the finding that affordability barriers compound the negative association between travel time to treatment and AOD treatment use; with travel time to treatment having a stronger negative association with treatment use when affordability barriers are high than when these barriers are low. Moreover, this finding is consistent with previous research which reported that financial barriers impact on the ability to afford public transport and lead to more difficult commutes to AOD treatment (Beardsley et al., 2003; Kelahar, Dunt, Day, & Feldman, 2006).

Similarly, stronger associations were found between travel time and AOD treatment use for Black/African than for Coloured participants; suggesting that Black/Africans are more vulnerable to the effects of travel time on AOD treatment use than Coloureds. Affordability concerns and transport costs might also explain this difference, especially as Black/Africans reported lower incomes than Coloured participants. For example, more than half of the Black/African controls reported earning less than R500 per month compared to less than a third of their

Coloured counterparts. The geographic location of AOD treatment services provides another possible reason for Black/African persons having greater vulnerability to travel barriers than their Coloured counterparts. At present, few AOD treatment services are located within or close to Black/African communities. In contrast, several treatment services are located within predominantly Coloured residential areas (Myers & Parry, 2005). For people from Black/African communities, this might translate into greater distances to travel to AOD services. Given the unreliability and high costs of the public transport system in South Africa (Naude & Krugell, 2003; Tanser, Gijsbertsen, & Herbst, 2006), this might also translate into relatively more difficult and costly commutes for Black/Africans than for people from Coloured communities.

Partial support for this explanation is provided by the qualitative findings. Key informants proposed that geographic access barriers related to the lengthy distances required to travel to AOD treatment, the length of time it took to travel to these services, the availability and unreliability of public transport within HDCs, and the costs associated with using public transport. Respondents perceived these geographic access barriers to be more salient in Black/African communities than in Coloured communities. For example, Black/African persons often had to walk long distances to access public transport and often had to use several modes of transport to reach the nearest treatment facility. According to key informants, these factors contributed to the time taken to reach an AOD service as well as the costs associated with travelling to treatment.

In summary, these findings suggest that geographic access barriers are key determinants of AOD treatment use. These barriers are compounded by transport and travel costs as well as other financial barriers. In part, these barriers relate to the geographic location and spatial distribution of AOD treatment services in the Cape Town metropole. As such, findings have important implications for service planning around the placement of new resources for AOD treatment. Treatment providers and the state need to take

these geographic access barriers into account when planning for new services. Treatment providers should also consider providing transport services to poor clients, especially for women and Black/African clients for whom travel costs may be unaffordable given the limited availability of free and low-cost treatment services.

Related to this, findings from this study also shed light on the association between service availability and AOD treatment access among people from HDCs in Cape Town. Although service availability has been documented as a predictor of treatment use (Appel et al., 2004; McLellan & Meyers, 2004), its impact was not demonstrated in the quantitative analyses. This was probably due to the homogenous responses obtained between cases and controls on availability measures. For instance almost all cases (98.6%) and controls (99.8%) reported that there were not enough alcohol or drug services available in their communities. Rather than implying that there are not enough AOD treatment services available in Cape Town, this finding probably refers to the limited availability of affordable nonprofit AOD treatment services relative to the need for such services for poor people from HDCs. Evidence from earlier research supports this explanation. More specifically, while the number of treatment slots available in Cape Town increased from 1950 in 1994 to 2500 in 2006 (Pluddemann et al., 2007), the bulk of these new treatment slots were located in the private for-profit AOD treatment sector which is largely unaffordable to poor black South Africans without medical insurance (Goosen et al., 2003) and who cannot afford the out-of-pocket treatment expenses. The qualitative findings also support this explanation, with all respondents commenting on the limited availability of affordable treatment options for people from HDCs. While key informants perceived low service availability to hamper AOD treatment use directly, they also argued that availability was shaped by contextual factors such as the state's provision of funding to the nonprofit AOD treatment sector. These contextual factors are discussed below.

### 7.3.4. Contextual influences on AOD treatment access

Findings from the qualitative phase showed that several of the predisposing and enabling factors that limit AOD treatment use by people from HDCs in Cape Town were influenced by contextual factors.

#### *7.3.4.1. Political influences on service planning*

According to key informants, one of the main contextual influences on AOD service delivery to HDCs was the state's lack of planning around AOD service provision. Findings highlighted that the state had struggled to develop effective plans for addressing AOD problems within HDCs. While key informants listed a number of causes for this, almost all identified a lack of capacity among decision makers and service planners as the main contributing factor to ineffective service planning. This lack of capacity points to the need for training in AOD issues (such as evidence-based approaches to treatment) and the need for access to relevant information on AOD trends and evidence based prevention and treatment programmes. While consultation with researchers and service providers could compensate for this limited capacity and aid effective service planning, all key informants remarked upon the state's limited consultation with the private nonprofit AOD service sector and researchers. Key informants noted that while the state paid lip service to the importance of consultation, this consultation was often time-limited; with few opportunities present for influence the state's plans.

Although this lack of capacity indicates a clear need for better information on AOD service needs, it was found that as in other parts of the world (Davis, 2002; Pappaioanou et al., 2003), policy makers and service planners made decisions intuitively or on the basis of other considerations that included public opinion, political interests, and the concerns of organised community interest groups with the "loudest voices", rather than sound empirical data. Key informants viewed many of the decisions regarding AOD service allocation as based on political opportunism and the need to act swiftly to contain community disquiet over poor AOD service delivery. To contain these extrinsic influences on decision-making

processes, service providers and researchers should advocate for the establishment and maintenance of an information system that collects systematic data on the prevalence of AOD use and treatment need in the province.

A lack of intersectoral collaboration on AOD issues also underpinned the state's difficulty in implementing effective plans to address AOD problems. In some ways this is a residual effect of the apartheid system of governance. Prior to 1994 and South Africa's first democratic elections, service delivery was hampered by a lack of intersectoral collaboration on AOD issues at the national, provincial and local levels between the NDOH and the NDOSD. Through the apartheid years, these departments shared responsibility for the treatment and management of AOD problems. For instance, the NDOH was responsible for medical treatment and custodial inpatient care and the NDOSD was responsible for prevention and community rehabilitation services. This division affected the quality and provision of services since these departments worked in isolation and neither took responsibility for local service delivery (Parry, 1997), especially to Black communities. In addition, within both these departments the provision of AOD services was fragmented. This was partly due to the apartheid legacy of separate health and social welfare departments for each racially defined population group which, when combined with their failure to work collaboratively to deliver services, resulted in duplicated and poorly distributed resources (Parry, 1997). Since South Africa's transition to democracy, the state has sought to redress these challenges to AOD service delivery. For example, the multiple social welfare departments have been integrated into a single structure to streamline service delivery (NDOSD, 1997) and the NDOSD has been made the lead department responsible for AOD prevention and treatment (although the NDOH remains responsible for medical detoxification services).

Despite these structural changes, key informants noted that intersectoral collaboration between the health and social welfare sectors on AOD issues remained limited. Key informants perceived this lack of intersectoral

collaboration as a key factor that undermined the planning, provision and availability of AOD treatment for people from HDCs reliant on state and nonprofit services. This is a concern as coordination within the government sector, and between the state and civil society, is essential for efficient planning and delivery, of AOD services (Thomas, Mooney, & Mbatsha, 2007). An unintended consequence of this lack of service coordination has been service duplication, with some areas being relatively overserved and others being underserved. This has contributed to geographic access barriers to AOD treatment use.

This lack of intersectoral collaboration also has limited the availability of comprehensive public services for people from HDCs with AOD problems. Although the health sector is responsible for the provision of detoxification services, key informants viewed these as relatively unavailable and difficult to access in the public health sector. Similarly, key informants viewed the public mental health sector as unwilling and lacking capacity to serve people with co-occurring mental health and AOD problems. According to key informants, the public health sector's unwillingness to take responsibility for their role in AOD service delivery has limited access to AOD treatment for people who require detoxification and psychiatric stabilisation prior to treatment entry. This is problematic, not only from the point of limiting access to AOD treatment, but also because the nonprofit AOD treatment system does not provide these services. Therefore the multiple physical and mental health needs of clients may remain untreated which could impact on AOD treatment outcomes (Friedmann et al., 1999; Friedmann et al., 2003; Wenzel et al., 2004).

One way of addressing this service fragmentation and the poor linkages between service sectors would be to integrate AOD services provided by each state department and by the nonprofit sector into a single integrated service network (ISN) (Nelson, Rashid, Galvin, Essien, & Levine, 1999). According to Nelson et al., such an ISN could improve service delivery through allowing for the consolidation and more efficient allocation of resources, addressing service

fragmentation so that comprehensive AOD services could be provided, and by allowing for more efficient referral pathways to AOD services (Badger et al., 2000; Hurlburt et al., 2004). These public-private partnerships might also help address the capacity needs of service planners within the government sector.

#### *7.3.4.2. Limited allocation of resources*

Apart from difficulties in developing an AOD service delivery framework, the state's limited allocation of financial resources to AOD treatment impacted on the availability of affordable nonprofit services. Respondents noted that the state's limited allocation of financial resources prevented the establishment of new treatment facilities for people from HDCs, despite the perception that there were not enough treatment facilities available to meet AOD service needs. This is worrisome; especially given previous research findings that low service availability is an important barrier to AOD treatment entry (Appel et al., 2004; McLellan & Meyers, 2004).

Above and beyond this, respondents perceived the state's limited allocation of resources to existing nonprofit AOD treatment services as limiting the number of poor people who could be served by this sector. According to key informants from this sector, limited state funding restricted their capacity to provide free and low-cost services to indigent clients. First, limited state funding prevented existing nonprofit services from expanding their services to meet the growing demand for AOD treatment; partly because they could not afford to employ more staff. Second, limited resources and concerns about financial sustainability had forced several facilities to cross-subsidise their free treatment slots with fee-paying clients. This restricted the number of treatment slots available to indigent clients. Third, financial constraints impacted on nonprofit service providers' capacity to deliver services, with several of these facilities operating at half of their capacity due to budgetary constraints. For example, two key informants reported large numbers of empty beds within their facilities despite lengthy waiting lists for treatment places and other service providers reported having reduced their

number of free treatment beds in an effort to contain costs. Limited funding has thus restricted the availability of affordable treatment options for people from HDCs, and consequently access to treatment. These findings are in keeping with evidence from the USA of resource availability affecting treatment coverage and service provision (Friedmann et al., 2006).

Fourth, the state's allocation of financial resources to service providers in the non-profit and state sectors has affected personnel resources, with key informants noting that there were few resources available for employing additional members of staff in these sectors of the AOD service system. This not only limited the number of people that could be served, but also increased the caseloads of service providers. According to key informants, these high caseloads impacted negatively on service quality by restricting the range of services available to indigent clients. For example, most of the residential service providers reported being unable to provide detoxification, mental health or aftercare services due to limited financial and personnel resources. Evidence from the USA supports this claim with Friedmann et al. (1999) reporting that well-resourced AOD treatment units were more likely to provide clients with a comprehensive range of services than poorly resourced facilities. In addition, key informants noted that this provision of a restricted range of services contributed to perceptions that available AOD services were ineffective, incapable of meeting clients' needs, and of inferior quality. This is a concern, especially given study findings that negative perceptions of treatment hampered AOD treatment use among persons from HDCs. This is in keeping with prior findings that people with AOD problems prefer to access services that best meet their needs and respond to their expectations (Allman et al., 2006). Thus it is important that this barrier to care is addressed.

Related to this, an unintended consequence of the limited availability of affordable AOD services has been the proliferation of small community based treatment providers which have mushroomed to meet the unmet demand for

AOD services in HDCs. Many of these "mom and pop" outlets operate out of people's homes within HDCs. Key informants expressed concern about these service providers who they perceived to be unskilled and untrained in the complexities of dealing with AOD problems. While the emergence of these service providers is understandable given the limited availability of treatment options to HDCs, this is still worrisome as these service providers might entrench negative beliefs about the quality and effectiveness of AOD treatment within HDCs. To some extent this concern seems justified given evidence that staff knowledge and experience is a key contributing factor to service quality (Grosenick & Hatmaker, 2000), and that service quality has an important influence on AOD treatment utilisation (Gallon, Gabriel, & Knudsen, 2003). The quality of services provided by these unregulated service providers is thus an important policy concern, especially as findings suggest that negative treatment experiences might inoculate some individuals from using AOD services in the future. Access to poor quality services might therefore be more harmful than access to no services.

These findings highlight the need for greater resource allocation to the AOD treatment system. Prior to allocating more resources, it is important to examine the extent to which current resources are used efficiently and effectively. To date, there has been no systematic evaluation of the AOD treatment system in the Cape Town metropole. Such an evaluation would provide insight into how resources might be redistributed to improve efficiency, service quality and service reach. In addition, these findings suggest that to improve the use of AOD services in Cape Town, human capital development within AOD services is important; especially as it influences service quality (Allman et al., 2006) and perceptions of treatment effectiveness. As such, these findings suggest that more resources should be allocated to the capacity development of AOD treatment providers.

#### 7.3.4.3. ***Organisational barriers within the AOD treatment system***

While there are some free treatment places available in the Cape Town metropole, findings showed that lengthy waiting lists for these affordable treatment options were common due to the limited number of these treatmen slots. According to key informants, these waiting periods not only prevented timely access to treatment but also served as barriers to treatment entry via their impact on loss of motivation for treatment due to the ambivalence associated with seeking treatment for AOD problems. Evidence that long waiting times limit access to treatment due to people with AOD problems' having little tolerance for treatment delays (Carr et al., 2007; Hser et al., 1998; Tucker et al., 2004) and that waiting lists result in missed opportunities to reach people with AOD problems (Carlson, 2006) provide support for this finding.

Apart from the limited availability of treatment slots, key informants identified other organisational barriers that hampered timely access to care for people with AOD problems. These included the lack of a structured referral pathway, multiple gatekeepers, complex eligibility requirements, and excessive bureaucratic procedures for referral and entry into nonprofit AOD treatment services. According to key informants, these factors made access AOD treatment difficult and delayed timely access to treatment. These perceptions are supported by earlier findings from the USA that bureaucratic reporting requirements and multiple gatekeepers hamper timely access to and use of AOD services (Allman et al., 2006; Carr et al., 2007). Given that delays in accessing care hamper treatment entry (Hser et al., 1998), it is important to address organisational barriers to timely access. Strength-based case management may be a useful tool for surmounting these barriers (Rapp et al., 2006). This approach would involve assigning case managers to clients at their point of entry into the referral system. These case managers could help shorten waiting times by negotiating access to services at each point in the referral chain and by helping the client address individual and systemic barriers to treatment entry.

Another barrier that hampered the delivery of effective AOD services was the fragile and unstable organisational structure of many nonprofit treatment services. As mentioned earlier, key informants perceived this organisational barrier to be shaped by limited financial resources within the nonprofit sector which precluded adequate remuneration for professional staff, limited human resources within facilities, and contributed to high caseloads among staff. In keeping with earlier research findings (Shoptaw, Stein, & Rawson, 2000), these factors, together with the emotionally demanding nature of the field were also seen as contributing to high levels of burnout among staff. Key informants perceived poor remuneration, high caseloads, and burnout to be the driving forces behind poor staff retention within the public and private nonprofit service sectors, with most key informants reporting difficulties in retaining experienced staff. According to key informants, these factors also undermined service quality by diminishing the skills-set of remaining treatment staff. This has important implications for treatment access as staff skills and experience are important contributors to service quality and clients' perceptions of service effectiveness (Allman et al., 2006; Grosenick & Hatmaker, 2000).

When combined, these organisational and resource barriers produced inadequate types and amount of services and impacted on the comprehensiveness of AOD services provided. As importantly, these factors impacted on the extent to which the public perceived AOD treatment services to be useful and effective, and this affected treatment uptake. These findings therefore highlight the importance of addressing not only individual and community barriers to AOD treatment use, but also contextual and systemic factors which, in keeping with Andersen's model of service utilisation, play an important role in shaping decisions to use services.

## 7.4. THE UTILITY OF THE BHSU MODEL

Findings from this study suggest that Andersen's (1995) Behavioural Model of Health Services Utilisation is a useful framework for understanding access to

AOD treatment in the South African context. The results indicate that the BHSU model explains a high percentage of variance in the use of AOD treatment services by people from HDCs in the Cape Town metropole.

More specifically, all of the variable domains originally conceptualised by the BHSU model were significantly associated with access to AOD treatment in this study. The quantitative phase identified a range of variables within the predisposing, need for treatment, and enabling/restricting variable domains that independently predict AOD treatment use among people from HDCs in the Cape Town metropole. Confirmatory evidence of the importance of these enabling variables in ensuring access was provided by the qualitative data. In addition, findings from the qualitative phase revealed contextual influences on AOD treatment use that seem to have a direct effect on AOD treatment use. These contextual influences included broad systemic influences as well as factors specific to the organisation of the nonprofit AOD treatment system. When these qualitative and quantitative findings are considered together, they support Andersen's (1995) contention that each of these variable domains makes an independent contribution to realised access.

Beyond these independent contributions, findings showed that several of these variable domains interact to influence AOD treatment use. Findings from the qualitative phase clearly illustrated these interactions, with predisposing and enabling/restricting factors seemingly influenced by the contextual domain. For example, the state's poor service planning and limited allocation of resources to treatment has limited the capacity of nonprofit treatment services to provide comprehensive services, service quality and service coverage. These treatment system factors have restricted the availability of services (an enabling variable) and contributed to negative perceptions about the effectiveness of services (a predisposing variable).

Quantitative findings also provided evidence of interactions between the BHSU model's variable domains. Firstly, a hierarchical logistic regression analysis was used to explore whether the enabling/restricting variable domain mediated the association between treatment need and AOD treatment use. Findings from this analysis revealed that most of the need for treatment variables significantly associated with access did not maintain their significance when the enabling/restricting variable block was included in the regression equation. Two need variables did remain significantly associated with access; however the strength of these associations was diminished. These findings indicated that while there is still substantial independence across the underlying constructs of the BHSU model, the enabling/restricting variable domain attenuated the association between need for treatment and access. In other words, the enabling/restricting variable domain of the BHSU partially mediated the association between the need for treatment domain and AOD treatment use. These findings provide some support for the hypothesis that the need for treatment and enabling variable domains of the BHSU interact to influence AOD treatment access.

This finding of a mediation effect contradicts the results of Wolinsky (1978) and Vingilis, Wade and Seeley (2006) who found that the indirect effects of enabling variables on health care use were negligible. As this previous research was conducted in better resourced settings with less social disadvantage and better service coverage than South Africa, it is not surprising that enabling/restricting barriers did not mediate the association between need and service use. There is one caveat to these findings. Design limitations precluded this study from meeting all of Baron and Kenny's (1986) requirements for establishing mediation. Specifically, it was unable to meet the assumption of a causal relationship between the need and enabling/restricting variable domains. Despite the aforementioned limitation, this finding of a mediation effect is plausible given the limited resources and multiple barriers to basic services that characterise HDCs

in Cape Town. Nevertheless, in the light of this limitation, it remains a preliminary finding and requires further verification.

Further support for the hypothesis that the BHSU variable domains interact to influence AOD treatment access is provided by evidence of the moderating effects of several enabling/restricting variables on the association between treatment need and AOD treatment access. Findings from a hierarchical logistic regression procedure revealed main and interaction effects of need for treatment and enabling/restricting variables on AOD treatment use. Two interaction terms were significantly associated with realised access: the interaction between drug problem severity and affordability barriers and between drug problem severity and travel time. These interactions revealed that the positive association between drug problem severity and AOD treatment use was weaker under conditions of high affordability barriers and lengthy travel times than under conditions of low affordability barriers and shorter travel times. These findings imply that the association between treatment need and access is modified by the presence of enabling/restricting barrier variables. Taken together, these findings support Andersen's (1995) contention that the variable domains of the BHSU interact to make joint contributions to realised access to services.

Although findings from this study provide support for some of the BHSU model's main assumptions regarding determinants of health services use, it only provides partial support for assumptions regarding the ordering of these variable domains. More specifically, the BHSU model suggests that need variables are the most proximal and important determinants of services use, predisposing variables are weak and exogenous influences on services use, and enabling variables are necessary but are not sufficient for use to occur (Andersen, 1995; Thind & Andersen, 2003). Findings provide support for the assumption that predisposing variables are weak and distal influences on realised access. In the quantitative phase, predisposing variables accounted only for a small percentage of the variance in AOD treatment use; with only two predisposing variable significantly

associated with access when the influence of need and enabling/restricting variables was controlled for. Findings from the qualitative phase also suggest that predisposing variables have a weak influence on access. For instance, predisposing beliefs about the effectiveness of AOD treatment appear to be distal influences on access; with much of this influence stemming from their contribution to community enabling variables. More specifically, beliefs about treatment effectiveness appear to underpin the extent to which communities support treatment use, trust treatment providers, and have collective efficacy around treatment use. Taken together, these findings support the BHSU model's assumption that predisposing variables precede enabling variables and have relatively weak associations with realised access.

In contrast, findings from this study challenged the notion that need for treatment variables are the most important and proximal influences on realised access. In the quantitative study, need variables accounted only for a small percentage of the unique variance in AOD treatment use after adjusting for the influence of predisposing and enabling variables. Only two need variables were significantly associated with realised access in the multivariate model and these associations were relatively weak. In contrast, the enabling variable domain accounted for a large proportion of the unique variance in AOD treatment use. When the influence of the predisposing and need variables was controlled for, several enabling/restricting variables had strong associations with AOD treatment use. Findings from the qualitative phase provide further evidence of the importance of enabling/restricting variables in determining AOD treatment use; with these variables being more salient in the qualitative data than either need or predisposing variables. For HDCs in Cape Town, enabling/restricting barriers thus seem as (if not more) important for determining the use and non-use of AOD treatment as treatment need.

These findings contest the BHSU model's assumption that need variables are the most important predictors of realised access and suggest that in a context

characterised by poverty, social disadvantage and limited access to basic services (Sanders & Chopra, 2006), need for treatment is necessary but does not ensure AOD treatment use. In this context, multiple barriers restricted AOD treatment access, despite the presence of treatment need. These findings also suggest that within HDCs in Cape Town, enabling/restricting variables (rather than treatment need) may be the most proximal determinants of AOD treatment use. While treatment need initiates help-seeking behaviour, the presence of barriers may prevent access to AOD treatment. Some support for this explanation arises from the finding that the enabling variable domain weakened the association between treatment need and realised access. However this explanation should be treated with caution, especially as this study did not examine the temporal order of these variable domains or pathways to AOD treatment use. Further research that unpacks the causal order of these determinants of AOD treatment use is needed to substantiate these claims.

Notwithstanding several caveats, findings suggest that Andersen's (1995) model is a useful framework for examining AOD treatment access in South Africa, with the variable domains conceptualised by this model having both independent and joint effects on AOD treatment use. Both quantitative and qualitative findings highlighted the interactions between various domains of the BHSU; particularly the interactions between the enabling/restricting domain and the need for treatment domain. Findings from this study also suggest that applications of this model to developing countries and impoverished communities should consider contextual influences on access; particularly how these influences inform the presence of barrier variables which seem as important for determining access as service needs.

## 7.5. SUMMARY

In summary, this study considerably improves understandings of access to AOD treatment within low resource country settings, where findings suggest that there are low rates of service use despite high levels of need. First, this study has

shown that Andersen's BHSU model is a useful framework for examining access in developing country settings; providing contextual factors are included in analyses. Secondly, the study identified horizontal and vertical inequities in access to AOD treatment among HDCs in the Cape Town metropole. Thirdly, the study identified a range of predisposing, need, enabling/restricting and contextual variables associated with AOD treatment use in a low resource setting. The most notable findings included the very strong associations of enabling/restricting variables with treatment access. These variables included: awareness barriers, geographic access barriers, and affordability barriers. In contrast, fewer need for treatment and predisposing factors were associated with access, and these variables associations with realised access were only weak to moderate. The findings also highlight how contextual factors are important for understanding AOD treatment use in low resource settings. For example, findings reflected how poor service planning and low resource availability shapes geographic access barriers and negative beliefs about treatment effectiveness and consequently informs the use of AOD services. Nonetheless, while contextual, need and predisposing variables clearly played a role in facilitating access, enabling variables were the major contributor to AOD treatment use by people from HDCs in the Cape Town metropole.

Fourth, findings also suggest distinct but overlapping gender and race profiles in predictors of access to AOD treatment, with women and Black/African participants appearing most vulnerable to the effects of awareness, geographical access and affordability barriers; although these barrier variables were significantly associated with access for all population subgroups. These findings suggest that interventions to improve access must be situated in community contexts and be sensitive to population subgroup differences. Chapter Eight provides further guidelines for interventions to improve AOD treatment use among HDCs in the Cape Town metropole. This final chapter also describes the strengths and limitations of this study and provides directions for future research.

# CHAPTER EIGHT

# CONCLUSION

## 8.1. INTRODUCTION

In a context where there is an increasing demand for scarce health resources (Freeman, 2000), this study provides evidence of inequities in access to AOD treatment among HDCs and identifies individual, community, and provider barriers that hamper access. This study is the first of its kind to adopt such a comprehensive approach to the study of access to AOD services in South Africa; where such studies have been hampered by the lack of health and social welfare registers, the limited and irregular use of household surveys, and the paucity of health and other service monitoring systems. The study is also the first to compare recipients of services with untreated people with AOD problems and provide quantitative estimates of barriers associated with AOD treatment access for people from HDCs in South Africa. As such, this study moves beyond previous South African research that merely described the extent to which AOD services were used by people from HDCs (Myers & Parry, 2005).

Apart from this contribution to knowledge, findings from this study hold clear implications for AOD policy and provide guidelines for the design of interventions to address barriers to AOD treatment access. Nonetheless, findings remain tentative and should be considered in the light of several limitations. This chapter reviews the merits of this study, examines its implications for AOD policy and interventions to improve access, critically considers its limitations, and outlines directions for future research.

## 8.2. MERITS OF THIS STUDY

This study has several merits. By using a clear theoretical framework to examine access to AOD treatment in South Africa, this study addressed many of the limitations of previous research. In addition, it expanded the body of knowledge

on access to AOD treatment by exploring the relevance of previous research findings for the South African context. Finally, the use of a mixed methods design allowed for a comprehensive understanding of access to AOD treatment to be developed that was firmly situated in the South African context. These merits are discussed below.

### 8.2.1. Contribution to knowledge on AOD treatment use

This study contributes to understandings of access to AOD treatment by examining a broad range of variables associated with access. As this study explored individual, community and contextual spheres of influence and attempted to integrate these multilevel influences into a unitary model of AOD treatment use, it addresses the reductionism inherent in much of the previous work on AOD treatment access (Matto, 2005). This multilevel approach to AOD treatment access also allowed for a comprehensive, rich understanding of access to be developed. Unlike previous research, this study was able to show how the socio-political context informed the structure of the AOD treatment system and shaped both HDCs' perceptions of AOD services and population level barriers to treatment access. In addition, by using the BHSU model as a theoretical framework, this study redresses the atheoretical approach inherent in previous studies of access to AOD treatment. In this study, the BHSU model provided a valuable framework for variable selection, data analysis, and the interpretation of findings.

