A mixed methods evaluation of the Postgraduate Diploma in Addictions Care at the University of Cape Town: students' experiences and uptake of evidence-based intervention techniques

By

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JHDSHA004

SUBMITTED TO THE UNIVERSITY OF CAPE TOWN

In fulfilment of the requirements for the degree

MPhil Public Mental Health

Faculty of Health Sciences

UNIVERSITY OF CAPE TOWN

Date of Submission: 15 November 2024

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DECLARATION

I, Shaheema Allie, hereby declare that the work on which this dissertation/thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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ACKNOWLEDGEMENTS

I would like to sincerely thank both of my supervisors; Associate Professor Claire van der Westhuizen and Associate Professor Tara Carney. Your patience, guidance and support has been invaluable throughout this process. I have learnt so many valuable lessons from your guidance and supervision at every step of the way. Without the two of you, I could not have done this by myself. Thank you for all the extra time and effort you have put into this.

To my husband, Moegamat Ganief Allie, thank you for always motivating me and pushing me to always strive to do better for myself, and for always supporting my goals. To my children, Azrah, Zia and Nusaybah Allie, thank you for having patience, understanding and for sacrificing weekends with me when I needed to focus on my thesis write up.

To my parents, Ebrahim and Sukayna Johaadien, for stepping in and assisting with my children when I needed it, and for always supporting my academic goals.

And finally, to the rest of my family, friends, and supportive colleagues, thank you for always cheering me on, and keeping me motivated throughout this journey.

To the Alan J Flisher Centre for Public Mental Health, thank you for giving me the opportunity to complete this master's degree whereby I have gained the necessary knowledge and skills to further my career.

ABSTRACT

Background: To address the training needs for addiction specialists to detect and treat the growing number of individuals using alcohol and drugs, there is a need to upscale existing quality academic programmes to implement evidence-based practices (EBPs) widely. It is vital that professionals in addictions services are well equipped to handle the burden of unhealthy substance use.

Aims and objectives: The overall aim is to investigate students' knowledge, attitudes and explore experiences related to EBP approaches taught in the Postgraduate Diploma in Addictions Care (PgDip) at the University of Cape Town (UCT). The specific objectives included: (1) assessing the attitudes and perceived knowledge gained by students related to EBP approaches taught on the PgDip programme, (2) exploring the experiences of graduates in integrating EBP taught on the PgDip programme into substance use services as part of their occupation, and (3) eliciting graduates' recommendations on how the PgDip programme can be improved.

Methods: This mixed methods study recruited participants registered for the PgDip at UCT between 2011 and 2018. Participants (n=113) were invited to partake in the online quantitative questionnaire which assessed attitudes towards EBP approaches, knowledge retention of EBP approaches and EBP skills used in their current occupation. The measures included questions on socio-demographics, occupation and use of skills, participants' satisfaction with the PgDip and the Evidence-Based Practice Attitudes Scale (EBPAS). Descriptive statistics and ANOVA were conducted using SPSS. The qualitative online in-depth semi-structured interviews (n=20) addressed graduates' opinions on the programme, retention of knowledge, skills, and recommendations for improving the PgDip. Additionally, it explored the impact of the PgDip on their career paths, daily practice, and challenges and facilitators to implementing EBP in their organisations. Transcripts were uploaded into NVivo and analysed using thematic analysis.

Results: 54 (47.8%) participants completed the online questionnaire with an overall positive attitude towards EBPs and satisfaction with the PgDip programme. There was with no statistical difference found between the year of graduation and screening and intervening for SUD (p= 0.52 and 0.93). 49 (91%) participants across occupational/occupational groups reported that they have been able to implement EBP in their workplace. For the EBPAS, the

average total score was 42.85 (SD=6.55). The mean scores for the EBPAS subscales were as follows: the Appeal subscale score was 3.18 (SD=0.62), the Openness subscale was 3.22 (SD=0.57), the Divergence subscale was 2.40 (SD=0.92), and the Requirement subscale was 2.55 (SD=1.11). There were no statistically significant difference in mean scores for any of the four EBPAS subscales between the three profession/occupation groups. Qualitatively, all graduates were satisfied with their overall academic experience on the PgDip, attitudes were generally positive towards EBP, and they retained EBP knowledge gained on the programme, and many transferred this knowledge to their organisations. The main barriers were competing with bureaucratic management styles of organisations, pressure on existing resources and working in a multidisciplinary team. Completing the PgDip also had a positive impact on career progression.

Conclusion: EBPs learnt on the PgDip seemed to have long-lasting positive effects for graduates, which were perceived as being beneficial to their context and organisation.