This study also contributes to scientific inquiry by testing the external validity of earlier findings on AOD treatment access. Prior to this study, most research on health services utilisation had been focused in the USA (Choi et al., 2004) and the relevance of past findings to different country and cultural settings remained largely untested. Findings from this study suggest that the BHSU model is useful for examining access to AOD treatment in South Africa; with all of the variable domains originally conceptualised by the BHSU model significantly associated with access in this context. Nonetheless, while some of this study's findings

converge with findings from research conducted in other contexts, there are also important points of difference which appear related to the context of AOD treatment and HDCs in South Africa. For instance, access to medical insurance, availability of services and affordability barriers were more weakly associated with access in this study than in studies conducted in other contexts (Appel et al., 2004; Tucker et al., 2004). These variables probably were not strongly associated with access due to the low proportion of the population with health insurance, the limited availability of affordable services, and widespread poverty in South Africa. These findings suggest that insights from AOD services research in relatively well-resourced settings cannot simply be extrapolated to South Africa, but should be understood in the light of context-specific policy and structural influences. This highlights the value of conducting country-specific AOD services research.

### 8.2.2. Contribution of a mixed methods design

Much of the value of this study stemmed from the use of a mixed method design that collected qualitative and quantitative data simultaneously. This concurrent design allowed the researcher to validate one form of data with the other (Creswell, Fetters, & Ivankova, 2004; Creswell & Plano Clark, 2007), while countering the limitations of any single approach (Chen, 1997). More specifically, the convergence of findings from each study phase improved confidence in the reliability and validity of the results (Denzin, 1988; Tashakkori & Teddlie, 2003). This design also allowed for a comprehensive analysis of access to AOD treatment; with the quantitative case-control study examining population-level barriers and the qualitative phase addressing questions related to structural and contextual influences on access that were not easily addressed through the use of quantitative methods (Woodhouse,1998). The use of multiple methods and data sources thus allowed for the scope and breadth of the research to be expanded beyond an examination of population-level influences on access.
To the best of our knowledge, this is one of the first case-control studies to examine associations between access to AOD treatment and predisposing,

enabling and need for treatment risk factors. It certainly is the first to examine factors associated with AOD treatment use among people from HDCs in South Africa.

The most important advantage of this case-control study was its ability to examine factors associated with access which even in developed world settings is a rare event (Wilson et al., 2005). This case-control study also had other advantages. For a rare condition, this study involved a substantial number of cases and matched controls from HDCs. The sample was thus large enough to examine a broad range of variables associated with access among demographic subgroups of the sample. Secondly, the case-control study collected population-based data that were not derived from hospital records or case files. This allowed for detailed information to be collected and provided the researcher with better control over data quality. Thirdly, this study's very high response rate and its ability to adjust for potential demographic confounders established a degree of confidence in the validity of findings. Fourth, our efforts to ensure data quality during the course of data collection also increase confidence in the reliability of the results. To the best of our knowledge, no other South African studies have had such a large sample size, have examined service use and non-use in such depth, and have gone to these lengths to ensure data quality.

The use of qualitative methods in Phase two also added value to this study. Data from this phase allowed the researcher to move beyond the acontextual approach to AOD services use that characterised earlier research. This qualitative data allowed the researcher to explicitly acknowledge that AOD services are influenced by the social, political, and economic contexts within which they are embedded (Green & Britten, 1998; Woodhouse, 1998) and provided a context for understanding and interpreting quantitative findings. The qualitative phase also allowed the researcher to explore the complex interactions between context, AOD treatment system structure, population-level influences on

access, and AOD treatment use that were not possible to explore using quantitative methods.

The qualitative phase also allowed the researcher to identify unobserved heterogeneity in the quantitative data. For example, race/ethnic differences on social cohesion, social trust, and other neighbourhood-level variables were not observed in the quantitative data, however they did emerge in the qualitative analysis. Using two data sets enriched the researcher's understanding of the data, with the qualitative data enabling deeper understandings of the associations found in the case-control study to be developed. For instance, explanations of the association between awareness barriers and access were enriched by findings from the qualitative phase which revealed a number of dimensions to awareness not measured by the quantitative study. These dimensions included "awareness of when to seek help", "awareness where to seek help", and "awareness of how to access help". Similarly, findings from the case-control study did not adequately reflect the importance of service availability to access as the homogenous responses obtained for the service availability measure reduced the possibility of detecting any measurable association between availability and access. In contrast, the qualitative phase provided rich descriptions of how limited the availability of AOD services hampered access.

## 8.3. TOWARDS INTERVENTIONS: IMPLICATIONS FOR POLICY AND PRACTICE

Findings also have practical applications for improving access to AOD treatment. As barriers are multilevel and multisectoral, a comprehensive approach to improving AOD treatment access for HDCs is required. Effective plans for improving AOD treatment access must be predicated upon a strong AOD policy framework and should address individual, contextual and AOD treatment system barriers. Specific interventions relating to these elements are discussed below.

### 8.3.1. Implications for policy

Given numerous barriers, interventions to improve AOD treatment access will need to coordinate across multiple sectors of service provision. This implies moving beyond working in silos to providing integrated AOD services across health and social welfare sectors (Sylla, Bruce, Kamaruzalan, & Altice, 2007). To facilitate a coordinated effort to improve access, it is vital for the state to develop and implement a coherent strategic plan that targets structural, community, and population level barriers to access.

To ensure that this strategic plan is appropriate and acceptable, AOD service planners and policy makers need to embark on a process of ongoing consultation with their stakeholders. Community voices need to be acknowledged and considered when developing plans, as do the voices of service providers and researchers. This will help ensure that strategic plans are evidence-based and informed by the experiences of HDCs and service providers. In addition, for strategic plans to be appropriate, AOD-wise policy makers with an understanding of appropriate systems of care for AOD problems are needed. Capacity to understand and address AOD treatment needs thus needs to be developed among policy makers and service planners. These AOD-wise policy makers will also help install community confidence in the state's ability to action AOD strategic plans.

To reduce the potential for confusion or conflict, plans to address access to AOD services must have clear goals and concrete implementation steps. Above all, the state must put into place institutions, budgets, and procedures that enable AOD strategic plans to be implemented (Gruskin, Ferguson, & O'Malley, 2007). The success of these plans also requires strong leadership that is committed to addressing AOD problems and accountable for the effectiveness of state-led interventions. Consequently, procedures need to be put into place for monitoring and evaluating the implementation and impact of these plans on AOD treatment

access. These procedures must allow for changes in AOD treatment access to be identified and tracked over time.

### 8.3.2. Interventions within the AOD treatment system

Findings suggest the need for structural interventions within the AOD treatment system. More specifically, efforts to reduce delays in accessing care, improve treatment availability, improve service quality, and decrease geographical access barriers associated with the location and distribution of treatment services would be useful.

#### *8.3.2.1. Addressing delays in accessing treatment*

For an integrated system of service provision to be viable and to reduce delays in accessing care, a structured referral pathway to AOD treatment needs to be available to individuals presenting with AOD problems at social welfare, mental health and public health settings (Gruskin et al., 2007). Findings suggest that this referral algorithm should document (i) stages in the referral process, (ii) activities that need to occur at each referral stage (e.g. reports that may be required), (iii) agencies responsible for these activities, (iv) patient placement criteria for each step in the referral chain, (v) guidelines specifying when particular services are indicated, and (vi) recommended combinations of services for AOD problems of varying severity. As the use of these referral pathways will depend upon the ability of referral agents to identify AOD problems, capacity development initiatives that focus on AOD problem detection are also required.

As individuals from HDCs may still struggle to negotiate a multistaged referral pathway, case managers should be assigned to persons with AOD problems at their point of entry into the treatment system. Case managers should manage the administrative and bureaucratic requirements for admission into nonprofit treatment settings and ensure that clients access services at each step in the referral process. Administrative requirements that delay access to AOD

to financial need, the provision of shuttle services or tokens for public transport might increase the likelihood of AOD treatment access (Beardsley et al., 2003). In addition, outpatient mobile clinics offer a low cost and geographically accessible means of providing AOD treatment services (Gruen et al., 2001; Laerum et al., 2005). As mobile clinics can be moved between and within communities, they allow for broad service coverage while reducing the distances required to travel to treatment, the costs associated with public transport, and the costs associated with buildings and other infrastructure. By using these mobile clinics as one-stop shops where multiple health and social welfare services are provided from a single access point, a comprehensive range of services can be provided to people with AOD problems without the stigma associated with using AOD treatment facilities.

While interventions to address geographic access barriers are needed in all HDCs, findings suggest the need to target Black/African persons and women specifically. These population subgroups appear most vulnerable to the effects of travel time on treatment access and report longer travelling times to treatment. Improving public transport in Black/African communities might help address this barrier. Factors that contribute to these socio-demographic differences, such as Black/Africans and women having more competing financial needs and affordability barriers relative to their Coloured and male counterparts, also need to be addressed.

### 8.3.3. Interventions to address population-level barriers to access

Besides the availability and geographical accessibility of services, HDCs' *ability* to use services impacts on AOD treatment access. Findings suggest that efforts to reduce affordability barriers, improve social capital within communities, and improve awareness of AOD treatment will likely benefit people from HDCs.

#### *8.3.3.1. Addressing awareness barriers*

As awareness of when and where to seek help is strongly associated with treatment use, programmes to improve access to AOD treatment should focus on increasing community awareness of existing AOD treatment services. Community-based outreach and awareness programmes may prove useful in this endeavour. By training outreach workers to detect AOD problems, these programmes can increase awareness of when treatment is needed. In addition, these programmes can provide links to AOD treatment services (Lennings et al., 2006).

Other ways of improving awareness of AOD services are also required. Community newspapers, flyers, and local radio stations could be used to disseminate information regarding AOD problems and available treatment options. These public messages should be aimed at HDCs and available in local languages (Sayre et al., 2004). Incorporating AOD issues into school curricula and community health promotion programmes could also address informational barriers. Both outreach and awareness programmes should include information on how to recognise AOD problems and *when* treatment is needed, *where* to go for treatment, and *how* to access AOD treatment. Interventions to address awareness barriers to AOD treatment access should take cognisance of the role that significant others play in facilitating problem recognition and awareness of treatment services. Awareness campaigns therefore should also target families. Finally, although interventions to address awareness barriers to AOD treatment use are needed in all HDCs, findings suggest the need to target Black/African persons and women specifically. These population subgroups appear most vulnerable to the effects of awareness barriers on treatment access and know of fewer AOD treatment facilities.

#### *8.3.3.2. Addressing community barriers to access*

Interventions that enhance community and family support for treatment are also needed; particularly for women and Black/African persons for whom significant

others play an important role in facilitating access. Leaders in HDCs also have a role to play in informing community members about treatment, advocating for sober living, and supporting efforts to address AOD problems. To enhance family and community support for AOD treatment, negative beliefs about existing services need to be countered. Interventions should therefore challenge misperceptions about what constitutes appropriate AOD treatment by providing information on evidence based treatment approaches, the process of AOD treatment, and anticipated treatment outcomes.

To facilitate environments supportive of treatment use, population-based efforts to change the notion that AOD use is an acceptable part of community life and to improve social capital are also needed. Efforts to improve social capital should focus on enhancing collective efficacy to reduce drug availability within HDCs. To improve collective efficacy, interventions to reduce poverty, limited access to basic services and high levels of neighbourhood disorder are needed. Improved policing and access to basic services (including recreational facilities) should reduce AOD availability. In addition, efforts to strengthen positive social networks in neighbourhoods characterised by high levels of disorder and disruption might be of value. Besides serving as an alternative to the normative culture of drug use, pro-social networks might enhance community support for AOD treatment. Improving social trust towards AOD treatment providers could also strengthen community support for treatment. To improve social trust, it is vital that government and treatment providers consistently deliver on their promises of services to HDCs, consult with communities prior to initiating AOD initiatives, address unrealistic expectations of quick fixes to AOD problems, and provide services of a high quality. Efforts to build collective efficacy and social trust are especially needed in Coloured communities.

#### *8.3.3.3. Addressing affordability barriers*

This study also highlights the need for interventions that target affordability barriers to access. To reduce the direct costs associated with AOD treatment use

for people from HDCs, the number of affordable treatment slots needs to be increased. Likewise, interventions should target competing financial priorities (such as the need to provide food and shelter) that take precedence over the need for AOD treatment. Interventions that provide tangible support (through the provision of food, clothing or economic assistance) to persons wanting treatment might reduce the impact of competing financial priorities on AOD treatment use.

In addition, interventions should target factors that contribute to affordability barriers, such as poverty and access to basic services. Long-term structural interventions are required to address these underlying factors. These interventions should focus on improving access to affordable housing, creating employment opportunities, and implementing feeding schemes. These interventions would empower people in HDCs to afford AOD services. In the interim, the nonprofit AOD treatment sector should consider linking clients from HDCs with organisations implementing income generation and sustainable livelihood projects. While interventions to address competing financial priorities and affordability barriers are needed for all gender and race groups in HDCs, findings suggest that female and Black/African AOD users have the greatest need for these interventions.

#### 8.3.4. Key interventions

While all of these recommendations might contribute to improving access to AOD treatment for people from HDCs, they might not all be straightforward or feasible to implement. However, there are three key interventions that might be relatively simple to implement and yet have powerful effects. First, service coverage and treatment need mapping tools are available, relatively inexpensive and can aid service planners in the rational and cost-efficient allocation of resources relative to need. Expertise for developing and implementing these mapping tools is present in the South African research and nonprofit sectors. Second, mobile outpatient clinics are a feasible and cost-effective way of increasing service availability, addressing geographic and affordability barriers, and reducing delays

in accessing care that are associated with the use of facility-based services. In addition, these mobile services can be used as a platform for outreach and awareness activities. Should these services be implemented in partnership with the NDOH, they could also serve as platforms for the provision of a broad spectrum of health and mental health services to HDCs. This would help ensure community acceptance and support for the project. Thirdly, quality assurance and improvement programmes should be introduced into all nonprofit and state-subsidised AOD services. While this would be a long-term initiative, commitment to improving the quality and appropriateness of services by training service providers in evidence-based practices and carefully monitoring the implementation of these practices would yield powerful benefits - both in terms of treatment outcomes and in terms of addressing negative perceptions about existing services. In the short-term, outreach and awareness programmes should also educate potential consumers about what constitutes effective (and ineffective) treatment so that they can make informed choices about their use of existing services.

## 8.4. LIMITATIONS

Several limitations must be taken into account when considering the implications of this study's findings. These relate to the potential for bias, the ability to make causal attributions, measurement difficulties, and external validity issues.

### 8.4.1. The potential for bias

Several aspects of the case-control study might have biased findings. Firstly, the retrospective design might have contributed to participants inaccurately remembering past exposures to factors associated with access (Grimes & Schulz, 2002). Recall of past exposures may be problematic for AOD users; especially if the drug of choice is known to affect memory. This study attempted to limit recall bias by using a memory aid, namely the timeline follow back procedure (Sobell et al., 1992). This procedure has been shown to improve

recall of health services use for people with AOD problems (Breslin, Borski, Cunningham, & Kowski-James, 2001).

Secondly, as fieldworkers were not blinded to the status of participants, they could have inadvertently collected data differently from cases and controls. This study attempted to minimise this information bias by ensuring that fieldworkers were blinded to the study's hypotheses, by using identical methods to gather information from cases and controls, and by ensuring fieldworkers were well-trained in data collection procedures (Grimes & Schulz, 2002; Schulz & Grimes, 2002). Thirdly, the nonrandom selection of participants might have introduced a selection bias (Grimes & Schulz, 2002; Schulz & Grimes, 2002). This study minimised selection bias by ensuring high response rates among cases and controls, controlling for the potential confounding effects of gender and race through matching, and by controlling for these and other potential confounders in multivariate analyses. Nonetheless, there might have been other confounders that were not controlled for. For example, cases and controls were not matched on suburb of residence. As AOD treatment is not necessarily equally accessible to all HDCs in the Cape Town metropole, this might be an important confounder and should be controlled for in future studies.

Despite the possibility that biases might have lead to spurious or insignificant associations with access in the case-control study, findings from the qualitative phase of the study generally confirm the significant associations found between need, enabling variables and access. This improves confidence in the reliability and validity of the quantitative findings and indicates that data are generally reflective of people with AOD problems from HDCs in the Cape Town metropole.

#### 8.4.2. Limited ability to make causal attributions

Although this observational study was able to establish associations between a range of predisposing, need and enabling variables and access, it was not able to establish causation (Concato, Shah, & Horwitz, 2000; Grimes & Schulz, 2002).

Despite this limitation, an argument can be made for *possible* causal linkages between the enabling variables of awareness, competing financial needs, travelling time to treatment and realised access. According to Hill (1965) and Grimes and Schulz (2002), criteria for the judgment of causal associations are strong associations between risk factors and the outcome of interest (with odds ratios greater than 4 for case-control studies), a temporal sequence of risk factors preceding the outcome of interest, consistency of associations between risk factors and outcome in other studies, a biological gradient or dose-response relationship, specificity of the association (with exposure leading only to the outcome), plausibility, and coherence with existing knowledge and available evidence.

Findings from this study meet several of these criteria. Firstly, odds ratios greater than 4 were obtained for the associations between awareness, travel time to treatment, competing financial priorities and realised access. Secondly, associations between these variables and health services use have been observed in different populations and with different study designs (Booth et al., 2003; Gelberg et al., 2000; Hser et al., 1998; Tucker et al., 2004) and are consistent with findings from the qualitative phase of this study. Thirdly, causal linkages between these risk factors are plausible and consistent with current knowledge of barriers to AOD treatment use (e.g. Appel et al., 2004; Tucker et al., 2004). Nonetheless, only tentative claims about causal linkages can be made; especially as temporal relationships between these enabling variables and access were not established.

More specifically, as this case-control study was not prospective, it precluded a temporal examination of risk factors for access. In this study, covariates were measured after the access event. This limited our ability to provide temporal explanations regarding the observed relationships between covariates and AOD treatment use; especially as some of the covariates (such as awareness of services and AOD problem recognition) could have been modified by the access

event. Although ideal, the relative rarity of access even in well-resourced country settings (Wilson et al., 2005) would have made a prospective cohort study time-consuming and expensive to conduct and would have included too few cases for multivariate analyses (Concato et al., 2000). Nonetheless, there is still a need for longitudinal prospective studies that identify antecedent risk factors that precipitate AOD treatment use by people from HDCs.

#### 8.4.3. Measurement concerns

Testing of the study hypotheses was limited to predisposing, need and enabling variables that were capable of measurement by the instruments used. In the quantitative component of the study, this precluded the testing of community-level predisposing and enabling variables. The inclusion of the qualitative phase overcame this limitation to some extent by allowing for the exploration of community-level variables associated with access.

Another measure-related limitation was the crude measure of access employed. Given that the primary aim of the study was to compare individuals who had accessed with those who had not accessed treatment, this was an appropriate measure to use. Nevertheless, this variable did not allow the researcher to examine the frequency, duration and intensity of AOD treatment used. As individuals who accessed AOD treatment were most likely heterogeneous with regard to the frequency, duration and intensity of AOD treatment used, future studies should use a more sophisticated measure of access that allows for division along these characteristics.

In addition, as this study did not measure the quality of AOD services accessed, the researcher was unable to distinguish between good and poor quality treatment episodes. Analyses were predicated on the tenet that all reported treatment episodes were similarly appropriate, whereas the appropriateness of treatment episodes probably differed widely. To address these limitations, future studies should measure the quality and appropriateness of AOD services used.

Finally, this study only examined the use of formal AOD treatment services. It is possible that participants used other services in the informal sector such as indigenous healers and faith-based supports.

### 8.4.4. External validity of findings

Another limitation relates to the external validity of findings. Firstly, as the study focused on access to treatment in the Cape Town metropole, it is questionable whether the findings are representative of rural regions or other urban centres in South Africa. AOD policies, resource allocation for AOD treatment and treatment practices in other provinces may differ from those examined in this study. Nevertheless, as the Western Cape Province (of which Cape Town is the capital) is well resourced in terms of both health and social services, relative to the other provinces (Statistics South Africa, 2003), it is possible that structural and population-level barriers are more salient in other provinces. Further research that examines factors associated with AOD treatment use in poorer areas of the country is thus required.

Secondly, the sample in Phase one was limited to adults from HDCs. The degree to which findings from this phase are generalisable to adolescents from similar communities is questionable. Thirdly, the sample in Phase two was limited to reports from AOD treatment providers, members of LDACs and SACs. Although the researcher gathered rich data on structural and contextual influences on access, interviews with individuals responsible for AOD treatment planning and policy within the state sector would have enriched the analysis of structural barriers to AOD service delivery. As such, future research should attempt to explore the perceptions of key informants within this sector. Moreover, Phase two did not gather information relating to structural, contextual and other barriers to access from people with AOD problems in HDCs. The collection of such data would have allowed the researcher to compare and contrast perceptions of structural and population-level barriers to treatment use among treatment providers, community based social workers, AOD service planners, and persons

with AOD problems from HDCs. In addition, it would have allowed for better triangulation of the quantitative data from phase one with the qualitative data gathered in Phase two.

When considered in isolation, findings from either phase of the study should be interpreted with caution. However, findings from phases one and two are generally consistent with each other. As a result, confidence in the reliability and validity of the results is increased when these findings are considered together (Tashakkorri & Teddlie, 2003). Nonetheless, these limitations should not be treated lightly, especially as they highlight directions for future research.

## 8.5. FUTURE RESEARCH DIRECTIONS

In the light of this study's limitations, findings are suggestive of deterrents to AOD treatment use for persons from HDCs in Cape Town, but are not conclusive. Nor does this study provide definitive solutions on how best to address barriers to treatment access. Nonetheless, this study does provide a foundation for future AOD treatment services research. Future research needs to use larger samples and expanded geography to replicate and increase the generalisability of these findings to other population subgroups and HDCs in other regions of South Africa. Intervention studies that focus on removing barriers and determining whether access to AOD treatment improves are also needed. Future research should also examine potential differences in AOD treatment access for people with different types of AOD problems (for example, alcohol, heroin, methamphetamine and cocaine problems) and for different population subgroups (such as adolescents and people with co-occurring psychiatric disorders).

In addition, longitudinal prospective cohort studies that more fully characterize the type, intensity and frequency of access to AOD treatment are required. Such studies would reflect the temporal association between predisposing, need and enabling variables and realised access. Related to this, although the present study demonstrated strong relationships between the various domains of the

BHSU and AOD treatment access, studies that unpack the interactions between these variable domains are needed. As path analysis is appropriate to use in longitudinal cohort studies, such studies would also allow for the moderators and mediators of factors associated with access to be examined.

As this study cannot estimate the prevalence of unmet need for AOD treatment in HDCs, household surveys examining this issue should be conducted on a regular basis. Findings from these surveys would identify HDCs where there is the greatest unmet need for AOD services and could guide the rational allocation of resources. GIS mapping studies that map treatment service coverage and distance to treatment services would also be useful for service planning. As findings from regular household surveys and mapping studies would identify changes in AOD treatment need and service coverage, they could be used to monitor service delivery and the impact of interventions to improve access.

Future research directions should also focus on monitoring and evaluating the quality and effectiveness of AOD treatment services. Findings from such studies could be used to motivate for additional funding, address negative perceptions of treatment, and improve service quality. Related to this, research that compares the quality and type of AOD treatment received by people from HDCs relative to people from more advantaged areas would be useful for gauging service equity. Given South Africa's recent past (Parry, 1997), it is possible that services used by people from HDCs may differ in important ways from those received by people living in more affluent areas. In addition, research that evaluates the effectiveness of outpatient treatment vis á vis inpatient services is required; especially given findings that HDCs view outpatient services as less effective than inpatient facilities. Finally, to facilitate ongoing monitoring of the quality and accessibility of the AOD treatment system, a treatment monitoring system needs to be developed that includes quantitative indicators of service quality, treatment service performance, and treatment access.

In summary, this study identifies several directions for future research efforts. As no single study can hope to address all of these research questions, multiple research studies are needed that allow for findings to be replicated and for knowledge on AOD treatment services to be accumulated over time. Such a body of evidence would enrich our understandings of AOD services use and how best to intervene for improving AOD treatment access and treatment outcomes.

## 8.6. CONCLUDING COMMENTS

Despite its limitations, this study contributes to the limited information on access to AOD treatment among HDCs in South Africa. By using a mixed methods design, this study was able to identify personal, community, structural, and contextual influences on access to AOD treatment. Findings paint a picture of inequitable access, with enabling/restricting barrier variables more strongly associated with realised access than treatment need. Specific barriers included personal barriers such as awareness barriers, affordability barriers and competing financial priorities; community barriers such as a lack of community support for treatment and low levels of social capital; and provider barriers such as limited availability of affordable services, treatment capacity, service quality, and geographical accessibility.

Findings reveal that social environmental and contextual factors contribute to these barriers. Predisposing environmental influences such as poverty, neighbourhood disorder, and drug availability undermined collective efficacy and community support for treatment in HDCs. Contextual and structural influences (such as the state's lack of effective planning and limited allocation of resources to AOD treatment) hindered access by contributing to community perceptions that treatment was ineffective, limited availability of affordable treatment services, and poor spatial distribution of existing facilities. These structural influences also diminished HDCs' social trust in treatment providers.

These findings highlight the need for a multi-pronged approach to addressing access to AOD treatment among HDCs in Cape Town. This approach should address contextual and structural influences as well as provider, community and personal barriers to AOD treatment access. Guidelines for interventions to address these barriers to access are provided in this study. At a population level, interventions should focus on improving awareness of when, where and how to access treatment within HDCs; enhancing community support for treatment by building collective efficacy around treatment use and social trust in AOD service providers; and addressing affordability barriers and competing needs. For these interventions to be successful, environmental interventions that address poverty, neighbourhood disorder, and limited access to services within HDCs are essential. Fostering the use of AOD treatment not only requires increased investment in HDCs, but also strengthening of the AOD treatment system. Structural interventions that improve the availability of affordable treatment and address geographic access barriers are vital, as are efforts to improve service quality and streamline the process of accessing AOD treatment.

Efforts to improve access would only be effective if guided by evidence-based strategic plans. Such plans should be informed by community and consumer voices as well as by research on unmet treatment needs, gaps in service coverage, and service quality and effectiveness. Findings from this research could be used to improve service planning and guide resource allocation. Ongoing monitoring and evaluation of efforts to improve AOD treatment access is also required. In addition, further research is needed to determine whether the barriers identified in this study reduce treatment access and whether intervening to eliminate these barriers increases treatment access for persons from HDCs.

In conclusion, the human, societal, and financial costs are high when AOD users do not access treatment. Greater access to AOD services could decrease trauma, crime, and the overall costs associated with AOD use to society (Alterman et al., 2001; Langenbucher et al., 2001). This study shows that greater

effort is needed to identify and link people with unmet AOD treatment needs to treatment. Despite limitations, findings support the notion that for ensuring access, special attention should be directed towards structural, contextual and enabling barriers. While further investigation is required to define more precisely the relationships between these various influences on access, results highlight the potential to improve access through modifying AOD treatment service delivery contexts, improving community environments, careful service planning, and outreach activities. Finally, as findings suggest that Black/Africans and women are most vulnerable to the effects of barrier variables, intervention strategies to improve access to AOD treatment are probably best anchored in their community contexts.

# REFERENCES


Acosta-Ramirez, N., Duran-Arenas, L.G., Eslava-Rincon, J.I., Campuzano-Rincon, J.C. (2005). Determinants of vaccination after the Colombian health system reform. *Rev Saude Publica, 39,* 421-9.

Aday, L.A., & Andersen, R.M. (1974). A framework for the study of access to medical care. *Health Services Research, 9,* 208–220.

Aday, L., & Andersen, R. (1981). Equity of access to medical care: A conceptual and empirical overview. *Medical Care, 19,* 4-27.

Aday, L.A., & Awe, W.C. (1997). Health services utilization models. In D. Gochman (Ed.), *The handbook of health behavior research* (Vol.1, pp. 153-172). New York: Plenum Publishing Corporation.

Aday, L.A., Begley, C.E., Lairson, D.R., Slater, C.H., Richard, A.J., & Montoya, I.D. (1999). A framework for assessing the effectiveness, efficiency, and equity of behavioral health care. *The American Journal of Managed Care, 5,* 25-44.

Agosti, V., & Levin, F.R. (2004). Predictors of treatment contact among individuals with cannabis dependence. *American Journal of Drug and Alcohol Abuse, 30,* 121-127.

Ahern, M.M., & Hendryx, M.S. (2003). Social capital and trust in providers. *Social Science & Medicine, 57,* 1195-1203.

Albizu-Garcia, C.E., Alegria, M., Freeman, D., & Vera, M. (2001). Gender and health services use for a mental health problem. *Social Science & Medicine, 53,* 865-878.

Allard, S.W., Tolman, R.M., & Rosen, D. (2003). Proximity to service providers and service utilization among welfare recipients: the interaction of place and race. *Journal of Policy Analysis and Management, 22,* 599-613.

Allman, D., Myers, T., Schellenberg, J., Strike, C., Cockerill, R., & Cavalieri, W. (2006). Improving health and social care relationships for harm reduction. *International Journal of Drug Policy, 18*, 194-203.

Alterman, A.I.; Langenbucher, J. & Morrison, R.L. (2001). State-level treatment outcome studies using administrative databases. *Evaluation Review, 25*(2):162-83.

Altschuler, A., Somkin, C.P., & Adler, N.E. (2004). Local services and amenities, neighborhood social capital, and health. *Social Science & Medicine, 59*, 1219-29.

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes, 50*, 179-211.

American Psychiatric Association. (2001). *Diagnostic and statistical manual of mental disorders DSM-IV-TR* (4th ed. revised). Washington, DC: American Psychiatric Association Press.

Andersen, R.M. (1995). Revisiting the behavioral model and access to medical care. Does it matter? *Journal of Health and Social Behavior, 36*, 1–10.

Andersen, R., Bozzette, S., Shapiro, M., St Clair, P., Morton, M., Crystal, S., Goldman, D., Wenger, N., Gifford, A., Leibowitz, A., Asch, S., Berry, S., Nakazano, T., Heslin, K., & Cunningham, W. (2000). Access of vulnerable groups to antiretroviral therapy among persons in care for HIV disease in the United States. *Health Services Research, 35*, 389-416.

Andersen, R.M., & Davidson, P.L. (1996). Access to medical care: measurement and trends. In R.M. Andersen, T.H. Rice, & G.F. Kominski (Eds.), *Changing the US health care system: key issues in health services, policy and management* (pp.13-40). San Francisco: Josey Bass.

Andersen, R., & Davidson, P. (1997). Ethnicity, aging, and oral health outcomes: A conceptual framework. *Advances in Dental Research, 11*, 203-209.

Andersen, R.M., Davidson, P., & Ganz, P. (1994). Symbiotic relationships of quality of life. *Health services research, and other quality of life research, 3,* 365-371.

Andersen, R.M., & Newman, J.F. (1973). Societal and individual determinants of medical care utilization in the United States. *Milbank Memorial Fund Quarterly, 51*, 95-124.

Andersen, R.M., Yu, H., Wyn, R., Davidson, P.L., Brown, E.R., & Teleki, S. (2002). Access to medical care for low-income persons: How do communities make a difference? *Medical Care Research Review, 59*, 384-411.

Aneshensel, C.S., & Socoff, C.A. (1996). The neighbourhood context of adolescent mental health. *Journal of Health and Social Behaviour, 37*, 293-410.

Antonucci, T. (2001). Social relations: An examination of social networks, social support and sense of control. In J. E. Birren, K. W. Schaie, & R. B. Abeles (Eds.), *Handbook of the psychology of aging* (pp. 427-453). San Diego, CA: Academic Press.

Antonucci, T.C., Ajrouch, K.J., & Janevic, M.R. (2003). The effect of social relations with children on the education-health link in men and women aged 40 and over. *Social Science & Medicine, 56*, 949-960.

Appel, P.W., Ellison, A.A., Jansky, H.K., & Oldak, R. (2004). Barriers to enrollment in drug abuse treatment and suggestions for reducing them: Opinions of drug injecting street outreach clients and other system stakeholders. *American Journal of Drug and Alcohol Abuse, 30,* 129–153.

Arif, A., & Westermeyer, A. (1998). *A manual for drug and alcohol abuse: guidelines for teaching.* New York: Plenum Press.

Asch, S., Leake, B., Andersen,R., & Gelberg, L. (1998). Why do symptomatic patients delay obtaining care for tuberculosis? *Am J Respir Critc Care Med, 157,* 1244-1248.

Auslander, G.K., Soskolne, V., & Ben-Shahar, I. (2005). Utilization of health social work services by older immigrants and veterans in Israel. *Health Soc Work, 30*, 241-251.

Babbie, E., & Mouton, J. (2001). *The Practice of Social Research. South African Edition.* Cape Town: Oxford University Press.

Babbie, E., & Wagenaar, T.C. (1992). *Practicing social research.* Belmont, California: Wadsworth Publishing Corporation.

Badger, T.A., McNiece, C., & Gagan, M.J. (2000). Depression service need and use in vulnerable populations. *Archives of Psychiatric Nursing, 24*, 173-182.

Bähre, E. (2007). Death, urban poverty and neighbourly assistance in South Africa. *Ethnography, 8*, 33-59.

Ball, A.L. (2007). HIV, injecting drug use and harm reduction: a public health response. *Addiction, 102*, 684-690.

Ballard, R., Habib, A., Valodia, I., & Zuan, E. (2005). Globalization, marginalization and contemporary social movements in South Africa. *African Affairs, 104*, 615-634.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: WH Freeman.

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research. Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Battjes, R.J., Onken, L.S., & Delaney, P.J. (1999). Drug abuse treatment entry and engagement: report of a meeting on treatment readiness. *Journal of Clinical Psychology, 55*, 643-657.

Beardsley, K., Wish, E.D., Fitzelle, D.B., O'Grady, K., & Arria, A.M. (2003). Distance traveled to outpatient drug treatment and client retention. *Journal of Substance Abuse Treatment, 25*, 279-285.

Beckman, L., & Amaro, H. (1986). Personal and social difficulties faced by women and men entering alcoholism treatment. *Journal of Studies in Alcohol*, *47*, 135 - 145.

Berdahl, T.A., Hoyt, D.R., & Whitbeck, L.B. (2005). Predictors of first mental health utilization among homeless and runaway adolescents. *Journal of Adolescent Health, 37*, 145-154.

Berk, M.L., & Schur, C. (1998). Measuring access to care, improving information for policymakers. *Health Affairs, 17*, 180–186.

Best, D., Noble, A., Ridge, G., Gossop, M., Farrell, M., & Strang, J. (2002). The relative impact of waiting time and treatment entry on drug and alcohol use. *Addiction Biology*, *7*, 67-74.

Biegel, D.E., Shafran, R.D., & Johnsen, J.A. (2004). Facilitators and barriers to support group participation for family caregivers of adults with mental illness. *Community mental health journal, 40*, 151-166.

Bijl, R.V., & Ravelli, A. (2000). Psychiatric morbidity, service use, and need for care in the general population: Results of the Netherlands Mental Health Survey and Incidence Study. *American Journal of Public Health, 90*, 602-607.

Bisschop, M.I., Kriegsman, D.M.W., Beekman, A.B.F., & Deeg, D.J.H.D. (2004). Chronic diseases and depression: the modifying role of psychosocial resources. *Social Science & Medicine*, *59, 721-733.*

Boardman, J.D., Finch, B.K., Ellison, C.G., Williams, D.R., & Jackson, J.S. (2001). Neighborhood disadvantage, stress, and drug use among adults. *Journal of Health and Social Behavior, 42*,151-165.

Booth, B.M., Staton, M., & Leukefeld, C. (2001). Substance use health services research. *Substance Use and Misuse, 36*, 673-683.

Booth, R.E., Corsi, K.F., Mikulich, S.K. (2003). Improving entry to methadone maintenance among out-of-treatment injection drug users. *Journal of Substance Abuse Treatment, 24,* 305-311.

Booth, R.E., Kwiatkowski, C., Iguchi, M., Pinto, F., & John, D. (1998). Facilitating treatment entry among out-of-treatment injection drug users. *Public Health Reports, 113,* 116-129.

Bradley, E.H., McGraw, S.A., Curry, L., Buckser, A., King, K.L., Kasl, S.V., & Andersen, R. (2002). Expanding the Andersen Model: The role of psychosocial factors in long-term care use. *Health Services Research, 37,* 1221-1242.

Bradshaw, D., Masiteng, K., Nannan, N. (2001). Health Status and Determinants. In A. Ntuli, N. Crisp, E. Clarke, P. Barron (Eds.), *South African Health Review 2000* (pp. 13-25). Durban: Health Systems Trust.

Breslin, F.C., Borsoi, D., Cunningham, J.A.Q., & Koswki-Jannes, A. (2001). Help-seeking timeline follow back for problem drinkers: preliminary comparison with agency records of treatment contacts. *Journal of Studies on Alcohol, 62,* 262-267.

Brewer, C.S. (2005). Health services research and the nursing workforce: Access and utilization issues. *Nursing Outlook, 53,* 281-290.

Brienza, R.S., Stein, M.D., Chen, M., Gogineni, A., Sobota, M., Maksad, J., Hu, P., & Clark, J. (2000). Depression among needle exchange program and methadone maintenance clients. *Journal of Substance Abuse Treatment, 18,* 331-337.

Brown, B.S., O'Grady, K.E., Battjes, R.J., & Katz, E.C. (2004). Community Assessment Inventory: Client views of supports to substance abuse treatment. *Journal of Substance Abuse Treatment, 27,* 241-251.

Brown, E.R., Davidson, P.L., Yu, H., Wyn, R., Andersen, R.M., Becerra, L., & Razack, N. (2004). Effects of community factors on access to ambulatory care for lower-income adults in large urban communities. *Inquiry, 41*, 39–56.

Brown, T.G., Seraganian, P.,Tremblay, J.,& Annis, H. (2002). Process and outcome changes with relapse prevention versus 12-step aftercare programs for substance abusers. *Addiction, 97,* 677-690.

Broyles, R.W., Narine, L., & Robertson, M.J. (2004). Assessing administrative costs of mental health and substance abuse services. *Adm Policy Mental Health, 31*, 393-408.

Bryman, A., & Cramer, C. (1997). *Quantitiative data analysis with SPSS for windows. A guide for social scientists.* London: Routledge.

Bukstein, O.G., Cornelius, J., Trunzo, A.C., Kelly, T.M., & Wood, D.S. (2005). Clinical predictors of treatment in a population of adolescents with alcohol use disorders. *Addictive Behaviors, 30,* 1663-73.

Burleson, J.A., & Kaminer, Y. (2005). Self-efficacy as a predictor of treatment outcome in adolescent substance use disorders. *Addictive Behaviors, 30,* 1751-1764.

Burnam, M.A., Bing, E.G., Morton, S.C., Sherbourne, C., Fleishman, J.A., London, A.S., Vitiello, B., Stein, M., Bozette, S.A., & Shapiro, M.F. (2001). Use of mental health and substance abuse treatment services among adults with HIV in the United States. *Archives of General Psychiatry, 58,* 729-36.

Burton, T.L., & Williamson, D.L. (1995). Harmful effects of drinking and the use and perceived effectiveness of treatment. *Journal of Studies on Alcohol, 56,* 611-5.

Cahill, M.A., Adinoff, B., Hosig, H., Muller, K., & Pulliam, C. (2003). Motivation for treatment preceding and following a substance abuse program. *Addictive Behavior, 28,* 67-79.

Carey, K.B., Purnine, D.M., Maisto, S.A., & Carey, M.P. (2001). Enhancing readiness-to-change substance abuse in persons with schizophrenia. A four-session motivation-based intervention. *Behavior Modification*, *25*, 331-384.

Carlson, R.G. (2006). Ethnography and applied substance misuse research: Anthropological and cross-cultural factors. In W. Miller and K. Carroll (Eds.), *A rethinking of substance abuse: What the science shows, and what we should do about it* (pp. 201-219). New York: Guilford.

Carpenter, K.M., Miele, G.M., & Hasin, D.S. (2002). Does motivation to change mediate the effect of DSM-IV substance use disorders on treatment utilization and substance use? *Addictive Behaviors, 27,* 207-225.

Carr, C.J.A., Xu, J., Redko, C., Lane, D.T., Rapp, R.C., Goris, J., & Carlson, R.G. (2007). Individual and system influences on waiting time for substance abuse treatment. *Journal of Substance Abuse Treatment*, *39*, 115-124.

Carter, R., Jacobsen, S.W., Molleno, C.D., Chiodo, L.M., Viljoen, D., & Jacobsen, J.L. (2005). Effects of prenatal alcohol exposure on infant visual acuity. *The Journal of Pediatrics, 147*, 473-479.

Center for Disease Control and Prevention. (2004). *AnSWR: Analysis Software for Word-based Records, Version 6.4.* Atlanta, Georgia: Centers for Disease Control and Prevention.

Chen, C.H., Tseng, Y.F., Chou, F.H., & Wang, S.Y. (2000). Effects of support group intervention in postnatally distressed women. A controlled study in Taiwan. *Journal of Psychosomatic Research, 49*, 395-399.

Chen, H. (1997). Applying mixed methods under the framework of theory-driven evaluations. *New directions for evaluation, 74*, 61-72.

Cho, W.H., Lee, H., KJim, C., Lee, S., & Choi, K-S. (2004). The impact of visit frequency on the relationship between service quality and output satisfaction: a South Korean study. *Health Services Research, 39*, 113-134.

Choi, S. (2006). Insurance status and health services utilization among newly arrived older immigrants. *Journal of Immigrant & Minority Health, 8*, 2149-2161.

Chou, K.L., & Chi, I. (2004). Factors associated with the use of publicly funded services by Hong Kong Chinese older adults. *Social Science & Medicine, 58*, 1025-1035.

Cloud, R.N., & Peacock, P.L. (2001). Internet screening and intervention for problem drinking. *Alcoholism Treatment Quarterly, 19*, 23-44.

Coetzee, P. (2001). Evaluation of Cape Town Drug Counselling Centre. (Masters thesis, School of Social Development). Cape Town: University of Cape Town.
UT 360 COET
Coetzee, P. (2004). Stepping Stones evaluation. In A. Pluddemann, S. Hon, A. Bhana, N. Harker., H. Potgieter (Eds.), *South African community epidemiology network on drug use (SACENDU). Monitoring alcohol and drug abuse trends in South Africa, 2004* (pp 124-128). Cape Town: South African Medical Research Council.

Cohen, J. (1988). *Statistical power analyses for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, S., Doyle, W.J., Turner, R., Alper, C.M., & Skoner, D.P. (2003). Sociability and susceptibility to the common cold. *Psychological Science, 14,* 389-395.

Cohen, S., & Syme, S. L. (1985). Issues in the study and application of social support. In S. Cohen & S. L. Syme (Eds.), *Social support and health* (pp. 3-22). Orlando, FL: Academic Press.

Coleman, J.S. (1986). Social theory, social research, and a theory of action. *American Journal of Sociology, 91*, 1309–1335.

Collins, K.A., Westra, H.A., Dozois, D.J., & Burns, D.D. (2004). Gaps in accessing treatment for anxiety and depression: challenges for the delivery of care. *Clinical Psychology Review, 24*, 583-616.

Concato, J., Shah, N., & Horwitz, R.I. (2000). Randomized, controlled trials, observational studies, and the hierarchy of research designs. *New England Journal of Medicine, 342,* 1887–1892.

Copeland, J. (1997). A qualitative study of barriers to formal treatment among women who self-managed change in addictive behaviors. *Journal of Substance Abuse Treatment, 14*, 183-190.

Corrigan, P.W., & Watson, A.C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1,* 16-20.

Creswell, J.W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches.* Thousand Oaks, CA: Sage.

Creswell, J., Fetters, M., & Ivankova, N. (2004). Designing a mixed methods study in primary care. *Annals of Family Medicine, 2*, 7-12.

Creswell, J.W., & Plano Clark, V.L. (2007). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage Publications.

Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 504-553). Boston: McGraw Hill.

Crum, R. M., Lillie-Blanton, M., & Anthony, J.C. (1996). Neighborhood environment and opportunity to use cocaine and other drugs in late childhood and early adolescence. *Drug and Alcohol Dependence, 43*, 155-61.

Cunningham, J.A., & Breslin, F.C. (2004). Only one in three people with alcohol abuse or dependence ever seek treatment. *Addictive Behaviors, 29*, 221-223.

Cunningham, J.A., Lin, E., Ross, H.E., & Walsh, G.W. (2000). Factors associated with untreated remissions from alcohol abuse or dependence. *Addictive Behaviors, 25*, 317-321.

Cunningham, J.A., Sobell, L.C., Sobell, M.B., Agrawal, S., & Toneatto, T. (1993). Barriers to treatment: Why alcohol and drug abusers delay or never seek treatment. *Addictive Behaviors, 18*, 347-353.

Cunningham, J.A., Sobell, L.C., Sobell, M.B., & Gaskin, J. (1994). Alcohol and drug abusers' reasons for seeking treatment. *Addictive Behaviors, 19*, 691-696..

Darke, S., & Hall, W. (2003). Heroin overdose: research and evidence-based intervention. *Journal of Urban Health, 80*, 189-200.

Davidson, P.L., & Andersen, R.M. (1997). Determinants of dental care utilization for diverse ethnic and age groups. *Advances in Dental Research, 11*, 254-262.

Davidson, P.L., Andersen, R.M., Wyn, R., & Brown, E.R. (2004). A framework for evaluating safety-net and other community-level factors on access for low-income populations. *Inquiry, 41*, 21–38.

Davidson, P.L., Cunningham, W.E., Nakazono, T.L., & Andersen, R.M. (1999). Evaluating the effect of usual source of dental care on access to dental services: comparisons among diverse populations. *Medical Care Research & Review, 56*, 74-93.

Davis, P. (2002). Problems, politics, and processes: Public health sciences and policy in developed countries. In R. Detels, J. McEwen, R. Beaglehole, & H. Tanaka (Eds.), *Oxford textbook of public health* (4th ed.,pp. 937-950). New Yorlk: Oxford University Press.

DeLeon, G., & Jainchill, N. (1986). Circumstance, motivation, readiness, and suitability as correlates of treatment tenure. *Journal of Psychoactive Drugs, 18*, 203–208.

Denzin, N.K. (1988). *The Research Act.* McGraw-Hill: New York.

De Silva, H.J., Peris, M., Samarasinghe, D.S., & Ellawala, N.S. (1992). A 2-year follow up study of alcohol dependent men rehabilitated at a special unit in a developing country. *British Journal of Addiction, 87,* 1409-1414.

De Weert-Van Oene, G.H., Schippers, G.M., De Jong, C.A.J., & Schrijvers, G.J.P. (2002). Retention in substance dependence treatment: The relevance of in-treatment factors. *Journal of Substance Abuse Treatment, 20,*253-261.

Dewing, S., Pluddemann, A., Myers, B.J., & Parry, C.D.H. (2006). Review of injection drug use in six African countries: Egypt, Kenya, Mauritius, Nigeria, South Africa and Tanzania. *Drugs: Education, Prevention and Policy, 13,* 121-137.

DiClemente, C.C. (1986). Self-efficacy and the addictive behaviors. *Journal of Social and Clinical Psychology, 4,* 302-315.

Dobalian, A., Andersen, R.M., Stein, J.A., Hayes, R.D., Cunningham, W.E., & Marcus, M. (2003). The impact of HIV on oral health and subsequent use of dental services. Journal of Public Health Dentistry, *63,* 78-85.

Donabedian, A. (1972). Models for organizing the delivery of personal health services and criteria for evaluating them. *Milbank Memorial Fund Quarterly, 50,* 103–154.

Duran, B., Oetzel, J., Lucero, J., Jiang, Y., Novins, D.K., Manson, S., & Beals, J. (2005). Obstacles for rural American Indians seeking alcohol, drug, or mental health treatment. *Journal of Consulting and Clinical Psychology, 73,* 819-829.

Edelstein, I., Weber, V., Pillay, Y. (1997). The role of the private sector. In. D. Foster, M. Freeman, & Y. Pillay (Eds.), *Mental health policy issues for South Africa* (pp. 132-142). Cape Town: Medical Association of South Africa.

Eden, J. (1998). Measuring access to care through population-based surveys. Where are we now? *Health Services Research, 33*, 685–708.

Ekanayake, L., & Mendis, R. (2002). Self reported use of dental services among employed adults in Sri Lanka. *Int Dent. J*, 52, 151-155.

Ensign, J. (2003). Ethical issues in qualitative health research with homeless youths. *Journal of Advanced Nursing, 43*, 43–50.

Evans, R.G., & Stoddart, G.L. (1990). Producing health, consuming health care. *Social Science & Medicine, 31,* 1347-1363.

Farabee, D., Leukefeld, C.G., & Hays, L. (1998). Accessing drug abuse treatment: Perceptions of out-of-treatment injectors. *Journal of Drug Issues, 28,* 381–394.

Fernandez-Mayorales, G., Rodriguez, V., & Rojo, F. (2000). Health services accessibility among Spanish elderly. *Social Science & Medicine, 50,* 17-26.

Festinger, D. S., Lamb, R.S., Kountz, M.R., Kirby, K.C., & Marlowe, D. (1995). Pretreatment dropout as a function of treatment delay and client variables. *Addictive Behaviors, 20*, 111-115.

Figlie, N.B., Dunn, J., & Laranjeira, R. (2005). Motivation for change in alcohol dependent outpatients from Brazil. *Addictive Behaviors, 30*, 159-165.

Finney, J.W., & Moos, R.H. (1995). Entering treatment for alcohol abuse: a stress and coping model. *Addiction, 90*, 1223-1226.

Fiorentine, R., & Hillhouse, M.P. (2003). Replicating the addicted-self model of recovery. *Addictive Behaviors, 28, 1063-1080.*

First, M.B., Spitzer, R.L., Gibbon, M., & Williams, J.B. (1997). *Structured Clinical Interview for DSM-IV (SCID-I).* New York: New York State Psychiatric Institute.

Fletcher, B.W. (1997). *DATOS overview and treatment outcomes.* Rockville, MD: National Institute on Drug Abuse.

Flisher, A.J. & Chalton, D.O. (2001). Adolescent contraceptive non-use and covariation among risk behaviors. *Journal of Adolescent Health, 28*, 235-241.

Flisher, A.J., Parry, C.D.H., Evans, J., Muller, M., & Lombard, C. (2003). Substance use by adolescents in Cape Town: Prevalence and correlates. *Journal of Adolescent Health, 32*, 58-65.

Foley, R. & Platzer, H. (2007). Place and provision: mapping mental health advocacy services in London. *Social Science & Medicine, 64*, 617-632.

Fortney, J.C., Booth, B.M., Blow, F.C., & Bunn, J.Y. (1995). The effects of travel barriers and age on the utilization of alcoholism treatment aftercare. *American Journal of Drug and Alcohol Abuse, 21*, 391-406.

Fortney, J., Mukherjee, S., Curran, G., Fortney, S., Han, X., & Booth, B.M. (2004). Factors associated with perceived stigma for alcohol Use and treatment among at-risk drinkers. *Journal of Behavioral Health Services Research, 31*, 418-429.

Fosu, G.B. (1989). Access to health care in urban areas of developing societies. *Journal of Health and Social Behaviour, 30,* 398-411.

Frazier, P.A., Tix, A.P., Barron, K.E. (2004). Testing moderator and mediator effects in counselling psychology research. *Journal of Counseling Psychology, 51*, 115-134.

Freedman, V.A. (1993). Kin and nursing home lengths of stay: A backward recurrence time approach. *Journal of Health and Social Behaviour, 34*, 138-152.

Feinson, M.C. & Popper, M. (1995). Does affordability affect mental health utilization? A United States-Israel comparison of older adults. *Social Science & Medicine, 40*, 669-678.

Finlayson, M., & Dalmonte, J. (2002). Predictors of occupational therapy use among people with multiple sclerosis in Atlantic Canada. *Canadian Journal of Occupational Therapy, 69*, 239-248.

Freeman, M. (2000). Using all opportunities for improving mental health. Examples from South Africa. *Bulletin of the World Health Organization, 78,* 508-10.

Frenk, J. (1992). The concept and measurement of accessibility. In K.L. White (Ed.), *Health Services Research: An Anthology* (pp. 842-855). Washington, DC: Pan American Health Organization.

Freyer, J., Tonigan, J.S, Keller, S., Rumpf, H., John, U., & Hapke, U. (2005). Readiness for change and readiness for help-seeking: A composite assessment of client motivation. *Alcohol & Alcoholism, 40,* 540-544.

Friedmann, P.D., Alexander, J.A., & D'Aunno, T.A. (1999). Organisational correlates of access to primary care and mental health services in drug abuse treatment units. *Journal of Substance Abuse Treatment, 16,* 71-80.

Friedmann, P.D., D'Aunno, T.A., Jin, L., & Alexander, J.A. (2000). Medical and psychosocial services in drug abuse treatment: do stronger linkages promote client utilization? *Health Services Research, 35*, 443-465.

Friedmann, P.D., Lemon, S.C., Durkin, E.M., & D'Aunno, T.A. (2003). Trends in comprehensive service availability in outpatient drug abuse treatment. *Journal of Substance Abuse Treatment, 24,* 81-88.

Friedmann, P.D., Lemon, S.C., & Stein, M.D. (2001). Transportation and retention in outpatient drug abuse treatment programmes. *Journal of Substance Abuse Treatment, 21,* 97-103.

Friedmann S.R., Tempalski, B., Brady, J.E., Friedman, J.J., Cooper, H.L.F., Flom, P.L., McGrath, M.M., Gostnell, K., & Des Jarlais, D.C. (2006). Predictors of the degree of drug treatment coverage for injection drug users in 94

metropolitan areas in the United States of America. *International Journal of Drug Policy, 35*, 113-121.