Keywords: Unhealthy substance use, substance use disorders, evidence-based practices, implementation, training programmes, attitudes, knowledge, skills

List of Abbreviations and Terms

SA	South Africa
UCT	University of Cape Town
PgDip	Postgraduate Diploma
EBP	Evidence-based Practice
HPCSA	Health Professions Council of South Africa
DSM	Diagnostic and Statistical Manual of Mental Disorders
SUD	Substance Use Disorder
GBD	Global Burden of Disease
HIC	High income countries
LMIC	Low-middle income countries
NCDs	Non-Communicable Disease
DALYs	Disability Adjusted Life Years
YLDs	Years Lived with Disability
SBIRT	Screening Brief Intervention and Referral to Treatment
MI	Motivational Interviewing
CBT	Cognitive Behavioural Therapy
PST	Problem Solving Therapy
AUDIT	Alcohol Use Disorder Identification Test
DUDIT	Drug Use Disorder Identification Test
ASSIST	Alcohol, Smoking, Substance Involvement Screening Test
DAST 10	Drug Abuse Screening Test 10
CAGE	CAGE Alcohol Questionnaire
CRAFFT	CAR, RELAX, ALONE, FORGET, FRIENDS, TROUBLE (Adolescent screening tool)
TPB	Theory of Planned Behaviour
RA	Research assistant

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1. Chapter One: Introduction

Globally, unhealthy substance use, and substance use disorders (SUDs) make a significant contribution to the burden of disease (James et al., 2018). Unhealthy substance is patterns of alcohol and drug use ranging on a continuum from hazardous use to use meeting diagnostic criteria for substance use disorder (Timko et al., 2016). For example, alcohol use disorders rank 17th as a leading cause of years lived with disability (YLDs)[1] for men, while drug use disorders rank 7th for males and 17th for females as a leading cause of YLDs. In 2016, 4.2% of all disability adjusted life years (DALYs)[2] were attributable to alcohol use and 1.3% of all DALYs were attributed to substance use (Degenhardt et al., 2018; James et al., 2018). In southern sub-Saharan Africa, unhealthy substance use and SUDs contribute 5.1% of DALYs attributable to alcohol, and 1.1% of DALYs attributable to other substance use (Degenhardt et al., 2018). In South Africa (SA) specifically, 2.8% of DALYs are attributable to alcohol and 1.6% to other drugs (Jack et al., 2014).

The prevalence of SUDs in terms of the number of cases globally gives a further indication of the magnitude of the problem. The Global Burden of Disease Study 2017 (GBD) found that, there were 175.6 million estimated cases of SUDs in 2017 (Degenhardt et al., 2018). The most common was alcohol use disorders, with 107.4 million estimated cases in 2017, followed by opioid use disorders (40.5 million estimated cases) and then cannabis use disorder (17.9 million estimated cases) (Degenhardt et al., 2018).

The use of alcohol and other drugs has a direct impact on an individual's health and wellbeing (Degenhardt et al., 2018). Health implications include being at risk for: (i) communicable diseases such as HIV and tuberculosis, (ii) non-communicable diseases, including liver and other cancers, cirrhosis, gastrointestinal and cardiovascular diseases, and (iii) unintentional and intentional injuries, including self-harm. Additionally, negative physical health

[1] YLDs is a metric used in public health and epidemiology to quantify the burden of non-fatal health conditions within a population. YLDs represent the number of years that people live with a disability or health condition, adjusted for the severity of the disability (https://www.who.int/data/gho/indicator-metadata-registry/imr-details/160#:~:text=One%20YLD%20represents%20the%20equivalent,to%20disability%20or%20ill%2Dhealth.)

[2] DALYs is a metric used in public health to measure the overall burden of disease by combining the impact of premature death (years of life lost) and the impact of living with a disability (YLDs). DALYs allow for the comparison of health loss due to different conditions across populations and time (https://www.who.int/data/gho/indicator-metadata-registry/imr-details/158)

consequences related to injection drug use, also include increased risk of contracting HIV and hepatitis, or sepsis and thrombosis. Individuals are also at increased risk of mental health conditions, such as depression, anxiety and psychotic disorders (Degenhardt et al., 2018; Jack et al., 2014). Finally, there are also social consequences including experiencing discrimination; low educational attainment; poor work performance whereby there is an increase in absenteeism and disciplinary actions; and also various interpersonal issues personally and socially (Nyashanu & Visser, 2022; Regenauer et al., 2020; Newcomb & Locke, 2005).

Whilst SUDs are highly prevalent, there are limited services available resulting in a substantial treatment gap, whereby individuals who need intervention or treatment for unhealthy substance use or SUDs do not receive appropriate or adequate treatment (Jansen et al., 2015). There are also limited specialised treatment services that address SUD and other comorbidities in LMIC settings for those conditions mentioned above (Kale, 2002).