Gage, A.J. (2007). Barriers to the utilization of maternal health care in rural Mali. *Social Science & Medicine*, in press.

Gallon, S.L., Gabriel, R.M., & Knudsen, J.R.W. (2003). The toughest job you'll ever love: A Pacific Northwest treatment workforce survey. *Journal of Substance Abuse Treatment, 24,* 183-196.

Gelberg, L., Andersen, R.M., & Leake, B.D. (2000). The behavioural model for vulnerable populations: Application to medical care uses and outcomes for homeless people. *Health Services Research, 34*, 1273-302.

George, A.A., & Tucker, J.A. (1996). Help-seeking by problem drinkers: Social contexts surrounding entry into alcohol treatment or AA. *Journal of Studies on Alcohol*, 57, 449-457.

Gerstein, D.R. (1997). *National Treatment Improvement Survey: Final Report.* Chicago, Ill: National Opinion Research Center, University of Chicago.

Gfroerer, J., Wright, D., & Kopstein, A. (1997). Prevalence of youth substance use: the impact of methodological differences between two national surveys. *Drug and Alcohol Dependence, 25*, 19-30.

Gilbert, G.H., Shah, G.B., Shelton, B.J., Heft, M.W., Bradford, E.H., & Chavers, L.S. (2002). Racial differences in predictors of dental care use. *Health Services Research, 37*, 1487-507.

Gold, M. (1998). Beyond coverage and supply: Measuring access to healthcare in today's market. *Health Service Research, 33*, 625–652.

Goodwin, R., & Andersen, R.M. (2003). Use of the behavioural model of health care use to identify correlates of use of treatment for panic attacks in the community. *Social Psychiatry and Psychiatric Epidemiology, 37*, 212-219.

Goosen, J., Bowley, D.M., Degiannis, E., & Plani, F. (2003). Trauma care systems in South Africa. *Injury, 34*, 704-708.

Gossop, M., Marsden, J., Stewart, D., & Treacy, S. (2001). Outcomes after methadone maintenance and methadone reduction treatments: two-year follow-up results from the National Treatment Outcome Research Study. *Drug and Alcohol Dependence*, *62,* 255-264.

Graham, K., Brett, P.J., & Bois, C. (1995). Treatment entry and engagement: A study of the process at assessment/referral centers. *Contemporary Drug Problems, 22*, 61-104.

Grant, B.F. (1997). Barriers to alcoholism treatment: Reasons for not seeking treatment in a general population sample. *Journal of Studies on Alcohol, 58*, 365–371.

Green, J., & Britten, N. (1998). Qualitiative research and evidence based medicine. *British Medical Journal, 326*, 1230-1232.

Green-Hennessy, S. (2002). Factors Associated With Receipt of Behavioral Health Services Among Persons With Substance Dependence. *Psychiatric Services, 53*, 1592-1598.

Griffith, J.D., Knight, D.K., Joe, G.W., & Simpson, D.D. (1998). Implications of family and peer relations for treatment engagement and follow-up outcomes: An integrative model. *Psychology of Addictive Behaviors, 12*, 113–126.

Grimes, D.A., & Schulz, K.F. (2002). Bias and causal associations in observational research, *Lancet, 359,* 248–252.

Groenewald, P., Bradshaw, D., Nojilana, B., Bourne, D., Nixon, J., Mahomed, H., & Daniels, J. (2001). *Cape Town mortality, 2001. Part 1: Cause of death and premature mortality.* Cape Town: South African Medical Research Council.

Grootaert, C., Nsrayan, D., Nyhan Jones, V., & Woolcock, M. (2003). *Integrated Questionnaire for the measurement of social capital (SC-IQ).* Geneva: The World Bank Social Capital Thematic Group.

Grosenick, J.K., & Hatmaker, C.M. (2000). Perceptions of staff attributes in substance abuse treatment. *Journal of Substance Abuse Treatment, 19*, 273-284.

Grossman, M., Chaloupka, F.J., & Sirtalan, J. (1998). An empirical analysis of alcohol addiction: Results from the Monitoring the Future panels. *Economic Inquiry, 36*, 49-48.

Gruen, R., Bailie, R., D'Abbs, P., O'Rourke, I., O'Brien, M., & Verma, N. (2001). Improving access to specialist care for remote aboriginal communities. Evaluation of a specialist outreach service. *Medical Journal of Australia, 174*, 507-511.

Gruskin, S., Ferguson, L., & O'Malley, J. (2007). Ensuring sexual and reproductive health for people living with HIV: An overview of key human rights, policy and health systems issues. *Reproductive Health Matters, 15*, 4-26.

Gulliford, M., Figeroa-Munoz, J., Morgan, M., Hughes, D., Gibson, B., Beech, R., & Hudson, M. (2002). What does 'access to health care' mean? *Journal of Health Services Research & Policy, 7*, 186-188.

Haefele, B. (2003). *Gangsterism in the Western Cape. Criminal economy, gangs and child abuse.* Cape Town: Western Cape Department of Community Safety.

Hajema, K., Knibbe, R.A., & Droop, M.J. (1999). Social resources and alcohol-related losses as predictors of help seeking among male problem drinkers. *Journal of Studies on Alcohol, 60,* 120–129.

Haller, D.L., Miles, D.R., & Dawson, K.S. (2002). Psychopathology influences treatment retention among drug-dependent women. *Journal of Substance Abuse Treatment, 23,* 431-436.

Harris, K.M., & Edlund, M.J. (2005). Use of mental health care and substance abuse treatment among adults with co-occurring disorders. *Psychiatric Services, 56*, 954-959.

Hart, P.D. (2005). *Faces and Voices of Recovery. Survey of adults in the U.S.A.* USA: Hart Research Associates and Coldwater Corporation.

Hatton, D.C. (2001). Homeless women's access to health services: a study of social networks and managed care in the US. *Women & Health, 33,* 149-162.

Hembree, C., Galea, S., Ahern, J., Tracy, M., Markham Piper, T., Miller, J., Vlahov, D., & Tardiff, K.J. (2005). The urban built environment and overdose mortality in New York City neighborhoods. *Health & Place,11,*147-56.

Hendrydx, M., Ahern, M., Lovrich, N., & McCurdy, A. (2002). Access to health care and community social capital. *Health Services Research, 37,* 87-103.

Heslin, K.C., Cunningham, W.E., Marcus, M., Coulter, I., Freed, J., Der-Martirosian, C., Bozzette, S.A., Shapiro, M.F., Morton, S.C., & Andersen, R.M. (2001). A comparison of unmet needs for dental and medical care among persons with HIV infection receiving care in the United States. *Journal of Public Health Dentistry, 621,* 14-21.

Higgins, S.T., Budney, A.J., Bickel, W.K., Foerg, F.E., Donham, R., & Badger, G.J. (1994). Incentives improve outcome in outpatient behavioral treatment of cocaine dependence. *Archives of General Psychiatry, 51,* 568-576.

Hill, A.B. (1965). The environment and disease association or causation, *Proc R Soc Med, 58,* 295–300.

Hill, T., & Angel, R. (2005). Neighborhood disorder, psychological distress, and heavy drinking. *Social Science & Medicine, 61,* 965-975.

Hiller, M.L., Broome, K.M., Knight, K., & Simpson, D.D. (2000). Measuring self-efficacy among drug-involved probationers. *Psychological Reports, 86,* 529-538.

Holder, H.D., & Schachtman, R.H. (1987). Estimating health care savings associated with alcoholism treatment. *Alcoholism: Clinical and Experimental Research, 11*, 66-73.

Hombeck, G.N. (1997). Towards terminological, conceptual, and statistical clarity in the study of mediators and moderators. Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.

Hosmer, D., & Lemeshow, S. (1989). *Applied logistic regression*. New York: Wiley.

Hser, Y.I., Joshi, V., Maglione, M., Chou, C-P., & Anglin, D. (2001). Effects of program and patient characteristics on retention of drug treatment patients. *Evaluation and Program Planning, 24, 331-34.*

Hser, Y.I., Maglione, M., Polinsky, M.L., & Anglin, D. (1998). Predicting drug treatment entry among treatment-seeking individuals. *Journal of Substance Abuse Treatment, 15*, 213–220.

Hser, Y.I., Polinsky, M.L., Maglione, M., & Anglin, M.D. (1999). Matching clients' needs with drug treatment services. *Journal of Substance Abuse Treatment, 16*, 299-305.

Hubbard, R.L., Craddock, S.G., Flynn, P.M., Anderson, J., & Etheridge, R.M. (1997). Overview of 1-year follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors, 11*, 261-278.

Hubbard, R.L., Marsden, M.E., Rachal, J.V., Harwood, H.J., Cavanaugh, E.R., & Ginzburg, H.M. (1989). *Drug Abuse Treatment: A National Study of Effectiveness.* Chapel Hill: University of North Carolina Press.

Humphreys, K., & Moos, R.H. (1996). Reduced substance-abuse-related health care costs among voluntary participants in Alcoholics Anonymous. *Psychiatric Services, 47*, 709-713.

Hurlburt, M.S., Leslie, L.K., Landsverk, J., Barth, R.P., Burns, B.J., Gibbons, R.D., Slymen, D.J., & Zhang, J. (2004). Contextual predictors of mental health service use among children open to child welfare. *Archives of General Psychiatry, 61*, 1217-1224.

Hurley, J. (2001). Ethics, economics and public financing for health care. *Journal of Medical Ethics, 27*, 234-239.

Institute of Medicine. (1990). *Consensus Development at the NIH: Improving the Program.* Washington, DC: National Academy Press.

Iredale, R., Jones, L., Gray, J., & Deaville, J. (2005). 'The edge effect': an exploratory study of some factors affecting referrals to cancer genetic services in rural Wales. *Health & Place, 11*, 197-204.

Jensen, S. (2001). *State formation, neighborhood & gangs in a Capetonian township.* (Doctoral Dissertation). Denmark: Roskilde University.

Joe, G.W., Broome, K.M., Rowan-Szal, G.A., & Simpson, D.D. (2002). Measuring patient attributes and engagement in treatment. *Journal of Substance Abuse Treatment, 22*, 183-196.

Joe, G.W., Knezek, L., Watson, D., & Simpson, D.D. (1991). Depression and decision-making amongst intravenous drug users. *Psychological Reports, 68*, 339-347.

Joe, G.W., Simpson, D.D., & Broome, K.M. (1998). Effects of readiness for drug abuse treatment on client retention and assessment of process. *Addiction, 93*, 1177-1190.

Joe, G.W., Simpson, D.D., & Broome, K.M. (1999). Retention and patient engagement models for different treatment modalities in DATOS. *Drug and Alcohol Dependence, 57*, 113-125.

Joseph, A.E., & Phillips, D.R. (1984). *Accessibility and utilization: Geographical perspectives on health care delivery.* New York: Harper and Row.

Kalichman, S.C., Simbayi, L.C., Kagee, A., Toefy, Y., Jooste, S., Cain, D. & Cherry, C. (2006). Associations of poverty, substance use, and HIV transmission risk behaviors in three South African communities. *Social Science & Medicine, 62,* 1641-1649.

Kane, D.J., Zotti, M.E., & Rosenberg, D. (2005). Factors associated with health care access for Mississippi children with special health care needs. *Maternal and Child Health Journal, 95,* S23-S31.

Kaplan, E. H., & Johri, M. (2000). Treatment on demand: An operational model. *Health Care Management Science, 3,* 171-183.

Kashdan, T.B., & Roberts, J.E. (2007). Social anxiety, depressive symptoms, and post-event rumination: Affective consequences and social contextual influences. *Journal of Anxiety Disorders, 21, 284-30.*

Katz, M.H., Cunningham, W.E., Fleishman, J.A., Andersen, R.M., Kellogg, T., Bozette, S.A., & Shapiro, M.F. (2001). Effect of case management on unmet needs and utilization of medical care and medications among HIV-infected persons. *Annals of Internal Medicine, 135,* 557-565.

Kelaher, M., Dunt, D., Day, S., & Feldman, P. (2006). Effects of financial disadvantage on use and non-use of after hours care in Australia. *Health Policy, 79,* 16-23.

Kertesz, S.G., Larson, M.J., Cheng, D.M., Tucker, J.A., Winter, M., Mullins, A., Saitz, R., & Samet, J.H. (2006). Need and non-need factors associated with addiction treatment utilization in a cohort of homeless and housed urban poor. *Med Care, 44,* 225-233.

Khan, A., & Bhardwaj, S. (1994). Access to health care: A conceptual framework and its relevance to health care planning. *Evaluation and the Health Professions, 17,* 60-76.

King, A.C., Bernardy, N.C., & Hauner, K. (2003). Stressful events, personality, and mood disturbance: Gender differences in alcoholics and problem drinkers. *Addictive Behaviors, 28,* 171-187.

King, G., Flisher, A.J., Mallett, R., Graham, J., Lombard, C., Rawson, T., Morojele, N.K., & Muller, M. (2003). Smoking in Cape Town: Community influences on adolescent tobacco use. *Preventive Medicine, 36,* 114-123.

Kleinman, B.P., Millery, M., Scimeca, M., & Polissar, N. (2002). Predicting long-term treatment utilization among addicts entering detoxification: The contribution of help-seeking models. *Journal of Drug Issues, 32*, 209–230.

Knight, K., Hiller, M.L., Broome, K.M., Simpson, D.D. (2000). Legal pressure, treatment readiness, and engagement in long-term residential programs. *Journal of Offender Rehabilitation, 31*, 101-115.

Knight, K., Holcom, M., & Simpson, D.D. (1994). *TCU psychosocial functioning and motivation scales: manual of psychometric properties.* Fort Worth: Institute of Behavioural Research, Texas Christian University.

Knight, K., Simpson, D.D., & Hiller, M.L. (2002). Screening and referral for substance-abuse treatment in the criminal justice system. In C.G. Leukefeld, F. Tims, & D. Farabee (Eds.), *Treatment of drug offenders: policies and issues* (pp 259-272). New York: Springer.

Knowlton, A.R., Hoover, D.R., Chung, S.E., Celentano, D.D., Vlahov, D., & Latkin, C.A. (2001). Access to medical care and service utilization among injection drug users with HIV/AIDS. *Drug and Alcohol Dependence, 64,* 55-62.

Kontodimopoulos, N.,Nanos, P., & Niakis, D. (2006) Balancing efficiency of health services and equity of access in remote areas in Greece. *Health Policy, 76*, 49-57.

Koopman, F.A., Reagon, G., Myers, B.J., & Parry, C.D.H. (2007). Addressing Alcohol problems in primary care settings: A study of GPs in Cape Town, South Africa. *Scandinavian Journal of Public Health, in press.*

Kosanke, N., Magura, S., Staines, G., Foote, J., & DeLuca, A. (2002). Feasibility of Matching Alcohol Patients to ASAM Levels of Care. *American Journal of Addiction, 11*,124-34.

Kouzis, A.C., Ford, D.E., & Eaton, W.W. (2000). Social relationships and treatment in the psychiatric service system. In J. Morrissey (Ed.), *Research in Community and Mental Health* (pp. 65-86). New York: JAI Press.

Krahn, G., Farrell, N., Gabriel, R., & Deck, D. (2006). Access barriers to substance abuse treatment for persons with disabilities: an exploratory study. *Journal of Substance Abuse Treatment, 31,* 375-384.

Laerum, F., Amdal, T., Kirkevold, M., Engedal, K., Hellund, J.C., Oswold, S., Borthne, K., Sager, E.M., Randers, J. (2005). Moving equipment not patients: mobile-based digital radiography to nursing home patients. *International Congress Series, 1281*, 922-925.

Lalloo, R., Myburgh, N.G., Smith, M.J., & Solanki, G.C. (2004). Access to health care in South Africa - the influence of race and class. *South African Medical Journal, 94*, 639-642.

Langenbucher, J., & Merrill, J. (2001). The validity of self-reported cost events by substance abusers. Limits, liabilities, and future directions. *Evaluation Review, 25*, 184-210.

Langenbucher, J., Sulesund, D., Chung, T., & Morgenstern, J. (1996). Illness severity and self-efficacy as course predictors of DSM-IV alcohol dependence in a multisite clinical sample. *Addictive Behaviors, 21,* 543-553.

Latkin, C.A., Williams, C., Wang, J., & Curry, A.D. (2005). Neighborhood social disorder as a determinant of drug injection behaviors: A structural equation modeling approach. *Health Psychology, 24*, 96-100.

Law, M., Wilson, K., Eyles, J., Elliott, S., Jerrett, M., Moffat, T., & Luginaah, I. (2005). Meeting health need, accessing health care: The role of neighbourhood. *Health & Place, 11*, 367-377.

Lennings, C.J., Kenny, D.T., & Nelson, P. (2006). Substance use and treatment seeking in young offenders on community orders. *Journal of Substance Abuse Treatment, 31,* 425-432.

Lim, Y.W., Andersen, R., Leake, B., Cunningham, W., & Gelberg, L. (2002). How accessible is medical care for homeless women? *Medical Care, 40,* 510-520.

Lin, N., Ye, X., & Ensel, W.M. (1999). Social Support and Depressed Mood: A Structural Analysis. *Journal of Health and Social Behavior, 40*, 344-359.

Litaker, D. & Love, T.E. (2005). Health care resource allocation and individuals' health care needs: examining the degree of fit. *Health Policy, 73,* 183-193.

Longabaugh, R., Beattie, M., Noel, N., Stout, R., Malloy, P. (1993). The effect of social investment on treatment outcome. *Journal of Studies on Alcohol, 54*, 465-478.

Longabaugh, R., Wirtz, P.W., Zweben, A., Stout, R.L. (1998). Network support for drinking. Alcoholics anonymous and long-term matching effects. *Addiction, 93*, 1313-1333.

Longshore, D. (1998). Desire for help among drug-using Mexican-American arrestees. *Substance Use and Misuse, 33*, 1387-1407.

Longshore, D. (1999). Help-seeking by African American drug users: A prospective analysis. *Addictive Behaviors, 24,* 683-686.

Longshore, D., & Teruya, C. (2006). Treatment motivation in drug users: A theory-based analysis. *Drug and Alcohol Dependence, 81,*179-188.

Low, W.Y., Zulkifli, S.N., Yusof, K., Batumalail, S., & Aye, K.W. (1996). The drug abuse problem in Pensinsular Malaysia: parent and child differences in knowledge, attitudes and perceptions. *Drug and Alcohol Dependence, 42*, 105-115.

Louw, S. (2006) Educational psychology criteria for the evaluation of drug treatment origrammes for adolescents in South Africa. (Doctoral dissertation). Johannesberg: Rand Afrikaans University.

Luchansky, B., & Longhi, D. (1997). *Cost savings in Medicaid medical expenses: an outcome of publicly funded chemical dependency treatment in Washington State.* Washington, DC: Washington State Department of Social and Health Services.

Lyons, M., & Snoxell, S. (2005). Creating urban social capital. Some evidence from informal traders in Nairobi. *Urban Studies, 42,* 1077-1097.

Maisto, S.A., Chung, T.A., Cornelius, J.R., & Martin, C.S. (2003). Factor structure of the SOCRATES in a clinical sample of adolescents. *Psychology of Addictive Behaviours, 17,* 98-107.

Martin, R.A., Rohsenow, D.J., MacKinnon, S.V., Abrams, D.B., & Monti, P.M. (2006). Correlates of motivation to quit smoking among alcohol dependent patients in residential treatment. *Drug and Alcohol Dependence, 83,* 73-78.

Matsumoto, D. (1996). *Culture and Psychology.* Pacific Grove, CA: Brooks/Cole Publishing.

Matto, H. (2005). A bio-behavioral model of addiction treatment: Applying dual representation theory to craving management and relapse prevention. *Substance Use & Misuse, 40,* 529-541.

Matzoupolos, R. (2005). *Profile of fatal injuries in South Africa sixth annual report (2004) of the NIMSS.* Cape Town: South African Medical Research Council.

Mauser, E., & Van Stelle, K.R. (1994). The economic impact of diverting substance abusing offenders into treatment. *Crime and Delinquency, 40,* 569-589.

May, P.A., Brooke, L., Gossage, J.P., Croxford, J., Adnams, C., Kones, K.L., Robinson, L., & Viljoen, D. (2000). Epidemiology of Fetal Alcohol

Syndrome in a South African Community in the Western Cape Province. *American Journal of Public Health, 90,* 1905-1912.

Mechanic, D. (1998). The functions and limitations of trust in the provision of medical care. *Journal of Health Politics, Policy, and Law, 23,* 661–687.

Meyers, R.J., Miller, W.R., Smith, J.E., & Tonigan, J.S. (2002). A randomized controlled trial of two interventions for engaging treatment refusing drug users through concerned significant others. *Journal of Consulting and Clinical Psychology, 70,* 1182-1185.

Miller, W.R. (1996). Motivational interviewing: research, practice, and puzzles. *Addictive Behaviors, 21,* 835-842.

Miller, W. R. (1999). Enhancing motivation for change in substance abuse treatment. *Treatment Improvement Protocol (TIP) Series, No. 35.* Rockville, M.D.: Center for Substance Abuse Treatment.

Miller, W.R., & Tonigan, J.S. (1996). Assessing drinker's motivation to change: The Stages of Change, Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviours, 10,* 81-89.

Millman, M.L. (1993). *Access to Health Care in America. Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services.* Washington, DC: National Academy Press.

Mills, A., Palmer, N., Gilson, L., McIntyre, D., Schneider, H., Sinanovic, E., & Wadee, H. (2004). The performance of different models of primary care provision in Southern Africa. *Social Science & Medicine, 59,* 931-943.

Miralles, M.A., & Kimberlin, C.L. (1998). Perceived access to care and medication use among ambulatory elderly in Rio De Janeiro, Brazil. *Social Science & Medicine, 46,* 345-355.

Mirowsky, J., & Ross, C.E. (2003). *Social Causes of Psychological Distress.* New York: Aldine de Gruyter.

Mojtabai, R. (2005). Use of speciality substance abuse and mental health services in adults with substance use disorders in the community. *Drug and Alcohol Dependence, 78*, 345-354.

Mojtabai, R., Olfson, M., & Mechanic, D. (2002). Perceived need and help-seeking in adults with mood, anxiety, or substance use disorders. *Archives of General Psychiatry, 59*, 77-84.

Monnet, E., Collin-Naudet, E., Bresson-Hadni, S., Minello, A., Di Martino, V., Carel, D., Jooste, V., Gagnaire, A., Evrard, P., Obert-Clerc, B., Miguet, J.P., & Hillon, P. (2005). Place of residence and distance to medical care influence the diagnosis of hepatitis C: a population-based study. *Journal of Hepatology, 44*, 499-506.

Moodley-Kunnie, T. (1988). Attitudes and perceptions of health professionals towards substance use disorders and substance-dependent individuals. *International Journal of Addiction, 23*, 469-475.

Mooney, G.H. (1983). Equity in health care: confronting the confusion. *Effective Health Care, 1,*179-185.

Mooney, G., & Jan, S. (1997). Vertical equity: Weighting outcomes or establishing procedures? *Health Policy, 39*, 79-87.

Morales, L.S., Cunningham, W.E., Galvan, F.H., Andersen, R.M., Nakazono, T.T., & Shapiro, M.F. (2004). Sociodemographic differences in access to care among Hispanic patients who are HIV infected in the United States. *American Journal of Public Health, 94*, 1119-1121.

Morgan, C., Mallett, R., Hutchinson, G., & Leff, J. (2004). Negative pathways to psychiatric care and ethnicity: the bridge between social science and psychiatry. *Social Science & Medicine, 58*, 739-753.

Morojele, N.K., & Brook, J.S. (2005). Substance use and multiple victimization among adolescents in South Africa. *Addictive Behaviours, 31,* 1163-1176.

Morojele, N.K., Kachieng'a, M.A., Mokoko, E., Nkoko, M.A., Parry, C.D.H., Nkowane, A.M., Moshia, K.M., & Saxena, K.M. (2006). Alcohol use and sexual behaviour among risky drinkers and bar and shebeen patrons in Gauteng province, South Africa. *Social Science & Medicine, 62*, 217-227.

Morris, S., Sutton, S., & Gravelle, H. (2005). Inequity and inequality in the use of health care in England: an empirical investigation; *Social Science & Medicine, 60,* 1251-1266.

Mueller, B., Nordt, C., Lauber, C., Rueesch, P., Meyer, P.C., & Roessler, W. (2006). Social support modifies perceived stigmatization in the first years of mental illness: a longitudinal approach. *Social Science & Medicine, 62*, 39-49.

Murdock, T., Wendler, A., & Nilsson, J. (2005). Addiction Counseling Self-Efficacy Scale (ACSES): development and initial validation. *Journal of Substance Abuse Treatment, 29*, 55-64.

Murphy, S., & Irwin, J. (1992). Living with the dirty secret: problems of disclosure for methadone maintenance clients. *Journal of Psychoactive Drugs, 24*, 257-264.

Mwamwenda, T.S. (1994). *Educational psychology: An African perspective.* Durban: Butterworth Press.

Myers, B. (2004a). *Technical Report on Audit of Substance Abuse Treatment Facilities in Gauteng (2003- 2004).* Cape Town: South African Medical Research Council.

Myers, B. (2004b). *Technical Report on the Evaluation of UNODC-funded Substance Abuse Treatment Facilities (Project SAF E66).* Cape Town: South African Medical Research Council.

Myers, B., & Parry, C.D.H. (2003). *Report on Audit of Substance Abuse Treatment Facilities in Cape Town.* Cape Town: South African Medical Research Council.

Myers, B., & Parry, C.D.H. (2005). Access to substance abuse treatment for Black South Africans: findings from audits of specialist substance abuse treatment facilities. *South African Psychiatry Review, 8*, 15-19.

Myers, B., Parry, C.D.H., & Pluddemann, A. (2004). Indicators of substance abuse treatment demand in Cape Town, South Africa 1997-2001. *Curationis, 27*, 27-31.

McAlpine, D.D., & Mechanic, D. (2000). Utilization of speciality health care among persons with severe illness: the roles of demographics, needs, insurance, and risk. *Health Services Research, 35*, 277-292.

McCaughrin, W.C., & Howard, D.L. (1996). Variation in access to outpatient substance abuse treatment: Organizational factors and conceptual issues. *Journal of Substance Abuse, 8*, 403–415.

McKay, J.R., Foltz, C., Stephens, R.C., Leahy, P.J., Crowley, E.M., & Kissin, W. (2005). Predictors of alcohol and crack cocaine use outcomes over a 3-year follow-up in treatment seekers. *Journal of Substance Abuse Treatment, 28*, S73-S82.

McKay, J.R., & Weiss, R.V. (2001). A review of the temporal effects and outcome predictors in substance abuse treatment studies with long-term follow-ups. *Evaluation Review, 25*, 113-161.

McLellan, A.T., & Meyers, K. (2004). Contemporary addiction treatment: A review of systems problems for adults and adolescents. *Biological Psychiatry, 56*, 764-770.

McLellan, E., Strotman, R., MacGregor, J., & Dolan, D. (2004). *AnSWR users guide*. Georgia: Center for Disease Control and Prevention.

McMillen, J., Scott, J.D., Zima, B.T., Ollie, M.T., Munson, M.R., & Spitznagel, E. (2004). Use of mental health services among older youths in foster care, *Psychiatric Services, 55*, 811–817.

National Department of Health (1997). *White paper on the transformation of the health system, April 1997.* Pretoria: South African Department of Health.

National Department of Social Development (1997). *White paper on the transformation of the social welfare system.* Pretoria: South African Department of Social Development.

National Department of Social Development (2006). *Draft: Revised Prevention and Treatment of Substance Abuse Act.* Pretoria: South African Department of Social Development.

Naude, W.A., & Krugell, W.F. (2003). Are South Africa's cities too small? *Cities, 20,* 175-180.

Neff, J.A., & Zule, W.A. (2002). Predictive validity of a measure of treatment readiness for out-of-treatment drug users: enhancing prediction beyond demographic and drug history variables. *The American Journal of Drug and Alcohol Abuse, 28*, 147-69.

Nel, E., Binns, T., & Motteux, N. (2001). Community-based development, non-governmental organizations and social capital in post-apartheid South Africa. *Human Geography, 83*, 3-14.

Nelson, J.C., Rashid, H., Galvin, V.G., Essien, J.D.K., & Levine, L.M. (1999). Public/private partners: Key factors in creating a strategic alliance for community health. *American Journal of Preventive Medicine,* 16, 94-102.

Nemet, G.F., & Bailey, A.J. (2000). Distance and health care utilization among the rural elderly. *Social Science & Medicine, 50*, 1197-1208.

Newman, I., & Benz, C.R. (1998). *Qualitative-Quantitative Research Methodology: Exploring the Interactive Continuum*. Carbondale: University of Illinois Press.

Ngwena, C. (2000). The recognition of access to health care as a human right in South Africa: is it enough? *Health and Human Rights, 5*, 26-44.

Ngwena, C. (2003). Access to health care services as a justiciable socio-economic right under the South African constitution. *Med Law Int, 6*, 13-23.

Norusis, M. (2007). *SPSS 15: Guide to data analysis.* Chicago, Ill: SPSS Inc.

Nwakeze, P.C., Magura, S., & Rosenblum, A. (2002).*Substance Use & Misuse, 37*, 291-312.

Nyamathi, A., Longshore, D., Galaif, E.R., & Leake, B. (2004). Motivation to stop substance use and psychological and environmental characteristics of homeless women. *Addictive Behaviors, 29,* 1839-1843.

Nyamathi, A.M., Stein, J.A., Dixon, E., Longshore, D., & Galaif, E. (2003). Predicting positive attitudes about quitting drug and alcohol use among homeless women. *Psychology of Addictive Behaviors, 17,* 32-41.

Obot, I.S., Poznyak, V., & Monteiro, M. (2004). From basic research to public health policy: WHO report on the neuroscience of substance dependence. *Addictive Behaviors, 29*, 1497-1502.

Ogborne, A.C., & DeWitt, D.J. (1999). Lifetime use of professional and community services for help with drinking: Results from a Canadian population survey. *Journal of Studies on Alcohol, 60*, 867-872.

Olley, B.O., Seedat, S., Nei, D.G., Stein, D.J. (2004). Predictors of Major Depression in Recently Diagnosed Patients with HIV/AIDS in South Africa. *AIDS Patient Care & STDs, 18,* 481-487.

Palacio, H., Shiboski, C.H., Yelin, E.H., Hessol, N.A., & Greenblatt, R. (1999). Access to and utilization of primary care services among HIV-infected women. *Journal of AIDS, 21*, 293-299.

Paneth, N., Susser, E., & Susser, M. (2002). Origins and early development of the case-control study. Part 1: early evolution. *Soz Praventivmed, 47*, 282-288.

Pappaioanou, M., Malison, M., Wilkins, K., Bradley, O., Goodman, R.A., Churchill, R.E., White, M., & Thacker, S.B. (2003). Strengthening capacity in developing countries for evidence-based public health: the data for decision-making project. *Social Science & Medicine,* 57, 1925-1937.

Paraherakis, A., Charney, D.A., Palacios-Boix, J., & Gill, K. (2000). An abstinence-oriented program for substance use disorders: poorer outcome associated with opiate dependence. *Canadian Journal of Psychiatry, 45,* 927-31.

Park, J.M. (2005). The determinants of long-term care utilization and equity of access to care among older adults in Dong-Ku of Incheon Metropolitan city, South Korea. *Asia Pac J Public Health, 17,*104-9.

Parry, C.D.H., & Bennetts, A. (1998). *Alcohol Policy and Public health in South Africa.* Cape Town, Oxford University Press.

Parry, C.D.H. (1997). Alcohol, drug abuse, and public health. In: D. Foster, M. Freeman, & Y. Pillay (Eds.), *Mental health policy issues for South Africa* (pp. 290-315). Cape Town: Medical Association of South Africa.

Parry, C.D.H., Bhana, A., Myers, B., Plüddemann, A., Flisher, A.J., Peden, M., & Morojele N.K. (2002). Alcohol use in South Africa: Findings from The South African Community Epidemiology Network on Drug Use (SACENDU) Project. *Journal of Studies on Alcohol, 63,* 430-435.

Parry, C.D.H., Bhana, A., Plüddemann, A., Myers, B., Siegfried, N., Morojele, N.K., Flisher, A.J., & Kozel, N. (2002). The South African Community Epidemiology Network on Drug Use (SACENDU): description, findings (1997-1999), and policy implications. *Addiction, 97,* 969-976.

Parry, C.D.H., Myers, B., Morojele, N.K., Flisher, A.J., Bhana, A., Donson, H., & Pluddemann, A. (2004). Trends in adolescent alcohol and other drug use: Findings from three sentinal sites in South Africa (1997-2001). *Journal of Adolescence, 27,* 429-440.

Parry, C.D.H., Myers, B., Thiede, M. (2003). A case for an increased excise tax on alcohol in South Africa. *South African Journal of Economics, 71*, 265-281.

Parry, C.D.H., Pluddemann, A., Louw, A., & Leggett, T. (2004). The 3-metros study of drugs and crime in South Africa: Findings and policy implications. *The American Journal of Drug and Alcohol Abuse, 30,* 167-185.

Parry, C.D.H., Pluddemann, A., Steyn, K., Bradshaw, D., Norman, R., & Laubsher R. (2005). Alcohol use in South Africa: Findings from the first demographic and health survey (1998). *Journal of Studies on Alcohol, 66*, 91-97.

Paschal, A.M., Ablah, E., Wetta-Hall, R., Molgaard, C.A., & Liow, K. (2005). Stigma and Safe Havens: A Medical Sociological Perspective on African American Female Epilepsy Patients. *Epilepsy & Behavior, 7*,106-15.

Pasche, S., Myers, B., & Louw, J. (in press) Staff attitudes and services provided by community based organizations for substance users in Cape Town, South Africa: Implications for training and education. *Drugs: Education, Prevention and Policy*

Peden, M., Harris, S., Sukhai, A., & Donson, H. (2001). *Sentinel surveillance of substance abuse and trauma 1999-2000. Final report.* Cape Town: South African Medical Research Council.

Pelissier, B., & Jones, N. (2005). A review of gender differences among substance abusers. *Crime Delinquency, 51*, 343–372.

Penchansky, R., & Thomas, J.W. (1981). The concept of access: definition and relationship to consumer satisfaction. *Medical Care, 19*, 127–140.

Perngpam, U., & Porncharoen,W. (2001). *An evaluation of government run substance misuse treatment centres.* Bangkok, Thailand: World Health Organisation.

Peters, R.H., Greenbaum, P.E., Steinberg, M.L., Carter, C.R., Ortiz, M.M., Fry, B.C., & Valle, S.K. (2000). Effectiveness of screening instruments in

detecting substance use disorders among prisoners. *Journal of Substance Abuse Treatment, 18,* 349-358.

Pettifor, A., Rees, H., & Stevens, A. (2004). *HIV & Sexual Behaviour Among Young South Africans: A National Survey of 15-24 Year Olds.* Johannesburg: Reproductive Health Research Unit, University of Witwatersrand.

Phillips, K.A., Morrisson, K.R., Andersen, R., & Aday, L.A. (1998). Understanding the context of health care utilization assessing environmental and provider-related variables in the behavioural model of utilization. *Health Services Research, 33,* 571-596.

Pickett, K. E., & Pearl, M. (2001). Multilevel analyses of neighbourhood socioeconomic context and health outcomes: A critical review. *Journal of Epidemiology and Community Health, 55,* 111-22.

Pinel, E.C. (1999). Stigma consciousness: The psychological legacy of social stereotypes. *Journal of Personality and Social Psychology, 76,* 114-128.

Pluddemann, A., Hon, S., Bhana, A., Harker, N., Potgieter, H., Gerber, W., Johnson, C., & Parry, C. (2007). *South African community epidemiology network on drug use (SACENDU) Monitoring alcohol and drug abuse trends in South Africa. July to December 2006.* Cape Town: South African Medical Research Council.

Pluddemann, A., Parry, C., Donson, H., & Sukhai, A. (2004). Alcohol use and trauma in Cape Town, Durban, and Port Elizabeth, South Afirca: 1999-2001. *Injury control and safety promotion, 11,* 265-267.

Pollini, R.A., O'Toole, T.P., Ford, D., & Bigelow, G. (2006). Does this patient really want treatment? Factors associated with baseline and evolving readiness for change among hospitalized substance-using adults interested in treatment. *Addictive Behaviors, 31,* 1904-1918.

Porter, J., Metzger, D.S., & Scotti, R. (2002). Awareness of drug treatment and other services among needle exchange participants. *Substance Use & Misuse, 37,*1305-1330.

Power, R., Hartnoll, R., & Chalmers, C. (1992). Help-seeking among illicit drug users: some differences between a treatment and nontreatment sample. *International Journal of Addiction, 27*, 887-904.

Powell, J., Dawe, S., Richards, D., Gossop, M., Marks, I., Strang, J., & Gray, J. (1993). Can opiate addicts tell us about their relapse risk? Subjective predictors of clinical prognosis. *Addictive Behaviors, 18,* 473-490.

Prentice, J.C. (2006). Neighborhood effects on primary care access in Los Angeles. *Social Science & Medicine, 62,* 1291-1303.

Prinsloo, M., Matzopoulos, R., & Sukhai, A. (2003). The Magnitude of Firearm Homicide in Cape Town, 2002. *African Safety Promotion: A Journal of Injury and Violence Prevention, 1*, 19-25.

Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*, 1102-1114.

Putnam, R.D. (1995). *Bowling alone. The collapse and revival of American community.* New York: Simon & Schuster.

Racher, F.E., & Vollman, A.R. (2002). Exploring the dimensions of access to health services: implications for nursing research and practice. *Research, Theory and Nursing Practice, 16*, 77–90.

Raine, R., Hutchings, A, & Black, N. (2003). Is publicly funded health care really distributed according to need? The example of cardiac rehabilitation in the UK. *Health policy, 63*, 63-72.

Rapp, R.C., Xu, J., Carr, C.A., Lane, T., Wang, J., & Carlson, R. (2006). Treatment barriers identified by substance abusers assessed at a centralized intake unit. *Journal of Substance Abuse Treatment, 30*, 227-235.

Reddy, S.P., Panday, S., Swart, D., Jinabhai, C.C., Amosun, S.L., James, S., Monyeki, K.D., Stevens, G., & Morojele, N. (2003). Umthente Uhlaba Usamila: *The First SA National Youth Risk Behaviour Survey, 2002*. Cape Town: South African Medical Research Council.

Redondo-Sendino, A., Guallar-Castillón, P., Banegas, J.R., & Rodríguez-Artalejo, F. (2006). Gender differences in the utilization of health-care services among the older adult population of Spain. *Public Health, 6*, 155-167.

Redpath, J. (2001). The gang landscape in the Western Cape. *Indicator SA, 18*, 34-40.

Reif, S., Golin, C.E., & Smith, S.R. (2005). Barriers to accessing HIV/AIDS care in North Carolina: rural and urban differences. *AIDS Care, 17*, 558-565.

Rew, L. (1998). Access to health care for Latina Adolescents. *Journal of Adolescent Health, 23*, 194-204.

Ricketts, T.C. (2002). *Toward a new designation of underservice: Final report of proposed method, analysis of effects and commentary on related areas.* Chapel Hill: University of North Carolina.

Ricketts, T.C., & Goldsmith, L.J. (2005). Access in health services research: The battle of the frameworks. *Nursing Outlook, 53*, 274-280.

Riley, E.D., Safaeian, M., Strathdee, S.A., Brooner, R.K., Beilenson, P., & Valhov, D. (2002). Drug user treatment referrals and entry among participants of a needle exchange program. *Substance Use & Misuse, 37*,1869-86.

Ritson, E.B. (1999). Alcohol, drugs, and stigma. *International Journal of Clinical Practice, 53*, 549-551.

Rosenbaum, M. (1995). The demedicalization of methadone maintenance. *Journal of Psychoactive Drugs, 27*, 45-49.

Rosenstock, I.M. (1966). Why people use health services. *Milbank Memorial Fund Quarterly, 44*, S94- S127.

Rosenthal, R. (1994). Parametric measures of effect size. In H. Cooper, & L.V. Hedges (Eds.), *The handbook of research synthesis* (pp. 231-244). New York: Russel Sage Foundation.

Rosero-Bixby, L. (2004). Spatial access to health care in Costa Rica and its equity: a GIS-based study. *Social Science & Medicine, 58*, 1271-1285.

Ross, C.E., & Jang, S.J. (2000). Neighborhood disorder, fear, and mistrust. The buffering role of social ties with neighbors. *American Journal of Community Psychology, 28*, 401-420.

Ross, M.W., Williams, M.L., Timpson, S.A., Amos, C., & Bowen, A. (2005). *Stigma consciousness of drug use and sexuality in male commercial sex workers.* Houston: WHO Centre for Health Promotion and Prevention Research, University of Texas.

Rössler, W., Riecher, A., Löffler, W., Fätkenheuer, B. (1991). Community care in child psychiatry. An empirical approach using the concept of travel time. *Social Psychiatry and Psychiatric Epidemiology, 26*, 28-33.

Rost, K., Fortney, J., Fischer, E., & Smith, J. (2002). Use, quality, and outcomes of care for mental health. The rural perspective. *Medical Care Research and Review, 59*, 231-265.

Russel, S. (2005). Treatment-seeking behaviour in urban Sri Lanka: Trusting the state, trusting private providers. *Social Science & Medicine, 61*, 1396-1407.

Sampson, R.J. (2003). The neighborhood context of well being. *Perspectives in Biology and Medicine, 46*, S53-S64.

Sampson, R.J., Raudenbush, S.W., & Earls, F. (1997). Neighbourhoods and violent crime: a multi-level study of collective efficacy. *Science, 277,* 918-924.

Sanders, D., & Chopra, M. (2006). Key challenges to achieving health for all in an inequitable society: The case of South Africa. *American Journal of Public Health, 96*, 73-78.

Sarason, B. R., Sarason, I. G., & Gurung, R. A. R. (2001). Close personal relationships and health outcomes: A key to the role of social support. In B. R. Sarason & S. Duck (Eds.) *Personal relationships: Implications for clinical and community psychology* (pp. 15-41). New York: Wiley.

Sarkin, J. (2000). A review of health and human rights after five years of democracy in South Africa. *Med Law, 19*, 287-307.

Sawyer, K.M., Wechsberg, W.M., & Myers, B. (2006). Cultural similarities and differences between a sample of Black/African and Coloured women in South Africa: Convergence of risk related to substance use, sexual behavior, and violence. *Women & Health, 43*, 73-92.

Sayre, S.L., Evans, M., Hokanson, P.S.W., Schmitz, J.M., Stotts, A.L., Averill, P., & Grabowski, J. (2004). "Who gets in?" Recruitment and screening processes of outpatient substance abuse trials. *Addictive Behaviors, 29*, 389-398.

Schell, T.L., Orlando, M., & Morral, A.R. (2005). Dynamic effects among patients' treatment needs, beliefs, and utilization: a prospective study of adolescents in drug treatment. *Health Services Research, 40*, 1128-47.

Schmidt, L., Greenfield, T., & Mulia N. (2006). Unequal treatment: racial and ethnic disparities in alcoholism treatment services. *Alcohol Research and Health, 29*, 49-54.

Schmitt, S.K., Phibbs, C.S., Piette, J.D. (2003). The influence of distance on utilization of outpatient mental health aftercare following inpatient substance abuse treatment. *Addictive Behaviors, 28*, 1183-1192.

Schildhaus, S., & Gerstein, D.R. (1998). *Services Research Outcomes Study*. Rockville, MD: United States Department of Health and Human Service, Substance Abuse and Mental Health Services Administration.

Schober, R., & Annis, H. (1996). Barriers to help-seeking for change in drinking: A gender focused review of the literature. *Addictive Behaviors, 21*, 81 - 92.

Schulz, A.J., Israel, B.A., Zenk, S., Parker, E.A., Lichtenstein, R., Weir, S.S., & Klem, L. (2006). Psychosocial stress and social support as mediators of relationships between income, length of residence and depressive symptoms among African American women on Detroit's eastside. *Social Science and Medicine, 62*, 510-522.

Schulz, K.F., & Grimes, D.A. (2002). Case-control studies: research in reverse. *The Lancet, 359,* 431-434.

Shadish, W.R., Cook, T.D., & Campbell, D.T. (2002). *Experimental and quasi experimental designs for generalized causal inference.* Boston: Houghton Mifflin Company.

Shah, A., & Jenkins, R. (2000). Mental health economic studies from developing countries reviewed in the context of those from developed countries. *Acta Psychiatrica Scandinavica, 101*, 87-103.

Shah, M.N., Rathouz, P.J., & Chin, M.H. (2001). Emergency department utilization by noninstitutionalized elders. *Academic Emergency Medicine, 8,* 267-23.

Shah, N.M., Shah, M.A., & Behbehani, J. (1996). Predictors of non-urgent utilization of hospital emergency services in Kuwait. *Social Science & Medicine, 42*, 1313-1323.

Shea, D.G., Streit, A., Smeyer, M.A. (1994). Determinants of the use of specialist mental health services by nursing home residents. *Health Services Research, 29*, 169-185.

Sheikh, S., Salah, E., Gaily, E, & Bashir, T.Z. (2004). High-risk relapse situations and self-efficacy: Comparison between alcoholics and heroin addicts. *Addictive Behaviors, 29,* 753-758.

Sherbourne, C.D., & Stewart, A.L. (1991). The MOS social support survey. *Social Science & Medicine*, *32*, 705-714.

Shisana, O., Rehle, T., Simbayi, L.C., Parker, W., Zuma, K., Bhana, A., Connolly, C., Jooste, S., & Pillay, V. (2005). *South African National HIV Prevalence, HIV Incidence, Behaviour, and Communication Survey.* Cape Town: Human Sciences Research Council Press.

Shoptaw, S., Stein, J.A., & Rawson, R.A. (2000). Burnout in substance abuse counsellors: Impact of environment, attitude and clients with HIV. *Journal of Substance Abuse Treatment, 19,* 117-126.

Silver, E., Mulvey, E.P., & Swanson, J.W. (2002) Neighborhood structural characteristics and mental disorder: Faris and Dunham revisited. *Social Science & Medicine, 55*, 1457-1470.

Simpson, C.A., & Tucker, J.A. (2002).Temporal sequencing of alcohol-related problems, problem recognition, and help-seeking episodes. *Addictive Behaviors, 27*, 659-74.

Simpson, D.D. (2001). *TCU treatment assessment forms.* Fort Worth: Texas Christian University, Institute of Behavioural Research.

Simpson, D.D., & Joe, G.W. (1993). Motivation as a predictor of early dropout from drug abuse treatment. *Psychotherapy, 30*, 357-368.

Simpson, D.D., Joe, G.W., & Brown, B. S. (1997). Treatment retention and follow-up outcomes in the Drug Abuse Treatment Outcome Study (DATOS). *Psychology of Addictive Behaviors, 11,* 294-307.

Simpson, D.D., Joe, G.W., Rowan-Szal, G.A., & Greener, J.M. (1995). Client engagement and change during drug Abuse treatment. *Journal of Substance Abuse, 7*, 117-134.

Simpson, D.D., Joe, G.W., Rowan-Szal, G.A., & Greener, J.M. (1997). Drug abuse treatment process components that improve retention. *Journal of Substance Abuse Treatment, 14*, 565-572.

Simpson, D.D., Knight, K., & Ray, S. (1993). Psychosocial correlates of AIDS-risk drug use and sexual behaviours. *AIDS Education and Prevention, 5*, 121-130.

Simpson, D.D., & Sells, S.B. (1982). Effectiveness of treatment for drug abuse: An overview of the DARP research program. *Advances in alcohol and substance abuse, 2*, 7-29.

Single, E., Robson, L., Xie, X., & Rehm, J. (1998). The economic costs of alcohol, tobacco and illicit drugs in Canada, 1992. *Addiction,* 93, 991-1006.

Smith, K. (2005). *The status of Cape Town: development overview for the City of Cape Town.* Cape Town: Isandla Institute.

Sobell, L. C., Sobell, M. B., & Toneatto, T. (1992). Recovery from alcohol problems without treatment. In N. Heather, W. R. Miller, & J. Greenley (Eds.), *Self-control and the addictive behaviours* (pp. 1198-1242). New York: Maxwell Macmillan.

Soskolne, V., Auslander, G.K., & Ben-Shahar, I. (2006). Help seeking and barriers to utilisation of medical and health social work services among ageing immigrants to Israel from the former Soviet Union. *Health Soc Care Community, 14*, 74-84.

Stafford, M., Cummins, S., Ellaway, A., Sacker, A., Wiggins, R.D., & Macintryre, S. (2007). Pathways to obesity: Identifying local, modifiable determinants of physical activity and diet. *Social Science & Medicine*, *64*, 1384-1391.

Statistics South Africa. (2001). *The people of South Africa Population Census, 2001. Census in Brief.* Pretoria: Statistics South Africa.

Statistics South Africa. (2003). *Causes of death, 2002*. Pretoria: Statistics South Africa.

Statistics South Africa (2005). *Achieving a better life for all. Progress between Census 1996 and Census 2001*. Pretoria: Statistics South Africa.

Steinberg, C. R., & Baxter, R.J. (1998). Accountable communities: How norms and values affect health system change. *Health Affairs, 17*, 149-57.

Stephens, R.S., Wertz, J.S., & Roffman, R.A. (1995). Self-Efficacy and Marijuana Cessation: A Construct Validity Analysis. *Journal of Consulting and Clinical Psychology, 63,* 1022-1031.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research*. Newbury Park, CA: Sage.

Sturm, R.A. (2000). State parity legislation and changes in health insurance and perceived access to care among individuals with mental illness: 1996-1998. *Journal of Mental Health Policy and Economics, 3*, 209-213.

Sturm, R.A., & Sherbourne, C.D. (2001). Are barriers to mental health and substance abuse care still rising? *Journal of Behavioural Health Services Research, 28*, 81-88.

Subedi, J. (1989). Modern health services and health care behaviour. A survey in Kathmandu, Nepal. *Journal of Health and Social Behaviour, 30*, 412-420.

Subramanian, S.V., Kim, D.J., & Kawachi, I. (2002). Social trust and self-rated health in US communities. Journal of Urban Health, 79, 79-85.

Subramanian, S.V., Lochner, K.A., & Kawachi, I. (2002). Neighborhood differences in social capital: a compositional artifact or a contextual construct. *Health & Place, 9*, 33-44.

Sunil, T.S., Rajaram, S., & Zottarelli, L.K. (2006). Do individual and program factors matter in the utilization of maternal care services in rural India? *Social Science & Medicine, 62*, 1943-1957.

Swets, J.A. (1988). Measuring the accuracy of diagnostic systems. *Science, 240,* 1285-1293.

Sylla, L., Bruce, D., Kamarulzaman, A., & Altice, F.L. (2007). Integration and co-location of HIV/AIDS, tuberculosis and drug treatment services. *International Journal of Drug Policy, 18,* 306-312.

Tanser, F., Gijsbertsen, B., & Herbst, K. (2006). Modelling and understanding primary health care accessibility and utilization in rural South Africa: An exploration using a geographical information system. *Social Science & Medicine, 63,* 691-705.

Tashakkori, A., & Teddlie, C. (2003). *Handbook of Mixed Methods in the Social and Behavioral Research.* Thousand Oaks, CA: Sage.

Teesson, M., Baillie, A., Lynskey, M., Manor, B., & Degenhardt, L. (2006). Substance use, dependence and treatment seeking in the United States and Australia: a cross-national comparison. *Drug and Alcohol Dependence, 81,* 149-155.

Teesson, M., Hall, W., Lynskey, M., & Degenhardt, L. (2000). Alcohol- and drug-use disorders in Australia : Implications of the National Survey of Mental Health and Well-being. *Aust NZ J Psychiatry, 34,* 206-213.

Thind, A. (2004). Health services use by children in rural Bihar. *Journal of Tropical Pediatrics, 50,* 137-42.

Thind, A. (2005). Analysis of health services use for respiratory illness in Indonesian children: implications for policy. *J Biosoc Sci., 37,* 129-42.

Thind, A., & Andersen, R. (2003). Respiratory illness in the Dominican Republic: What are the predictors for health services utilization of young children? *Social Science & Medicine, 56,* 1173-1182.

Thind, A., & Cruz, M. (2003). Determinants of children's health services utilization in the Phillipines. *Journal of Tropical Pediatrics, 49,* 269-274.

Thomas S., Mooney, G., & Mbatsha, S. (2007). The MESH approach: Strengthening public health systems for the MDGs. *Health Policy*, In Press.

Thomas, J.W., & Penchansky, R. (1984). Relating satisfaction with access to utilization of services. *Medical Care, 22*, 553-557.

Tolhurst, R., & Nyonator, F.K. (2006). Looking within the household: gender roles and responses to malaria in Ghana. *Transactions of the Royal Society of Tropical Medicine and Hygiene, 100*, 321-326.

Tucker, J.A. (2001). Resolving problems associated with alcohol and drug misuse: understanding relations between addictive behavior change and the use of services. *Substance Use and Misuse, 36*, 1501-18.

Tucker, J.A., Vuchinich, R.E., & Rippens, P.D. (2004). A factor analytic study of influences on patterns of help-seeking among treated and untreated alcohol dependent persons. *Journal of Substance Abuse Treatment, 26*, 237–242.

Unger, J.B., Johnson, C.A., Marks, G. (1997). Functional decline in the elderly: evidence for direct and stress-buffering protective effects of social interactions and physical activity. *Annals of Behavioral Medicine, 19*, 152-60.

United Nations (1966). *International Covenant on Economic, Social and Cultural Rights. Adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966.* Vienna: United Nations.

Uziel-Miller, N.D., Lyons, J.S., Kisiel, C., & Love, S. (1998). Treatment needs and initial outcomes of a residential recovery program for African–American women and their children. *American Journal on Addictions, 7*, 43–50.

Van Achterberg, T., Stevens, F.C., Crebolder, H.F., & Philipsen, H. (1996). Predictors of professional and non-professional community care for care-dependent adults. *Health Policy, 36*, 83-98.

Van Doorslaer, E., Wagstaff, A., van der Burg, H.,Christiansen, T., De Graeve, D., & Duchesne, I. (2000). Equity in the delivery of health care in Europe and the US. *Journal of Health Economics, 19*, 553-583.

Verbrugge, L.M. (1985). Gender and health: An update on hypotheses and evidence. *Journal of Health and Social Behaviour, 26*, 156-182.

Vickers, K.S., & Vogeltanz, N.D. (2000). Dispositional optimism as a predictor of depressive symptoms over time. *Personality and Individual Differences, 28*, 259-272.

Viljoen, D. (2003). Fetal alcohol syndrome in South Africa. *Morbidity Mortality Weekly Report, 52*, 660-2.

Vingilis, E., Wade, T., Seeley, J. (2006). Predictors of adolescent health care utilization. *Journal of Adolescence*, in press.

Wallace, A., Scott, J., Klinnert, M., & Andersen, M.E. (2004). Impoverished children with asthma: a pilot study of urban healthcare access. *JSPN, 9*, 50-58.

Weich, S., Blanchard, M., Prince, M., Burton, E., Erens, B., & Sproston, K. (2002). Mental health and the built environment: cross-sectional survey of individual and contextual risk factors for depression *The British Journal of Psychiatry,* 180, 428-433.

Weisner, C. (1993). Gender disparities in treatment for alcohol problems. *Journal of the American Medical Association, 268*, 1872–1876.

Weisner, C., & Matzger, H. (2002). A prospective study of the factors influencing entry to alcohol and drug treatment. *J Behav Health Services Research, 29*, 126-137.

Weisner, C., Matzger, H., Tam, T., & Schmidt, L. (2002). Who Goes to Alcohol and Drug Treatment? Understanding Utilization within the Context of Insurance. *Journal of Studies on Alcohol, 63*, 673-682.

Weisner, C., Mertens, J., Tam, T., & Moore, C. (2001). Factors affecting the initiation of substance abuse treatment in managed care. *Addiction, 96*, 705-16.

Weiss, L., McCoy, K., Kluger, M., & Finkelstein, R. (2004). Access to and use of health care: perceptions and experiences among people who use heroin and cocaine. *Addiction Research & Theory, 12*, 155-165.

Weitzman, E., & Miles, M. (1995). *Computer programs for qualitative data analysis.* Newbury Park: Sage.

Wells, K.B., Sherbourne, C.D., Sturm, R., Young, A.S., & Burnam, M.A. (2002). Profiles of care for alcohol, drug abuse and mental health problems for uninsured and insured adults. *Health Services Research, 37*, 1055-1066.

Wenzel, S.L., Burnam, M.A., Koegel, P., Morton, S.C., Miu, A., Jinnett, K.J., & Sullivan, G. (2001). Access to inpatient or residential substance abuse treatment among homeless adults with alcohol or other drug use disorders. *Medical Care, 39*, 1158-1169.

Wenzel, S.L., Leake, B.D., Andersen, R.M., & Gelberg, L. (2001). Utilization of birth control services among homeless women. *American Behavioural Scientist, 45*, 14-34.

Wenzel, S.L., Turner, S.F., & Ridgely, M.S. (2004). Collaborations between drug courts and service providers: Characteristics and challenges. *Journal of Criminal Justice, 32,* 253-263.

Westaway, M.S., Seager, J.R., Rheeder, P., & Van Zyl, D.G. (2005). The effects of social support on health, well-being and management of diabetes mellitus: a black South African perspective. *Ethnicity & Health, 10*, 73-89.

Whitehead, M. (1992). The concepts and principles of equity and health. *International Journal of health services: planning administration, evaluation, 12,* 429-45.

Wilson, M. T., Atanda, R., Atkinson, D. D., & Mulvey, K. (2005). Outcomes from the Targeted Capacity Expansion (TCE) Substance Abuse Treatment Program. *Evaluation and Program Planning, 28*, 341-348.

Wilson, K., & Rosenberg, M.W. (2004). Accessibility and the Canadian health care system: squaring perceptions and realities. *Health Policy, 67*, 137-148.

Wolinsky, F.D. (1978). Assessing the effects of predisposing, enabling and illness–morbidity characteristics on health service utilization, *Journal of Health and Social Behavior, 19,* 384–396.

Woodhouse, P. (1998). People as Informants. In A. Thomas, J. Chataway, & M. Wuyts (Eds.), *Finding Out Fast: Investigative Skills for Policy and Development* (pp 127-146). London: Sage.

Wyszewianski, L. (2002). Access to care: remembering old lessons. *Health Services Research, 37*, 1441-1443.

Xie, X., Rehm, J., Single, E., & Robson, L. (1999). Methodological issues and selected economic consequences of substance abuse in Ontario. *Addiction Research*, *7,* 417-431.

Xu, K.T. (2002). Usual source of care in preventive services use: a regular doctor versus a regular site. *Health Services Research, 37*, 1509-1529.

Yanagisawa, S., Mev, V., & Wakai, S. (2004). Comparison of health-seeking behaviour between poor and better-off people after health sector reform in Cambodia. *Public Health, 118*, 21-30.

Yanagisawa, S., Oum, S., & Wakai, S. (2006). Determinants of skilled birth attendance in rural Cambodia. *Trop Med Int Health,11*, 238-251. Yin, R.K. (1994). *Case study research: design and methods*. London: Sage.

Yu, D.S.F., Lee, D.T.F., Woo, J. (2004). Psychometric testing of the Chinese version of the Medical Outcomes Study Social Support Survey (MOS-SSS-C). *Research in Nursing & Health, 27*, 135-143.

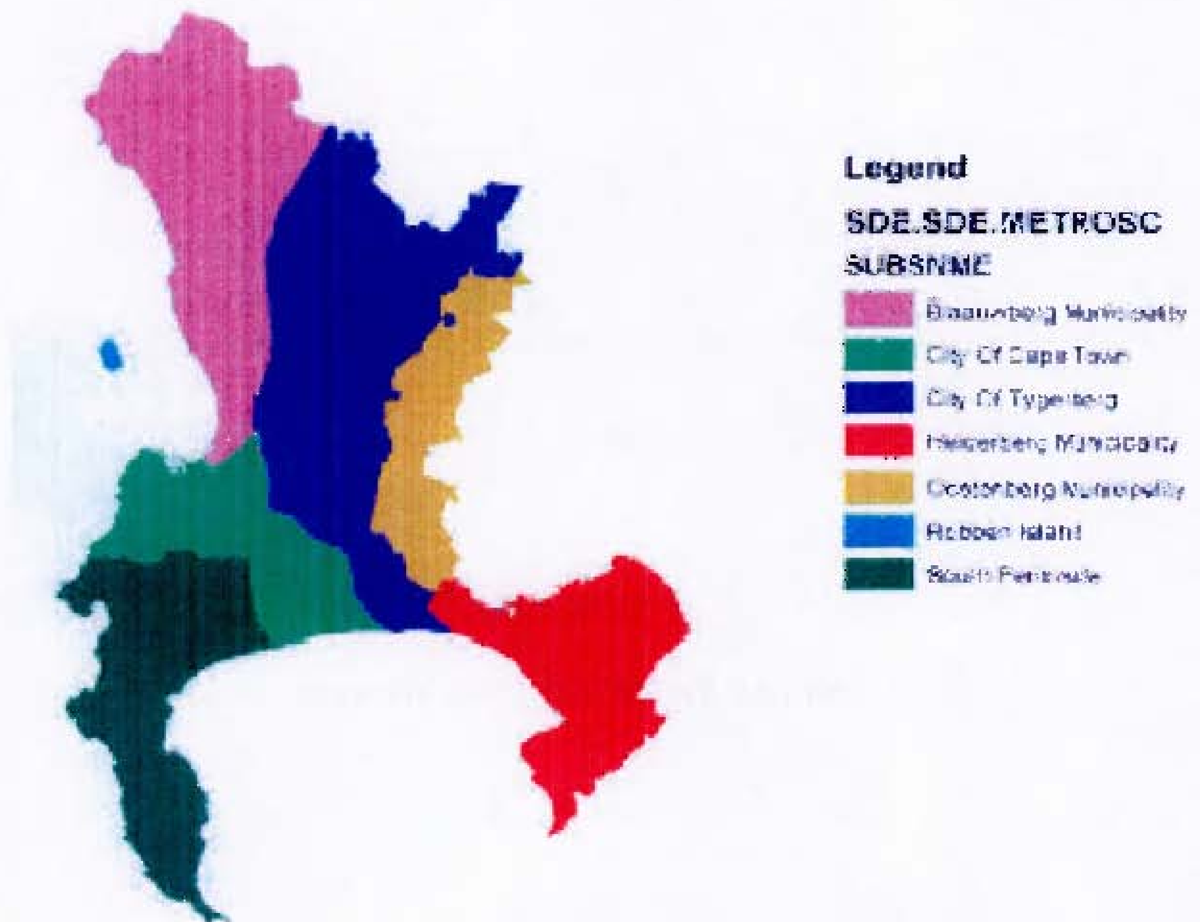
Ziersch, A.M. (2005). The health implications of access to social capital: Findings from an Australian study. *Social Science & Medicine, 61*, 2119-2131.

Zule, W.A., Lam, W.K., & Wechsberg, W.M. (2003). Treatment readiness among out-of-treatment African-American crack users. *Journal of Psychoactive Drugs, 35*, 503-510.

Zurayk, H. (2001). The meaning of reproductive health for developing countries: the case of the Middle East. *Gender and Development, 9*, 22-27.

## APPENDIX 1

## MAP OF RECRUITMENT AREAS



# APPENDIX 2 DATA COLLECTION TOOLS:

## QUICK FIELD SCREENER

READ: Hello, my name is ____________________.
I'm working on a study of alcohol and drug use for the Medical Research Council of South Africa. This study will look at alcohol and drug use amongst communities in Cape Town and the factors that prevent people from going to treatment or rehab. I would like your permission to ask you some questions that will tell us whether you might be eligible to participate in this study. Your answers will be kept strict y confidential and you do not need to give me your name.

---

IDENTIFYING INFORMATION

STAFF Initials:.......................................................................|__|__|
CLIENT ID:.......................................................................|__|__|__|__|
DATE: .......................................................................|__|__| / |__|__| / |__|__|__|__|
DD MM

---

A. SCREENER

A1. [FROM OBSERVATION IF POSSIBLE] (Are you male or female?)
FEMALE...........................................................1
MALE...........................................................2

A2. What is your date of birth? ......................|__|__|/|__|__|/|__|__|__|__|
D D M M Y YY Y

a. And how old are you now?..............................................|__|__|

18+ □

A3. (FROM OBSERVATION IF POSSIBLE. (Are you a Black, Coloured, White or a South African, or from another race or ethnic group?)

BLACK...........................................................1
COLOURED...........................................................2
ASIAN/INDIAN...........................................................3
WHITE...........................................................4
OTHER [SPECIFY]:...........................................................5

________________________________________

Black or Coloured □

A4. How well do you understand English?
Very well ..................................................1
Somewhat..................................................2
Not at all..................................................3

Very well □

A5. In a group with other people (friends/family) what language will you most likely speak in?

________________________________________

A6. **READ:** *Next, I'm going to ask you some questions about your use of alcohol and drugs*

| READ: During the last 12 months, did ... | YES ▼ | NO ▼ |
|---|---|---|

a. You <u>use larger amounts of alcohol/drugs or use them for a longer periods of time</u> than you had planned to .................................................................................................... 1 .......... 0

b. You <u>try to cut down</u> on your alcohol/drug use but were unable to do it ........ 1 .......... 0

c. You <u>spend a lot of time</u> getting alcohol/drugs, using, or recovering from their use .................................................................................................... 1 .......... 0

d. You get so high or sick from alcohol/drugs that it <u>kept you from doing work</u>, going to school or caring for children .................................................................... 1 .......... 0

e. You get so high or sick from alcohol/drugs that it <u>caused an accident</u> or put you or others in danger .................................................................................... 1 .......... 0

f. You <u>spend less time at</u> work, school, or with friends (important activities) so that you could use alcohol/drugs ............................................................................ 1 .......... 0

g. Your alcohol/drug use cause emotional or psychological problems .......... 1 .......... 0

h. Your alcohol/drug use cause problems with family, friends, work or the police .................................................................................................... 1 .......... 0

i. Your alcohol/drug use cause physical health or medical problems .......... 1 .......... 0

j. You <u>increase the amount</u> of alcohol/drug you were taking so that you could get the same effects as before .................................................................... 1 .......... 0

l. You ever <u>keep taking alcohol/ drugs to avoid withdrawal</u>, "come down" or keep from getting sick .......................................................................................... 1 .......... 0

m. You get <u>sick</u> when you stopped taking alcohol/drugs .................................. 1 .......... 0

More than 3 checked: Alcohol and drug use □

A7. How much money did you receive from all <u>legal</u> sources in the last 30 days?

<= R2500 □

RAND.................................................................................... |__|__|__|__|

<u>END OF SCREENER: All boxes must be checked for person to be interviewed!!!!</u>

[IF <u>ANY</u> BOXES (□) <u>NOT</u> CHECKED, READ:] Thank you very much for your time and participation. Let me assure you again that all of the information you have provided will be kept confidential.

[IF ALL BOXES (¬) CHECKED, READ:] Based on your answers, you may be eligible to participate in the study we are conducting to try and improve access to substance abuse treatment services in Cape Town.

Make an appointment for full interview. Record appointment: DATE________ AND TIME ________ and LOCATION where contact was made _______________.

# GENERAL INFORMED CONSENT TO TAKE PART IN THE "ACCESS TO TREATMENT" STUDY

**Introduction.** The Alcohol and Drug Abuse Research Unit of the Medical Research Council (MRC) is conducting a study in the Cape Town Metropolitan Area. The research study aims to identify factors that prevent people from getting help to change their alcohol and/or drug use.

**What We're Asking of You.** You will be one of 400 people currently receiving alcohol/ drug treatment services that we will be interviewing. Should you agree to be interviewed, you will be asked for your contact details so that we can arrange a date/time for the interview. During this interview, you will be asked questions about your treatment/rehab experience, your alcohol and drug use, your health, and other behaviors. This interview will not take more than an hour of your time.

**Risks or Discomforts.** There are some risks to taking part in this interview. Some of the questions may make you uncomfortable. We will provide referrals to help you if you are uncomfortable with any of the questions asked in the interview or if you ask us for help.

**Benefits of Taking Part.** If you take part in this interview, you will help us understand the barriers that prevent people from getting help for alcohol and drug problems. This information will be used to benefit your communities, by designing programmes that will help reduce these barriers to changing drug use. You will also help us understand how people experience alcohol and drug rehab programmes. This information will be used to improve existing rehab centres and will therefore benefit people in rehab.

**Participation is voluntary.** Being in this interview is completely voluntary. You have the right to refuse to answer any of the questions and to stop the interview at any time.

**Confidentiality.** You will interact only with staff connected with the MRC. The information you provide will be kept private. Your name will not be told to anyone and your name will never be connected with the responses you give during the interview. Information from these consent forms and your contact details will be stored in locked file cabinets. The consent forms will be destroyed after one year.

There are two exceptions to confidentiality: 1) if you tell us that you are about to hurt yourself or someone else; and 2) if you are involved in the neglect and/or abuse of a child we will report that information to the appropriate authorities.

**Who To Contact With Questions.** If you have questions about the study you can call Bronwyn Myers on 021-938-0350

**In the box below, please put your initials if you agree to give us your contact details and to take part in an interview.**

| Initials | What We're Asking of You |
|---|---|
| | I agree to give you my contact details |
| | I agree to take part in an interview |

Signing on the line below means that we have described the interview to you, asked you to take part in the interview, and given you the chance to ask questions. We will give you an unsigned copy of this form to keep.

______________________________ ______________
Participant's signature Date

______________________________ ______________
Signature of person obtaining consent Date

## CONFIDENTIAL LOCATOR INFORMATION FORM

Please read the following aloud to the person:

As part of the study in which you are participating, it is very important that we be able to contact you to arrange for an interview. May we please have the following information and your permission to use the information to find you for an interview:

1. Your full name (as it appears on your identity document)

   ______________________________

2. Your "calling name" or the name by which friends and family members know you

   ______________________________

3. Your residential address (where you stay most of the time):

   ______________________________

   ______________________________

   ______________________________

4. Your home telephone number: ______________________________

5. Your cell phone number: ______________________________

6. Your work telephone number: ______________________________

---

**READ:** Please can you also give us the names of one person who might be able to help us find you if we cannot contact you by phone. This person will not be told anything about the study in which you are participating or your alcohol/drug use.

1. Name of other contact person ______________________________
2. Residential address (where they stay most of the time):

   ______________________________

   ______________________________

   ______________________________

3. Their telephone number: ______________________________

---

Their relationship to you (family/friend/neighbour):

MRC SOUTH AFRICA

# ACCESS TO TREATMENT QUESTIONNAIRE
## Treatment phase

### IDENTIFYING INFORMATION
(To be completed by interviewer)

**STAFF INITIALS:** ........................................................|__|__|

**CLIENT ID:** ........................................................|__|__|__||__|

**SUBURB** ........................................................ ______________

**DATE:** ........................................................ |__|__| / |__|__| / |__|__|__|__|
DD MM YYYY

**START TIME:** ........................................................|__|__| : |__|__|
**(Use 24 hr clock)**

---

**Read the following aloud to the respondent:**

***In this interview I will be asking about your personal background, your alcohol and drug use, your health, your relationships and your use of treatment/rehab facilities. It is very important that you are as open and honest as possible.***

Before we begin, I'd like to remind you that:

- All of your answers will be kept confidential,
- You have the right to refuse to answer any question without having to explain why you did so, and
- If you do not recall something exactly, we would still like your best guess.

Before we begin, do you have any questions?

## SECTION A: DEMOGRAPHICS

**READ:** *First, I am going to ask you a few questions about yourself.*

A1. How old are you now?

**NOTE: ENTER AGE IN THE BOXES PROVIDED BELOW.**

AGE........................................................|__|__|

A7. Where you live now, what is the floor made of?

Mud, dung or soil ............................................1
Rough cement ............................................2
Cement with additional covering (tiles, wood, carpet, rug) ............3
OTHER ............................................99
If other, then specify: ____________________

A8. Where you live now, what is the roof made of?

Thatch/reeds/grass/palms ............................................1
Plastic sheets/cardboard ............................................2
Iron sheets/tin/metal sheet/asbestos ............................................3
Wood ............................................4
Roof tiles, bricks, cement, or slate ............................................5
OTHER ............................................99
If other, then specify: ____________________

A9. Where you live now, where do you get your drinking water from?

Collect water from rain/dam/pond/lake/river ............................1
Buy water from neighbours ............................................2
A well, hand pump, or borehole shared with the community ..........3
A well, hand pump, or borehole for family use only ......................4
An outside tap (in the yard) ............................................5
Taps inside the house ............................................6
OTHER ............................................99
If other, then specify: ____________________

A10. Where you live now, where do you get your electricity from?

Have no electricity ............................................1
Have a shared connection with others ............................................2
Illegally tap electricity off municipality wires/cables ......................3
Own paid for electricity connection ............................................4
OTHER ............................................99
If other, then specify: ____________________

A11. Where you live now, what kind of toilet do you use?

Bush, veld, no facility ........ 1
A bucket ........ 2
Outside toilet (pit latrine)shared with the general public ........ 3
Outside toilet shared only with the people you live with ........ 4
Flush toilet shared with the general public ........ 5
Flush toilet inside your room/flat/house ........ 6
OTHER ........ 99
If other, then specify: ______________________

A12. Where you live now, what is the <u>main type</u> of fuel you use to cook with?

Wood ........ 1
Paraffin ........ 2
Coal ........ 3
Gas ........ 4
Electricity ........ 5
OTHER ........ 99
If other, then specify: ______________________

A13. Do you **personally own** any of the following items?

**PLEASE NOTE: Respondent must own these items personally, they should not just be household/family possessions**

| NOTE: READ CHOICES; CIRCLE ALL THAT APPLY | YES ▼ | NO ▼ | DK ▼ | Ref ▼ |
|---|---|---|---|---|
| a. Television | 1 | 2 | -4 | -7 |
| b. Radio | 1 | 2 | -4 | -7 |
| c. Refrigerator | 1 | 2 | -4 | -7 |
| d. Electric or gas cooking stove | 1 | 2 | -4 | -7 |
| e. Sewing machine | 1 | 2 | -4 | -7 |
| f. Land phone | 1 | 2 | -4 | -7 |
| g. Cell phone | 1 | 2 | -4 | -7 |
| h. Bed | 1 | 2 | -4 | -7 |

| | | | | | |
|---|---|---|---|---|---|
| i. | Couch | 1 | 2 | -4 | -7 |
| j. | Wardrobe | 1 | 2 | -4 | -7 |
| k. | Bicycle | 1 | 2 | -4 | -7 |
| l. | Car/bakkie/taxi/truck | 1 | 2 | -4 | -7 |
| m. | Motorcycle | 1 | 2 | -4 | -7 |
| n. | House/flat | 1 | 2 | -4 | -7 |
| o. | Farm/small holding | 1 | 2 | -4 | -7 |
| p. | Empty piece of land | 1 | 2 | -4 | -7 |
| q. | Other (of value, e.g. livestock) | 1 | 2 | -4 | -7 |

If other then specify: ______________________________

A14. Who do you live with now? (HAND RESPONDENT SHOWCARD A-12)

**NOTE: READ CHOICES; CIRCLE ALL THAT APPLY**

a. No-one, I live by myself most of the time .................. 1
b. My main sexual partner (boyfriend or girlfriend) .................. 2
c. Friend/s .................. 3
d. Family/Relative/s (including children, wife, parents) .................. 4
e. OTHER .................. 99

If other, then specify: ______________________________

A15. Including yourself, how many people currently live with you *(include children)* .................. |__|__|

A16. Right now, are you <u>legally</u> employed?

**NOTE: READ CHOICES; CIRCLE ONLY ONE RESPONSE**

Employed full-time by someone else .................. 1
Employed part-time by someone else .................. 2
Self-employed full-time .................. 3
Self-employed part-time .................. 4
Unemployed, looking for work .................. 5
Unemployed, not looking for work .................. 6
Student/learner/scholar .................. 7

Retired/disabled/pensioner ........................................................8

Housewife...........................................................................9

OTHER..... ........................................................................99

If other then specify ______________________________

A17. Thinking about the last month, how much money did YOU personally earn from all LEGAL sources?

Between R0 and R500 per month.............................................1

Between R501 and R1000 per month...................................2

Between R1001 and R2500 per month.................................3

OTHER.............................................................................99

If other, then specify: ______________________________

A18. Do you have a medical aid?

YES.................................................... 1

NO .................................. 2

A19. Do you have a family member who has or has had problems with alcohol and/or drugs?

YES.................................................................1

NO ...................................................................2

DK/UNSURE ................................................... -4

## SECTION B: RISK ENVIRONMENT, SOCIAL CAPITAL AND AVAILABILITY OF SERVICES

**READ**: *Now I am going to ask about some questions about what it is like to live in your neighbourhood.*

B1. What area are you staying in now (main area of residence)________________

B2. How long have you lived in this area?

Less than 12 months ............................................ 1
12 months but less than 2 years ............................ 2
2 years but less than 3 years ................................ 3
3 years but less than 5 years ................................ 4
5 years but less than 10 years .............................. 5
10 years but less than 20 years ............................ 6
20 years or longer ................................................ 7

B3. Overall, how would you rate your community as a place to live?

Poor ........................................................................ 1
Only fair ................................................................. 2
Neither good nor bad ............................................. 3
Good ....................................................................... 4
Excellent ................................................................. 5

B4. How safe do you feel living in your neighbourhood? **(Probe: would you feel safe going out alone at night?)**

Very unsafe .............................................................. 1
Rather unsafe .......................................................... 2
Neither safe nor unsafe ........................................... 3
Rather safe .............................................................. 4
Very safe .................................................................. 5

B5. How high is crime in your neighbourhood? **(Probe: how often do people get robbed, mugged, attacked?)**

Very high .................................................................. 1
Rather high .............................................................. 2
Neither high nor low ................................................ 3
Low .......................................................................... 4
Very low ................................................................... 5

B6. How high are the levels of alcohol abuse in your community?

Very high ........................................................ 1
Rather high ...................................................... 2
Neither high nor low ........................................... 3
Low ................................................................. 4
Very low .......................................................... 5

B7. How high are the levels of drug abuse in your community?

Very high ........................................................ 1
Rather high ...................................................... 2
Neither high nor low ........................................... 3
Low ................................................................. 4
Very low .......................................................... 5

B8. How high is the level of poverty in your community?

Very high ........................................................ 1
Rather high ...................................................... 2
Neither high nor low ........................................... 3
Low ................................................................. 4
Very low .......................................................... 5

B9. How much do you agree with these statements for your neighbourhood? Please give your best guess.

| For each statement read: In my neighbourhood... | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |
| a. There aren't many places where it is safe to walk at night | 1 | 2 | 3 | 4 | 5 |
| b. A person gets mugged, assaulted, or attacked every few weeks | 1 | 2 | 3 | 4 | 5 |
| c. There are broken bottles and rubbish lying in many yards and streets | 1 | 2 | 3 | 4 | 5 |
| d. I have seen people using, selling, or buying drugs | 1 | 2 | 3 | 4 | 5 |

e. I often see drunk people on the street.....1..............2..........3..........4...........5

f. Most people do not obey the law...........1..............2..........3..........4...........5

g. I do not feel safe when I walk around by myself at night

...............................................1..............2..........3..........4...........5

h. People often damage, break or steal other people's things /property

...............................................1..............2..........3..........4...........5

i. The people with the most money are the drug dealers/merchants

...............................................1..............2..........3..........4...........5

j. There are a lot of poor people who don't have enough money for food and basic needs...............................1..............2..........3..........4...........5

**READ:** *In every community, some people get along with others while others do not. Now I would like to talk to you about* ***trust*** *in your community.*

B10. Generally speaking, can most people in your community be trusted?

YES..........................................................................1

NO ...........................................................................2

B11. In general, how much do you agree/disagree with each of these statements?

| **Social Trust** | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |

a. In this neighbourhood most people can be trusted

...............................................1..........2..........3..........4..........5

b. In this neighbourhood, someone is likely to take advantage of you if you are not careful.......................................1..........2..........3..........4..........5

c. In this neighbourhood, most people are willing to help you if you need it

...............................................1..........2..........3..........4..........5

d. In this neighbourhood, people generally do not trust each other in matters of lending/borrowing money.........................1..........2..........3..........4..........5

e. I trust people from my neighbourhood to act in my best interests

...............................................1..........2..........3..........4..........5

f. I trust people that I work with to act in my best interests

...............................................1..........2..........3..........4..........5

g. I trust people from my church/place of worship to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

h. I trust people from my own ethnic/cultural group to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

i. I trust people from other ethnic/cultural groups to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

j. I trust shopkeepers in my neighbourhood to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

k. I trust local government officials to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

l. I trust representatives of national government to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

m. I trust the police in my neighbourhood to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

n. I trust teachers in this neighbourhood to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

o. I trust nurses and doctors in this neighbourhood to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

p. I trust social workers in this neighbourhood to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

q. I trust strangers in this neighbourhood to act in my best interests

............................................................ 1.......... 2.......... 3 .......... 4.......... 5

B12. How much are people in this neighbourhood willing to help their neighbours?

Never helping.................................................. 1

Rarely helping.................................................. 2

Sometimes helping .......................................... 3

Helping most of the time ................................. 4

Always helping................................................. 5

B13. How likely is it that the community would get together to help someone at a time of crisis (e.g. illness)?

Very unlikely .................................................. 1

Unlikely.......................................................... 2

Neither likely nor unlikely ..................................... 3
Likely ..................................................................... 4
Very likely ............................................................ 5

B14. How likely is it that the community will get together to help someone (in your neighbourhood) with an alcohol or drug problem?

Very unlikely ......................................................... 1
Unlikely ................................................................ 2
Neither likely nor unlikely ..................................... 3
Likely ..................................................................... 4
Very likely ............................................................ 5

B15. How close are the relationships that people in your neighbourhood have to each other?

Not at all strong/very distant.................................. 1
Somewhat distant ................................................. 2
Neither distant nor close ....................................... 3
Somewhat strong/close........................................... 4
Very strong/close .................................................. 5

B16. How well do people in this neighbourhood get along with each other?

Not at all well/ a lot of conflict.............................. 1
Somewhat unwell- there is some conflict ............... 2
Neither well nor unwell........................................... 3
Well, conflict is rare............................................... 4
Very well, no conflict ............................................. 5

B17. Do people in this neighbourhood share the same values (beliefs)?

Strongly disagree................................................... 1
Disagree ............................................................... 2
Unsure/neutral ...................................................... 3
Agree .................................................................... 4
Strongly agree ...................................................... 5

B18. If you wanted to cut back on or stop your use of alcohol or drugs, do you know of any places you could go to for help?

YES ........................................................................................ 1
NO ........................................................................................ 2

B19. Please name all the alcohol and drug treatment/rehab centres that you have heard of **(DO NOT READ LIST ALOUD, MARK WITH AN X)**

| Cape Town Drug Counselling Centre | Akron/Loyola | Stikland Neuroclinic D | Tabankulu |
|---|---|---|---|
| SANCA | Beth Rapha | Start to Stop (Kenilworth Outpatient) | Teen challenge |
| Toevlug | Orient/Centre for Holistic Medicine | Hesketh King | The Farm |
| Ramot | Clara Clinic | The next step | Serendipity |
| Kenilworth Place | De Novo | Pathways | Tijger Clinic |
| Stepping Stones | De Novo Youth | Lifeskills | Noupoort |
| Crescent Clinic | Kaya (Kenilworth Adolescent) | Horizon Half-way House | OTHER__________ |
| FASA | Serenity | | |

B20. How far is the alcohol and drug treatment/rehab centre where people in your community usually go to from where you live? (best guess)

..........................................................km

B21. How long does it normally take to get there? (Note: best guess)

_____________mins (travel time)

B22. In your community, are there enough services available to help people with alcohol/drinking problems?

YES ........................................................................................ 1
NO ........................................................................................ 2

B23. In your community, are there enough services available to help people with drug problems?

YES ........................................................................................ 1
NO .......................................................................................... 2

B24. Have you ever had to go without alcohol or drug treatment/rehab because you (or your family) needed the money for food, clothing, housing etc.?

YES ........................................................................................ 1
NO .......................................................................................... 2

B25. Have you ever had to go without alcohol or drug treatment/rehab because taking care of someone else was more important to you?

YES ........................................................................................ 1
NO .......................................................................................... 2

B26. **READ:** *Please tell me how strongly you agree with each of these statements*

| **READ: In my community, people think that......** | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |
| a. Treatment for alcohol/drug problems is too expensive/costs too much money | 1 | 2 | 3 | 4 | 5 |
| b. There aren't enough alcohol and drug rehab services for my community | 1 | 2 | 3 | 4 | 5 |
| c. Lots of people need alcohol and drug treatment/rehab services in my community | 1 | 2 | 3 | 4 | 5 |
| d. There isn't enough help for people with alcohol and drug problems in my community | 1 | 2 | 3 | 4 | 5 |
| e. People in my community can't afford (pay for) transport to get to alcohol/drug treatment | 1 | 2 | 3 | 4 | 5 |
| f. Most people in my community don't know where to go for help with alcohol or drug problems | 1 | 2 | 3 | 4 | 5 |
| g. For my community, it is too far to travel to the alcohol and drug treatment /rehab services | 1 | 2 | 3 | 4 | 5 |

h. Most alcohol and drug treatment services do not seem to help people change their drinking or drug use ............ 1 ............... 2 ............... 3 ........... 4 ............. 5

i. People can't get to alcohol/drug treatment/rehab because transport is too expensive ................................. 1 ............... 2 ............... 3 ......... 4 ............. 5

j. The waiting list to get into alcohol/drug treatment/rehab is too long
........................................... 1 ............... 2 ............... 3 .......... 4 .......... 5

k. The operating times of the alcohol and drug rehab services are inconvenient
........................................... 1 ............... 2 ........... 3 .......... 4 ............. 5

l. Most treatment/rehab services do not cater for my culture and language
........................................... 1 ............... 2 ........... 3 .......... 4 ............. 5

m. Most people in my community do not have their own transport to get to rehab centres ...................................... 1 ............... 2 ........... 3 .......... 4 ............. 5

n. In my community, buying food is more important than paying for treatment/rehab
........................................... 1 ............... 2 ........... 3 .......... 4 ............. 5

o. Alcohol/drug treatment doesn't seem to work
........................................... 1 ............... 2 ........... 3 .......... 4 ............. 5

## SECTION C: STIGMA, ATTITUDES AND BELIEFS ABOUT SUBSTANCE ABUSE AND TREATMENT

**READ:** *Now I am going to ask about how people in your community treat people with alcohol and drug problems.*

C1. Please tell me how strongly you agree or disagree with each of the following statements.

| READ: People in my community think that...... | Strongly Disagree ▼ | Disagree ▼ | Unsure ▼ | Agree ▼ | Strongly Agree ▼ |
|---|---|---|---|---|---|
| a. Drug addicts are dangerous | 1 | 2 | 3 | 4 | 5 |
| b. Drug addicts cannot be trusted | 1 | 2 | 3 | 4 | 5 |
| c. Drug addicts are to blame for their problems | 1 | 2 | 3 | 4 | 5 |
| d. Drug addicts cannot keep a job | 1 | 2 | 3 | 4 | 5 |
| e. Only immoral people use drugs | 1 | 2 | 3 | 4 | 5 |
| f. Drug addicts never get better | 1 | 2 | 3 | 4 | 5 |
| g. Drug addicts could pull themselves together if they wanted to | 1 | 2 | 3 | 4 | 5 |

h. Only weak people become drug addicts..... 1......... 2.......... 3........... 4........ ......... 5

i. Alcoholics are dangerous.............. .......... 1......... 2.......... 3........... 4........ ......... 5

j. Alcoholics cannot be trusted ......... .......... 1......... 2.......... 3........... 4........ ......... 5

k. Alcoholics are to blame for their own problems

.................................................. .......... 1......... 2.......... 3........... 4........ ......... 5

l. Alcoholics cannot keep a job......... .......... 1......... 2.......... 3........... 4........ ......... 5

m. Only immoral people become alcoholics.... 1......... 2.......... 3........... 4........ ......... 5

n. Alcoholics never get better........... .......... 1......... 2.......... 3........... 4........ ......... 5

o. Alcoholics could pull themselves together if they wanted to

.................................................. .......... 1......... 2.......... 3........... 4........ ......... 5

C2. **READ:** Now I want to know about your community's beliefs about treatment for alcohol and drug problems. If you are unsure of your answer, please give your best guess.

| Read: People in my community think that... | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |

a. Only White people go to treatment/rehab...... 1......... 2.......... 3........... 4........ ......... 5

b. Men need treatment more than women........1.......... 2.............. 3......... 4...... ............ 5

c. My community thinks that treatment/rehab is only for people with no self-control or will power.............................................. 1.......... 2........... 3......... 4...... ............ 5

d. My community thinks that treatment/rehab hardly ever helps people with alcohol/drug problems.................. .......... 1......... 2.......... 3........... 4........ ......... 5

e. My community disapproves of people who go to treatment/rehab

.................................................. .......... 1......... 2.......... 3........... 4........ ......... 5

f. My community thinks that treatment/rehab could improve a person's health

.................................................. .......... 1......... 2.......... 3........... 4........ ......... 5

g. People in my community think that people who go to rehab end up using more alcohol/ drugs than they did before............1.......... 2.............. 3......... 4...... ............ 5

h. People in my community think that the things people say in treatment/rehab are not kept confidential.......................... .......... 1......... 2.......... 3........... 4........ ......... 5

i. People in my community think that the rehab centres won't understand the kinds of problems they face...................... .......... 1......... 2.......... 3........... 4........ ......... 5

j. People in my community think that treatment/rehab for alcohol and drug problems does not work ............................ .......... 1......... 2.......... 3........... 4........ ......... 5

k. My community thinks that treatment/rehab could improve family relationships

.............................................................. 1.......... 2........ ......3............4........ ..........5

l. People in my community think that rehab only works if people get treatment away from their communities.................. .......... 1.......... 2........ ......3............4........ ..........5

## SECTION D: PAST NEED FOR ALCOHOL AND DRUG ABUSE TREATMENT

D1. **READ:** *Next I am going to ask some questions about your use of alcohol and drugs* ***before you went to treatment/rehab***.

| **Type of drug**<br>ASK D1a FOR EACH ROW. IF RESPONDENT ANSWERS "NO" GO TO NEXT ROW. IF RESPONDENT ANSWERS "YES" TO D1a, THEN ASK D1b-f. | **D1a. Have you used this drug before** | **D1b. Have you used this drug at least 1 per year** | **D1c. Used this drug on a monthly basis** | **D1d. Used this drug on a weekly basis** | **D1e. Used this drug a couple of times/ week** | **D1f. Used this drug almost every day** |
|---|---|---|---|---|---|---|
| *Alcohol*<br>(Ʊ to next row) | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Cannabis/dagga/ganja* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Mandrax/white pipe* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Rock/Crack cocaine* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Cocaine powder* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Methamphetamine (Tik/ Choef)* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Heroin (Thai white, H, smack, Brown)* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Ecstasy (E/X)* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |
| *Tranquilizers & pain meds (used without a prescription)* | YES.........1<br>NO...........2Ʊ | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 | YES...1<br>NO.....2 |

D2. How old were you when you first started using

Alcohol (beyond a sip)........................................ |__|__| years

Drugs........................................................... |__|__| years

DK/UNSURE .................................................................................-4

D3. *I want to go over a list of problems related to alcohol or drug use (problem severity)*

| **READ**: When was the last time that | In the past month ▼ | 2-12 months ago ▼ | 1 or more years ago ▼ | Never ▼ |
|---|---|---|---|---|
| a. You took drugs or drank alcohol in larger amounts or over a longer period than intended? | 1 | 2 | 3 | 4 |
| b1. You tried, unsuccessfully, to cut down or stop using alcohol or drugs? | 1 | 2 | 3 | 4 |
| b2. You wanted to stop or cut down on your alcohol or drug use | 1 | 2 | 3 | 4 |
| c. You <u>spent a lot of time</u> using alcohol/drugs, doing whatever you had to do to get the drug, or recovering from using the drug (being intoxicated, high, or hungover) | 1 | 2 | 3 | 4 |
| d. You <u>started to use alcohol/drugs instead of</u> working, spending time with your friends and family, or doing other activities | 1 | 2 | 3 | 4 |
| e. You <u>kept on using</u> alcohol/drugs even though the drugs caused you <u>psychological</u> problems, like making you depressed | 1 | 2 | 3 | 4 |
| f. You <u>kept on using alcohol/drug</u> even though it <u>caused you health problems</u> or made a health problem/illness worse | 1 | 2 | 3 | 4 |
| g1. You <u>needed to use more</u> alcohol/drugs to get the feeling you got the first time you used the drug | 1 | 2 | 3 | 4 |
| g2. When you used the <u>same amount</u> of alcohol/drug, it had much <u>less effect</u> than before | 1 | 2 | 3 | 4 |
| h1. You found you had <u>withdrawal symptoms</u> (felt sick) when you cut down or stopped using alcohol/drug (e.g. shakes, nausea) | 1 | 2 | 3 | 4 |

h2. You used alcohol/drugs to stop yourself feeling sick from withdrawal symptoms, so that you would feel better? ................................1..............2..............3..........4

i1. You missed work or school because you were high or very hung over? ................................1..............2..............3..........4

i2. You did a bad job at work, failed subjects at school, or did not take proper care of your children because of alcohol/drug use ..........1..............2..............3..........4

j. You used alcohol/drugs in a situation where it might have been dangerous to be using? (e.g. driving while high)..........1..............2..............3..........4

k. Your alcohol/drug use got you into trouble with the law or the police ................................1..............2..............3..........4

l1. Your use of drugs caused problems with other people (family, friends or people at work) ................................1..............2..............3..........4

l2. You got into physical fights or arguments because of your use of drugs ................................1..............2..............3..........4

**READ ALOUD:** *The next set of questions focus on your thoughts, feelings and actions **BEFORE** you last went to treatment/rehab. Think about where you were living, where you were working, and with whom you were friends before you last went to treatment.*

D4. (HAND RESPONDENT A CALENDAR). Think about the most recent time you went to treatment/rehab. When did you start going to this alcohol/drug treatment/rehab? *(Ask respondents to trace the start of rehab back on a calendar if necessary)*

YEAR ..............................|__|__|__|__|

MONTH ..............................|__|__|

DAY ..............................|__|__|

**READ ALOUD:** Thinking about the time just before you most recently went to rehab, that is the time just before (**give date of start of rehab in D4**), please tell me: Who were you living with? Where were you staying? Where were you working? Who did you hang out with?

***Now, thinking about this time just before you started going to treatment/rehab, please answer the following questions:***

D5. **READ:** On a scale of 1 (Stronglydisagree) to 10 (Strongly agree) Please tell me how much you agree with the following statements. **[ CIRCLE THE RESPONSE]**

a. The way most people view alcohol and drug users affects me personally

1..........2........3........4........5........6........7........ 8........ 9........ 10

b. I worry that my behaviour will be viewed by others as that of a drinker/drug user

1..........2........3........4........5........6........7........ 8........ 9........ 10

c. When mixing with people who do not use alcohol/drugs, I feel that they are judging me because of my (past) use of alcohol/drugs

1..........2........3........4........5........6........7........ 8........ 9........ 10

d. I often think that people discriminate against alcohol and drug users

1..........2........3........4........5........6........7........ 8........ 9........ 10

e. Most people judge alcohol and drug users on the basis of their alcohol and drug use (rather than who they are as people)

1..........2........3........4........5........6........7........ 8........ 9........ 10

f. Being a (ex-) drinker/drug user influences how drinkers/drug users act with me

1..........2........3........4........5........6........7........ 8........ 9........ 10

g. I always think about the fact that I am a (ex-) drinker/drug user when I mix with people who do not use alcohol/drugs

1..........2........3........4........5........6........7........ 8........ 9........ 10

h. Being an (ex) alcohol/drug user influences how people behave towards me

1..........2........3........4........5........6........7........ 8........ 9........ 10

i. Most people are prejudiced against drinkers/drug users

1..........2........3........4........5........6........7........ 8........ 9........ 10

j. Most people have a problem viewing alcohol/drug users as equals

1..........2........3........4........5........6........7........ 8........ 9........ 10

D6. Before you went to treatment/rehab did you think you had an alcohol or drug problem?

YES, I HAD A PROBLEM ........................................................ 1
NO PROBLEM ........................................................................ 0

D7. Before you went to treatment/rehab, how serious a problem did you think your alcohol/drug use was?

Not at all serious........................................................................1
Slightly serious..............................................................................2
Moderately serious..........................................................................3
Considerably serious........................................................................4
Extremely serious.............................................................................5

D8. Before you went to treatment/rehab, did you think you needed help/ treatment/rehab to change your alcohol and/ or drug use?

YES.......................................................................................................1
NO.........................................................................................................0

D9. Before you went to treatment did other people (eg family/friends) suggest that you needed or should get help to change your use of alcohol and/or drugs?

YES.......................................................................................................1
NO.........................................................................................................0

D10. Before you went to treatment/rehab, did you want help (e.g. treatment/rehab) to change your use of alcohol and/or drugs?

YES.......................................................................................................1
NO.........................................................................................................0

## SECTION E: PROBLEM RECOGNITION, MOTIVATION AND SELF-EFFICACY TO CHANGE SUBSTANCE USE

**READ ALOUD**: *Thinking about the time just before you started going to treatment/rehab that is, the time before (**give date person started treatment**), please answer the following questions:*

E1. Thinking about the time just before you started treatment/rehab, that is, the time before (**give date person started treatment**).

| Could you avoid using alcohol/drugs when ... (That is not use drugs when...) **AASE** | Strongly disagree | Disagree | Neutral/ Unsure | Agree | Strongly agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |
| a. You had withdrawal symptoms (shakes, nausea) | 1 | 2 | 3 | 4 | 5 |
| b. You had a headache | 1 | 2 | 3 | 4 | 5 |
| c. You were feeling sad or depressed | 1 | 2 | 3 | 4 | 5 |
| d. You wanted to relax | 1 | 2 | 3 | 4 | 5 |
| e. You were concerned about someone | 1 | 2 | 3 | 4 | 5 |
| f. You were very worried | 1 | 2 | 3 | 4 | 5 |
| g. You wanted to have just a drink/ taste | 1 | 2 | 3 | 4 | 5 |
| h. You were offered a drink or drugs by others | 1 | 2 | 3 | 4 | 5 |
| i. You had dreams about alcohol/drugs | 1 | 2 | 3 | 4 | 5 |
| j. You wanted to test your willpower or self-control over alcohol and/or drugs | 1 | 2 | 3 | 4 | 5 |
| k. You felt a (physical) need or craving for alcohol and/or drugs (eg you wanted them so badly you could taste them) | 1 | 2 | 3 | 4 | 5 |
| l You felt tired or had trouble sleeping | 1 | 2 | 3 | 4 | 5 |
| m. You were in pain | 1 | 2 | 3 | 4 | 5 |
| n. You were frustrated | 1 | 2 | 3 | 4 | 5 |
| o. You saw others drinking or using drugs at a bar, shebeen, club, bash or a party | 1 | 2 | 3 | 4 | 5 |
| p. You felt like everything was going wrong for you | 1 | 2 | 3 | 4 | 5 |
| q. People you used to drink or use drugs with put pressure on you to drink or use drugs | 1 | 2 | 3 | 4 | 5 |
| r. You felt angry inside | 1 | 2 | 3 | 4 | 5 |
| s. You suddenly had a strong desire/need to drink or use drugs | 1 | 2 | 3 | 4 | 5 |
| t. You were excited or celebrating | 1 | 2 | 3 | 4 | 5 |

E2. Thinking about the time just before you started treatment/rehab (***Give date provided in D4 again***) how much do you agree with these statements:

| **READ:** At the time just before you started treatment/rehab.... **(Please emphasize these questions refer to time before went to treatment)** | Strongly disagree ▼ | Disagree ▼ | Unsure ▼ | Agree ▼ | Strongly Agree ▼ |
|---|---|---|---|---|---|

a. You wanted to make changes in your use of alcohol/drugs ........ 1.......2.......3.......4.......5

b. You wondered whether you were an addict or an alcoholic ........ 1.......2.......3.......4.......5

c. You felt that if you didn't change your alcohol/drug use, your problems would get worse ........ 1.......2.......3.......4.......5

d. You had already started making some changes in your use of alcohol/drugs ........ 1.......2.......3.......4.......5

e. You had been drinking/using drugs too much, but you had managed to change that ........ 1.......2.......3.......4.......5

f. You wondered if your use of alcohol/drugs was hurting other people ........ 1.......2.......3.......4.......5

g. You had a drinking/drug problem ........ 1.......2.......3.......4.......5

h. You were not just thinking about changing your use of alcohol/drugs, you were already doing something about it ........ 1.......2.......3.......4.......5

i. You had already changed your use of alcohol/drugs and were looking for ways to stop slipping back to the old pattern of use ........ 1.......2.......3.......4.......5

j. You had a serious problem with alcohol/drugs ........ 1.......2.......3.......4.......5

k. You wondered if you were in control of your alcohol and/or drug use. ........ 1.......2.......3.......4.......5

l. Your alcohol/drug use was causing a lot of harm ........ 1.......2.......3.......4.......5

m. You were actively doing things to cut down or stop your use of alcohol/drugs ........ 1.......2.......3.......4.......5

n. You wanted help to keep from going back to the alcohol/drug problem that you had had in the past ........ 1.......2.......3.......4.......5

o. You knew that you had an alcohol/drug problem........ 1.......2.......3.......4.......5

p. There are times when you wondered whether you drank/drugged too much ........ 1.......2.......3.......4.......5

q. You were an alcoholic and/or a drug addict. ........ 1.......2.......3.......4.......5

r. You were working hard to change your use of alcohol/drugs

........................................................ 1..........2..........3..........4.........5

s. You made some changes to your alcohol/drug use and you wanted help to keep from going back to the way you used to drink/use drugs

........................................................ 1..........2..........3..........4.........5

E3. [TCU problem recognition]

| **READ: At the time <u>just before you started</u> treatment/rehab, your alcohol/drug use was ...** | Strongly disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |

a. A problem for you ........................................ 1..........2..........3..........4..........5

b. More trouble than it was worth ........................ 1..........2..........3..........4..........5

c. Causing problems with the law.......................... 1..........2..........3..........4..........5

d. Causing problems in thinking or doing your work .... 1..........2..........3..........4..........5

e. Causing problems with your family or friends.......... 1..........2..........3..........4..........5

f. Causing problems in finding or keeping a job.......... 1..........2..........3..........4..........5

g. Causing problems with your health ...................... 1..........2..........3..........4..........5

h. Making your life become worse and worse ............ 1..........2..........3..........4..........5

i Going to cause your death if you did not stop soon 1..........2..........3..........4..........5

E4. [TCU desire for help. treatment readiness]

| **READ: At the time <u>just before you started</u> <u>treatment/rehab</u>**...*(that is GIVE DATE)* | Strongly disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |

a. You needed help in dealing with your drug/alcohol use

........................................................ 1..........2..........3..........4..........5

b. It was urgent that you got help immediately for your alcohol/drug use

........................................................ 1..........2..........3..........4..........5

c. You were tired of the problems caused by alcohol/drugs

........................................................ 1..........2..........3..........4..........5

d. You were prepared to give up your friends and hangouts to solve your alcohol/drug problems........................................ 1..........2..........3..........4..........5

e. You could stop using alcohol/drugs without any help

........................................................ 1..........2..........3..........4..........5

f. Your life had gone out of control ........................ 1..........2..........3..........4..........5

g. You wanted to get your life sorted/ straightened out 1..........2..........3..........4..........5

h. You had too many outside responsibilities to be in treatment/rehab

............................................................ 1..........2...........3..........4. ........5

i. The treatment/rehab programme seemed too demanding for you

............................................................ 1..........2...........3..........4. ........5

j. You thought treatment/rehab would be your <u>last</u> chance to solve your alcohol/drug problem............................................. 1..........2...........3..........4. ........5

k. You thought treatment/rehab would not be very helpful to you

............................................................ 1..........2...........3..........4. ........5

l. You planned to stay in treatment/rehab for a while.. 1..........2...........3..........4. ........5

m. You went to treatment/rehab because someone else made you come..

............................................................ 1..........2...........3..........4. ........5

n. You believed that treatment/rehab could really help you

............................................................ 1..........2...........3..........4. ........5

o. You wanted to be in a treatment/rehab programme

............................................................ 1..........2...........3..........4. ........5

## SECTION F: SOCIAL SUPPORT AND MENTAL HEALTH

F1. <u>Thinking about the time just before you started treatment/rehab</u>, **that is**, the time before (**give date in D4 that the person started treatment**)..

| **ASK:** *How often did you have…* | None of the time | A little of the time | Some of the time | Most of the time | All of the time |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |

a. Someone that <u>listened</u> when you needed to talk

.............................................1 .... ..........2..... ...........3...........4..............5

b. Someone that <u>gave you information</u> to help you understand a situation

.............................................1 .... ..........2..... ...........3...........4..............5

c. Someone that <u>gave you good advice</u> about a problem

.............................................1 .... ..........2..... ...........3...........4..............5

d. Someone that <u>talked to you</u> about your problems

.............................................1 .... ..........2..... ...........3...........4..............5

e. Someone whose advice you really wanted

.............................................1 .... ..........2..... ...........3...........4..............5

f. Someone that you could share your most private worries with

..............................................1 .... ..........2..... ...........3...........4..............5

g. Someone that you could ask for advice about how to deal with a personal problem

..............................................1 .... ..........2..... ...........3...........4..............5

h. Someone that would understand your problems

..............................................1 .... ..........2..... ...........3...........4..............5

i. Someone that would help you if you were forced to stay in bed

..............................................1 .... ..........2..... ...........3...........4..............5

j. Someone that would take you to the doctor if you needed it

..............................................1 .... ..........2..... ...........3...........4..............5

k. Someone that would prepare your meals if you were unable to do it

..............................................1 .... ..........2..... ...........3...........4..............5

l. Someone that would help with daily chores if you were sick

..............................................1 .... ..........2..... ...........3...........4..............5

m. Someone that would show you love and affection

..............................................1 .... ..........2..... ...........3...........4..............5

n. Someone who loves you and made you feel wanted

..............................................1 .... ..........2..... ...........3...........4..............5

o. Someone who hugs you....................1 .... ..........2..... ...........3...........4..............5

p. Someone to have a good time with...1 .... ..........2..... ...........3...........4..............5

q. Someone to relax with ......................1 .... ..........2..... ...........3...........4..............5

r. Someone to do something fun with...1 .... ..........2..... ...........3...........4..............5

s. Someone to do things with to help you get your mind off your problems

..............................................1 .... ..........2..... ...........3...........4..............5

F2. Thinking about the time just before you started treatment/rehab (TCU support)

| **READ: At the time just before you started treatment/rehab**...*(that is GIVE DATE)* | Strongly disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |

a. You have people close to you who motivate and encourage you to stay clean/not drink........................................................................ 1..........2............3..........4. .........5

b. You have close family who help you stay away from alcohol/drugs

........................................................................ 1..........2............3..........4. .........5

c. You have good friends who do not use alcohol/drugs

........................................................................ 1..........2............3..........4. .........5

d. You have people close to you who can always be trusted

.................................................................................. 1..........2..........3..........4..........5

e. You have people close to you who understand your situation and problems

.................................................................................. 1..........2..........3..........4..........5

f. You live in situations where alcohol/drug use is common

.................................................................................. 1..........2..........3..........4..........5

g. You have people close to you who expect you to make positive changes in your life.......................................................... 1..........2..........3..........4..........5

h. You have people close to you who help you believe in yourself (feel confident)

.................................................................................. 1..........2..........3..........4..........5

i. You have people close to you who respect you and your efforts in treatment/rehab

.................................................................................. 1..........2..........3..........4..........5

F3. **READ:** *The next questions are about your emotions. How much do you agree with these statements.* [TCU depression and anxiety]

| **READ:** ***In the <u>3 months before</u> you went to treatment/rehab (give dates), you ...*** | Strongly disagree ▼ | Disagree ▼ | Neutral ▼ | Agree ▼ | Strongly Agree ▼ |
|---|---|---|---|---|---|
| a. Felt sad or depressed | 1 | 2 | 3 | 4 | 5 |
| b. Had thoughts of committing suicide | 1 | 2 | 3 | 4 | 5 |
| c. Felt lonely | 1 | 2 | 3 | 4 | 5 |
| d. Felt uninterested in life | 1 | 2 | 3 | 4 | 5 |
| e. Felt extra tired | 1 | 2 | 3 | 4 | 5 |
| f. Worried a lot | 1 | 2 | 3 | 4 | 5 |
| g. Had trouble sitting still for long | 1 | 2 | 3 | 4 | 5 |
| h. Had trouble sleeping | 1 | 2 | 3 | 4 | 5 |
| i. Felt anxious or nervous | 1 | 2 | 3 | 4 | 5 |
| j. Had trouble concentrating or remembering things | 1 | 2 | 3 | 4 | 5 |
| k. Felt afraid of certain things, like lifts, crowds, or going out alone | 1 | 2 | 3 | 4 | 5 |
| l. Felt tense or wound-up | 1 | 2 | 3 | 4 | 5 |
| m. Felt tightness or tension in your muscles | 1 | 2 | 3 | 4 | 5 |

## SECTION G: UTILIZATION OF AOD TREATMENT SERVICES AND BARRIERS

**READ:** *Now, I'm going to ask you some questions about your use of different types of services for alcohol and drug problems and your experience of treatment/rehab.*

G1. Have you received treatment treatment for an alcohol/drug problem in the last 12 months?

YES........................................................................1

NO..........................................................................0

G2. How many times have you receeived treatment for AOD problems?

Never.......................................................................1
Only once ................................................................2
2 times.....................................................................3
3 times ....................................................................4
4 or more times ........................................................5

G3. **READ** A lot of people list reasons that make it difficult for them to get into a treatment/rehab programme. *Think back to the time just before you went to treatment/rehab (give date in D4).*

| **ASK**: At that time, what were the factors that made it more difficult for you to go to treatment/rehab | Strongly disagree | Disagree | Neutral | Agree | Strongly Agree |
|---|---|---|---|---|---|
| | ▼ | ▼ | ▼ | ▼ | ▼ |

***Treatment concerns***

1. I didn't want to be told to stop drinking or using drugs
   ............................................ 1..........2..........3..............4...... ......5

2. I didn't want somebody telling me what to do about my life
   ............................................ 1..........2..........3..............4.............5

3. I was afraid of what kind of treatment they would give me
   ............................................ 1..........2..........3..............4.............5

4. I was afraid of what might happen in treatment
   ............................................ 1..........2..........3..............4.............5

5. I didn't like to talk in groups............... 1............ 2............ 3............... 4............. 5

6. I was worried about the bad feelings of going through withdrawal from alcohol/drugs ............................................... 1............ 2............ 3............... 4............. 5

7. It seemed like too much trouble to go for help ............................................... 1............ 2............ 3............... 4............. 5

8. I didn't want to go to AA/NA or other self-help groups ............................................... 1............ 2............ 3............... 4............. 5

9. I was afraid of the people I might see there ............................................... 1............ 2............ 3............... 4............. 5

10. I didn't like to talk about my personal life with other people ............................................... 1............ 2............ 3............... 4............. 5

*Treatment utility*

11. I didn't think it will do any good ......... 1............ 2............ 3............... 4............. 5

12. I was afraid that I would fail or that it wouldn't help me ............................................... 1............ 2............ 3............... 4............. 5

*Affordability*

13. I didn't have the money to pay for treatment/rehab ............................................... 1............ 2............ 3............... 4............. 5

14. I had no money to pay for transport to get to rehab ............................................... 1............ 2............ 3............... 4............. 5

15. I had no transport to get there .......... 1............ 2............ 3............... 4............. 5

16. I had no-one to take care of my children while I was in rehab ............................................... 1............ 2............ 3............... 4............. 5

17. I had no medical aid to pay for treatment/rehab ............................................... 1............ 2............ 3............... 4............. 5

*Delays in accessing treatment*

18. I was put on a long waiting list to get into treatment/rehab ............................................... 1............ 2............ 3............... 4............. 5

19. I had to wait for a report from a social worker before I could go to rehab ............................................... 1............ 2............ 3............... 4............. 5

20. The treatment/rehab centres were far away from where I live ..... ............................................... 1............ 2............ 3............... 4............. 5

**Thank you for participating in this study.** **END TIME:|__|__| : |__|__|**

## APPENDIX 3 : Resource list for Access to Treatment Study

| Resource | Name | Address | Tel no |
|---|---|---|---|
| **Substance abuse services** | *Alcoholics Anonymous*<br>Self-help programme where recovering alcoholics support each other | See attached list of meetings | 510 2288 |
| | *Narcotics Anonymous*<br>Self-help programme where recovering drug addicts support each other | See attached list for meetings | 0881 300327 |
| | *Cape Town Drug Counseling Centre*<br>Non-profit outpatient drug treatment centre. Provides prevention, training and treatment services. | 1 Roman Rd, Observatory | 447 8026 |
| | *SANCA Centres:*<br>Non-profit outpatient services. Provides prevention and early intervention services for substance users and their families | Head office: Tygerberg Centre, Voortrekker Rd Bellville | 945 4080 |
| | Athlone Alcohol and Drug Centre | P.O. Box 528<br>Klipfontein Road<br>Gatesville | (021) 638 5116 |
| | Atlantis Alcohol and Drug Centre | C/o Sun and Rotterdam Street, Atlantis | 572 7461 |
| | Guguletu Alcohol and Drug Centre | Saartjie Baartman Centre<br>Klipfontein Road Surrey Estate | (021) 638 5116 |
| | Khayelitsha satelite office | E505 scott street<br>Khayelitsha,7784 | (021) 364 5510 |
| | Mitchells Plain Alcohol and Drug Centre | P.O. Box 761 Mitchells Plain | (021) 397 4617 |
| | Paarl Alcohol and Drug Centre | P.O. Box 249<br>Paarl | (021) 872 5050 |
| | Tygerberg Alcohol and Drug Centre | P.O. Box 1431<br>Sanlamhof | (021) 919 9557/8 |
| | *Stepping Stones*<br>For-profit inpatient substance abuse treatment centre. Provides substance abuse and mental health services to individuals and families | 9 Vlomhoff Rd, Kommetjie | 783 4230 |
| | *Crescent Clinic*<br>For-profit inpatient substance abuse treatment centre. Provides substance abuse and mental health services to individuals and | 24 Crescent Rd, Kenilworth | 762 7666 |

| | | | |
|---|---|---|---|
| | families | | |
| | *Kenilworth Place*<br>For-profit inpatient substance abuse treatment centre. Provides substance abuse and mental health services to individuals and families | 32 Kenilworth Rd, Kenilworth | 763 4501 |
| | *De Novo*<br>State rehabilitation centre for alcohol and drug use | Old Paarl Rd, Kraaifontein | 988 1138 |
| | *Ramot*<br>Non-profit inpatient substance abuse treatment centre | 54 Toner Street Parow | 939 2033 |
| | *Stickland Neuro D*<br>State, alcohol rehabilitation unit | Stikland Hospital | 9191110 |
| **Detoxification Services** | Stellenbosch Hospital | Private Bag X 5027<br>Stellenbosch | 887 0310 |
| | Paarl Hospital | Private Bag X 3012 Paarl | 872 1711 |
| | Karl Bremer Hospital | Private Bag X 15 Parow | 918 1511 |
| | GF Jooste Hospital | P.O Box 66<br>Duinefontein Rd Manenberg | 690 100 |
| | Hottentots Holland Hospital | Private Bag X 2<br>Somerset West | 852 1334 |
| **Mental health/substance abuse assessment at primary health care clinics** | *Greenpoint Community Health Centre*<br>(Mon, Weds, Thurs) | Portwood Road<br>Green Point | 421-0288 |
| | *Woodstock Community Health Centre*<br>(Wed) | Mountain Rd. Woodstock<br>7925 | 460 9115<br>460-9100 |
| | *Maitland MLC*<br>(Thurs) | 2 Norfolk Rd.<br>Maitland | 511-6272<br>511-2523 |
| | *Kensington CHC*<br>(Mon, Tues) | 6th Ave. Kensington | 593-0378<br>593-1150\1 |
| | *Dr Abdurahman CHC* | Ebbenhout st. Kewtown<br>Athlone | 637-9071\2\3 |
| | *Heideveld CHC* | Heideveld Rd.<br>Heideveld Athlone | 637-8036\7\8<br>637 8033 |
| | *Hanover Park CHC* | 9 Hanlyn Walk/Hanover Park Avenue Hanover Park | 692-1240\1\2\3 |
| | *Saxonsea MLC* | Cnr Hermes & Grouvener Ave.<br>Saxonsea | 572-3508 |
| | *Mamre CHC* | Cnr. Liederman & Adam St. | 576-1175 |

| | Facility | Address | Telephone |
|---|---|---|---|
| | | Mamre | |
| | Tableview MLC | South Rd. Tableview, | 557-1065\6 |
| | Goodhope CHC | Justin st Ysterplaat | 511-8606 |
| | ProteaPark MLC | Gardenia Street Atlantis | 572-4696 |
| | Westfleur Hospital | Westfleur Shopping centre Atlantis | 571-8040 |
| | Reed Street CHC | Reed St. Bellville | 946-3790\1\2 |
| | Bellville CHC | KasselsvleiRd. Bellville South | 951-2326\7\8 |
| | Groenvallei MLC | Midmar st. Groenvallei Bellville | 919-5872<br>919-8391 |
| | Durbanville CHC (Morning Star) | De Villiers st. Durbanville | 970 3170 |
| | Mfuleni CHC | Church St. Mfuleni | 954-2235<br>909 2755/6 |
| | Belhar CHC | Chestnut Way Belhar 7490 | 952-1010 |
| | Belhar MLC | St Vincent Drive Ext.13 Belhar 7490 | 952-2160 |
| | Delft CHC | Main Rd./Voorbrug Rd Delft 7100 | 594-2228\35 |
| | Bishop Lavis CHC | Lavis Drive Bishop Lavis | 934-6050 |
| | Vanguard CHC | Citrus & Candlewood street Bonteheuwel | 694-5540/1/3 |
| | Parow CHC | Smith Str Parow | 9388037/8253 |
| | Elsies River CHC | Cnr. Halt&29th Ave Elsies River | 931-0211\2\3 |
| | Ravensmead CHC | Florida Street Ravensmead | 936 8758 |
| | Kleinvlei CHC | C/O Albert Philander& Melbosstrand Kleinvlei, | 900 4053<br>904 1414 |
| | Brackenfell MLC | Paradys St. Brackenfell, | 980 1284/5 |
| | Kraaifontein CHC | 6th Ave Kraaifontein | 987 0080 |
| | Scottsdene MLC | Eon Ave Scottsdene, | 980 6243 |
| | Kuilsriver MLC | Carinus St Kuilsriver | 900 1909 |
| | Sarepta MLC | 123 Rietvlei Rd Kuilsrivier, | 900-1556 |
| | CHC | Lwandle Rd Site B Khayelitsha | 361 3470 |
| | Mapongwana CHC | Steve Biko Rd. Harare | 361-3353 |
| | Hout Bay CHC | Karbonkel St. Hout Bay | 790 3570 |
| | Ocean View CHC | Carina Close Ocean View | 783 1688 |

| | | |
|---|---|---|
| | 7975 | 783-1766 |
| Lady Michaelis CHC | C\o Berham\Gabriel Rd Plumstead | 797-8171 |
| Grassy Park CHC | Victoria Rd. Grassy Park | 705-3814 |
| Retreat CHC | 11th Ave Retreat | 712-5105\55\9 |
| Lotus River CHC | C/o Delia & Anita Rd. Lotus River | 703-8057 703-3131\2\3 |
| Mitchell's Plain CHC | 1st Avenue Eastridge | 392 5161 |
| Tafelsig MLC | Kilimanjaro rd Tafelsig | 397-8195 397 8906 |
| Rocklands MLC | Park Ave Rocklands | 392 5121/2/3 |
| Lentegeur MLC | Merrydale Rd. Lentegeur | 371-2126\7 |
| Strandfontein MLC | Welgelegen str. Strandfontein | 393-6226\36 |
| Westridge MLC | Wespoort Road Westridge | 392-4124 |
| Somerset-West MLC | 28 Kerk St. | 852-2131 |
| The Ark | Faurie | 904-9131 |
| Macassar CHC | C/o Hospital & Musical Ave. Macassar | 857-2330 |
| Boland CHC | Boland Bank Arcade 37 Main Rd Strand | 853-3380 |
| Gustrow CHC | Hassan Khan Ave Strand | 845-8383 |
| Gordonsbaai MLC | Sir Lowry's Road | 856-2135 |
| Cross Rd.CHC | Lansdowne Rd. Cross Rd. | 386-1121\4 |
| Guguletu CHC | NY1& 3 Guguletu | 638-6145 637-1280 |

## ALCOHOLICS ANONYMOUS MEETINGS : AS FROM JANUARY 2005

| MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY | SUNDAY |
|---|---|---|---|---|---|---|
| **Delft**<br>Rosendale<br>Primary School<br>Room 40<br>DELFT<br>**Time:** 19H45 | **Gordons Bay**<br>Municipal Clinic, Sir<br>Lowry's Pass<br>GORDONS BAY<br>**Time**: 19H30 | **Atlantis**<br>St John, the<br>Baptist RC Hall<br>Cnr Sun &<br>Penelope Sts<br>**Time:**20H00 | **Big Book Study**<br>St Mary's Cathedral<br>16 Bouquet St<br>CAPE TOWN<br>**Time:** 19H30 | **As Bill Sees It**<br>Methodist<br>Church Hall<br>Greenmarket Sq<br>CAPE TOWN<br>**Time:** 13H05 | **Gordons Bay**<br>Municipal Clinic,<br>Sir Lowrys Pass<br>GORDONS BAY<br>**Time**: 13H30 | **Athlone/ Klipfontein**<br>Mary Harding Centre<br>Klipfontein Rd<br>Silvertown<br>**Time:** 17H00 |
| **Fish Hoek**<br>Catholic Church<br>Hall<br>Cnr 6th Avenue &<br>Kommetjie Rd<br>FISH HOEK<br>**Time:** 20H15 | **Grassy Park**<br>League of Friends<br>of the Blind<br>(LOFOB)<br>Cnr Klip &1st Rd<br>GRASSY PARK<br>**Time:** 20H00 | **Bellville**<br>Presbyterian<br>Church Hall<br>Cnr Rhos and<br>Davies Roads<br>BELLVILLE<br>**Time:** 20H15 | **Blue Downs**<br>Blue Downs Comm<br>Centre<br>Blue Downs Way<br>BLUE DOWNS<br>**Time:** 20H00 | **Bergvliet**<br>Meadowridge<br>Library<br>Howard Drive<br>MEADOW=<br>RIDGE<br>**Time**: 19H30 | **GreenDoor**<br>St BarnabasHall<br>Cnr Kloofnek &<br>Camp Street<br>Entramce<br>Cape Town<br>**Time: 07H30** | **Durbanville**<br>Durbanville Library<br>Main Road<br>DURBANVILLE<br>**Time**: 20H15 |
| **Hottentots Holland**<br>St Paul's R C<br>Church Hall<br>Cnr Andries<br>Pretorius Street<br>**Time:** 20H15 | **Hermanus**<br>United Church Hall<br>Royal Street<br>HERMANUS<br>**Time:** 19H30 | **Bonteheuwel**<br>Multi-Purpose<br>Centre<br>Cnr Jakkalsvlei<br>and Elder Sts<br>BONTEHEUWEL<br>Time: **19H30** | **Cape Town 1**<br>Presbyterian<br>Church Hall<br>Cnr Upper Orange<br>and Annandale Rd<br>GARDENS<br>**Time:** 20H00 | **Hanover Park**<br>Lady of the<br>Rosary R.C<br>Church Hall<br>Hanover Park<br>Avenue<br>**Time:** 20H00 | **Into Action/ Table View**<br>Girl Guide Hall<br>Hof Street<br>TABLE VIEW<br>**Time**: 19H00 | **Elsies River**<br>Methodist Church<br>Hall<br>Cnr 27th Ave & Halt<br>Road<br>ELSIES RIVER<br>**Time**: 15H00 |
| **Melkbosstrand**<br>Melkbos Clinic<br>Robben Road<br>MELKBOS=<br>STRAND<br>**Time:** 20H15 | ***Hope Street non-restrictive**<br>(Gay/Lesbian)<br>St Mary's School<br>Library,<br>Tuin Plein<br>CAPE TOWN<br>**Time:** 20H00 | ***Cocktail Tales (Gay Men)**<br>Sacred Heart<br>Church Hall<br>Somerset Road<br>GREEN POINT<br>**Time:** 18H00 | **Claremont**<br>Congregational<br>Church Hall<br>Franklin Road<br>CLAREMONT<br>**Time:** 20H00 | **Kalk Bay**<br>Holy Trinity<br>Anglican Church<br>Hall<br>Main Road<br>KALK BAY<br>**Time:** 20H15 | **Keep It Simple/ Goodwood**<br>Culture Centre<br>Cnr Merriman &<br>Dirkie Uys St<br>GOODWOOD<br>**Time:** 19H30 | **GreenDoor**<br>St BarnabasHall<br>Cnr Kloofnek & Camp<br>Street Entramce<br>Cape Town<br>**Time:** 17H00 |
| ***Muldersvlei**<br>Heskith King TC<br>Crossroads<br>(Rehab. Centre)<br>MULDERSVLEI<br>**(Tel: 8844600)**<br>**Time:** 20H00 | **Hout Bay**<br>NG Kerk Hall<br>Oxford Street<br>HOUT BAY<br>**Time**: 19H15 | **Rondebosch**<br>St Michaels<br>Church Hall<br>Rouwkoop Rd<br>RONDEBOSCH<br>Time: 20H15 | **Engine Room**<br>St Andrews Church<br>Hall<br>Wesley Road<br>STRAND<br>**Time:** 20H00 | **Macassar**<br>Methodist<br>Church Hall<br>Oklahoma Street<br>MACASSAR<br>**Time:** 19H30 | **Pass It On/ Steenberg**<br>St Anne's RC<br>Church Hall<br>Ochestra Road<br>STEENBERG<br>**Time:** 15H00 | **Kensington**<br>Roman Catholic<br>Church Hall<br>Coronation Rd<br>MAITLAND<br>**Time**: 15H00 |

| **Sea Point**<br>St James Church Hall<br>St James Road<br>SEA POINT<br>Time: 20H15 | Klein Constantia<br>Constantia Primary School<br>Ladies Mile Rd.<br>CONSTANTIA<br>Time: 19H30 | Heathfield<br>Heathfield Primary School<br>Chadwin Road<br>HEATHFIELD<br>Time. 20H00 | First Women's Group<br>St Thomas Hall<br>Campground Rd<br>RONDEBOSCH<br>Time: 19H30 | O'Kiep/ Another Chance<br>35B Main Road<br>O'KIEP<br>Time: 19H00 | Plumstead<br>St Lukes Church Hall<br>Annandale Rd<br>DIEP RIVER<br>Time: 17H00 | Mandalay<br>79 Kipling Ave<br>MANDALAY<br>Time: 17H00 |
|---|---|---|---|---|---|---|
| **Paarl**<br>Holy Trinity Church Hall<br>Main Road<br>PAARL<br>Time: 19H30 | Kraaifontein<br>Baptist Church Hall<br>Cnr York and Edward Streets<br>KRAIFONTEIN<br>Time: 20H00 | Kuils River<br>NG Moedersaal<br>Ou Pastorie<br>KUILS RIVER<br>Time: 20H00 | Hout Bay<br>NG Kerk Hall<br>Oxford Street<br>HOUT BAY<br>Time: 19H15 | Somerset West<br>Back To Basics<br>St Paul's RC Church Hall<br>Andries Pretorius<br>Time: 20H15 | Westridge<br>Westridge High<br>Cnr Silversands &Dagbreek Sts<br>Westridge, MP<br>Time: 17H00 | |
| **Woodlands**<br>Princeton High School<br>Mitchell Avenue<br>Woodlands M/P<br>Time: 20H00 | **Observatory/ Salt River**<br>Loaves & Fishes<br>Lower Rochester Rd<br>OBSERVATORY<br>Time: 19H30 | **Lansdowne**<br>St Aidans Church Hall<br>St Aidens Road<br>LANSDOWNE<br>Time: 20H00 | **Killarney-Milnerton**<br>Methodist Church Hall<br>Ascot Road<br>MILNERTON<br>Time: 20H00 | **Sea Point**<br>St James Church Hall<br>ST James Rd<br>SEA POINT<br>Time: 20H15 | **Wynberg**<br>Tenterden Place of Safety<br>60Durban Road<br>WYNBERG<br>Time: 15H00 | **O'Kiep/ Another Chance**<br>35B Main Rd<br>O'KIEP<br>Time: 18H00 |
| **Parkwood**<br>Hyde Road Primary School<br>Hyde Road<br>PARKWOOD<br>Time: 19H30 | **Serenity**<br>Caravelle Primary School<br>Caravelle Rd<br>Rocklands<br>MITCHELL/PL<br>Time: 20H00 | **Lentegeur**<br>Lentegeur Hosp.<br>Training Centre<br>Highlands Rd<br>Lentegeur, M/P<br>Time: 20H15 | **Strand**<br>St Andrews Church Hall<br>Cnr Kort and Wesley Streets<br>STRAND<br>Time: 20H15 | **Stanford**<br>Stanford Primary School<br>STANFORD<br>Time: 19H30 | | **Rondebosch**<br>St Michaels Church Hall<br>Rouwkoop Rd<br>RONDEBOSCH<br>Time. 20H15 |
| **Sunrise**<br>St James Church Hall<br>St James Road<br>SEA POINT<br>Time: 7H00am) | **Parow**<br>St Margaret's Church Hall<br>Smith Street<br>PAROW<br>Time: 20H15 | **Reflections/CT**<br>St Mary's Cathedral<br>16 Bouquet St<br>CAPE TOWN<br>Time:7H00 m | **Strandfontein**<br>St Phillips Church Hall<br>Cnr Welgelegen & Cruiser Roads<br>Time: 20H00 | **Sunrise**<br>St James Church Hall<br>ST James Rd<br>SEA POINT<br>Time: 07H00 | **Thurs: Ocean View**<br>Methodist Church Hall<br>1 Zodiac Road<br>Time: 20H15 | **Steenberg**<br>Tokai Library<br>Cnr Tokai Rd & Forest Str<br>TOKAI<br>Time: 18H30 |

# APPENDIX 4 RELATIVE DEPRIVATION

Principal components analysis (PCA) was used to create a composite deprivation index. Variables included in the index were additive and different weights were assigned to each variable. More specifically, all variables in the ATQ that related to participants socio-economic status and living conditions were included in the factor analysis. Prior to entry into this procedure, variables that were not symmetrically distributed were transformed. After applying the transformation, a correlation procedure was conducted to ensure that all the variables to be included in the PCA were highly correlated with each other. A PCA was then conducted using varimax rotation. This reduced the number of variables within each component (factor) allowing for a simpler solution. Several components emerged from this procedure. The two most salient related to living circumstances (component one) and possessions (component two). Component one accounted for 15.5% of the variance and component two accounted for 10.9% of the variance. The other components each accounted for less than 5% of the variance. As these first two components accounted for the largest proportion of the variance, a decision was made to use these as the basis for the deprivation index. Table 30 displays the factor loadings for these two components.

Component score coefficients (produced by the PCA) were used as weights for each variable in the calculation of the final deprivation index. Z-scores were calculated for each variable that contributed significantly to the component. The index was calculated by summing the weighted variables and can be represented as follows; where each of the variable labels refers to the z-score of that variable):

**Deprivation index** = (0.126 x race) + (0.211 x outside walls) + (0.224 x water) + (0.195 x electricity) + (0.158 x toilet) + (0.247 x cooking fuel) + (0.278 x refrigerator) + (0.270 x stove) + (0.262 x land phone) + (0.274 x sofa).

*Table 30. Components arising from PCA: factor loadings and component score coefficients*

| Variables | Component 1 | | Component 2 | |
|---|---|---|---|---|
| | *Factor loading* | *Component score coefficient* | *Factor loading* | *Component score coefficient* |
| Race | .54 | .126 | - | - |
| Outside walls | .85 | .211 | - | - |
| Drinking water | .87 | .224 | - | - |
| Electricity | .81 | .195 | - | - |
| Toilet | .73 | .158 | - | - |
| Cooking fuel | .80 | .247 | - | - |
| Own refrigerator | - | - | .63 | .278 |
| Own stove | - | - | .76 | .270 |
| Own a land phone | - | - | .60 | .262 |
| Own sofa/couch | - | - | .73 | .274 |

## APPENDIX 5

## ACCESS TO TREATMENT INTERVIEW SCHEDULE

The purpose of this interview is to examine access to and the use of AOD treatment services by people from poor, historically disadvantaged communities. I am not evaluating your performance as a service provider. Before we begin, do you have any questions?

Agency........................ Date of interview: ......................

**1. Please describe the AOD treatment system in the Cape Town metropole; specifically its substructures and components.**

- Who are the role players?
- Who are the role players accountable to?
- What are the policies and regulations that regulate these role players?
- What are the kinds of services that these role players provide to people from HDCs

**2. In your experience, what are the contextual and political influences on AOD treatment that hamper access to treatment for people from HDCs ?**

- Service planning and political influences?
- Community responses to AOD services?
- Other factors within HDCs that restrict the use of AOD services?

**3. Please describe the extent to which the AOD treatment system in the Cape Town metropole is accessible to people from HDCs.**

**4. Please describe the typical process of accessing AOD treatment for people from HDCs.**

(Please outline all the steps involved from the start of the AOD problem until they access treatment).

**5. In your experience, what are the treatment system factors that act as barriers to accessing AOD treatment for people from HDCs ?**

- Treatment capacity?
- Resources?
- Organisational dimensions (such as staff)?
- Service quality?
- Other practical barriers that make it difficult to deliver services to the poor?

**6. In your opinion, are there any other barriers that limit the use of AOD treatment services for people from HDCs in Cape Town?**

**7. What do you think can be done to improve the use of AOD services by people from HDCs?**

**8. Anything else you wish to add or comments you wish to clarify?**

**Thank you for your participation in this study.**