In setting such low- and middle-income countries (LMICs), the range of non-specialised SUD treatment services are diverse, these include services from general health and social services which are provided by professionals that are not trained in addiction care. In these settings treatment services range from non-evidence-based treatment approaches, non-specialised substance use treatment approaches, to using appropriate evidence-based practice (EBP) approaches. To remedy the limited specialised substance use treatment services and trained specialists in substance use treatment, some LMIC settings, have adopted task-shared approaches (Hassan et al., 2024). Some of the treatment services are performed by trained lay workers, who implement screening for unhealthy substance use and brief treatment approaches (Heijdra Suasnabar & Hipple Walters, 2020).

There are several barriers to accessing effective SUD treatment in SA. Some of these barriers includes affordability of treatment, the low perceived need for treatment, stigma (internalised stigma, perceived-stigma, enacted stigma and anticipated stigma), and the unavailability of appropriate treatment facilities (Myers et al., 2016; Myers et al., 2010; Anderson et al., 2020). Further to this, there is lack of trained specialised professionals in the field of addiction care (Pasche et al., 2015). It is therefore important to understand these barriers to accessing SUD treatment to improve the accessibility and quality of SUD treatment in SA.

Although many undergraduate healthcare programmes include basic knowledge regarding screening for unhealthy substance use and care of people living with SUDs, this training is limited and rarely includes instruction in current EBPs for addiction care (Pasche et al., 2014; Pasche & Myers, 2012b; Senreich et al., 2017; World Health Organization, 2021b). It is especially important that professionals working in addictions care are well equipped, with up-to-date EBP knowledge and skills, to handle the heavy burden on South Africa due to the high prevalence of substance use, and potential associated physical and mental health issues associated with unhealthy substance use and SUDs (Degenhardt et al., 2018; (Vellios & Walbeek, 2018)

Globally, in high-income countries (HICs), there are many addictions care training and education programmes related to EBP approaches that are part of formal qualifications within medical and psychiatric degrees, undergraduate degrees and postgraduate addiction studies (Pavlovská et al., 2017; Rieckmann et al., 2011). In LMIC countries, these training opportunities are limited and are not offered as specialised addiction care qualifications, but rather short courses or modules within qualifications or workshops (Pasche et al., 2014; Pasche & Myers, 2012b; Senreich et al., 2017). In Africa particularly, there are only six universities with formal addiction qualifications, with South Africa hosting the majority of the qualifications, with two Masters of Philosophy degrees and two postgraduate diplomas in addiction care (Lososová et al., 2020).

Globally, specialised addiction care training and education on EBP includes assessment and screening of various validated tools, EBP counselling skills and approaches, practical clinical training, ethical and professional issues and some training includes an addiction care research project (Lososová et al., 2020; Pavlovská et al., 2017). It is important for the workforce delivering addiction care to be adequately trained in order to provide the best access to appropriate care for clients. To address the training needs for addiction specialists to detect and treat the growing number of individuals using alcohol and drugs, there is a need to upscale existing quality academic programmes to implement EBPs widely (Pasche et al., 2014; Pavlovska et al., 2017).

The Postgraduate Diploma in Addictions Care (PgDip) at the University of Cape Town (UCT), which was initiated in 2011, was developed to address the lack of specialised training for those working in addictions care in South Africa. However, since its inception, the EBP

approaches taught in the PgDip have not been formally evaluated. There are many studies that evaluate the treatment services of SUDs (Farhoudian et al., 2022), however, there are not many that evaluate the addiction education programmes of universities (Zborník et al., 2021). The current research study aims to investigate postgraduate students' knowledge, attitudes and experiences related to EBP approaches taught in the PGDip in Addictions Care at the UCT. The impact of the programme on graduates and their professional practice has not yet been evaluated. This study aims to address this gap and add to the knowledge on such training courses in LMICs.

1.1. Aim and objectives

The aim of the study is to investigate postgraduate students' knowledge, attitudes and explore experiences related to evidence-based practice (EBP) approaches taught in the Postgraduate Diploma in Addictions Care at the University of Cape Town.

Specific objectives of the study include: (i) to assess attitudes and perceived knowledge gained by students related to EBP approaches taught on the PgDip programme; (ii) to explore the experiences of graduates in integrating EBP taught on the PgDip programme into substance use services as part of their occupation; and (iii) to elicit graduates' recommendations on how the PgDip programme can be improved.

2. Chapter Two: Literature Review

This chapter discusses definitions of substance use, the prevalence and burden of unhealthy substance use and SUDs globally and in LMICs in sub-Saharan Africa. It will focus on the literature available in South Africa and then the Western Cape particularly. A description of the treatment gap for SUDs and the barriers to accessing existing treatment is discussed. Subsequent sections present available EBP approaches to intervention and treatment for unhealthy substance use and SUDs, as well as a summary of the training opportunities for professionals working in the substance use field in South Africa. In particular, the inclusion of EBPs in training curricula as well as an overview of the PgDip UCT is provided. The chapter concludes with a discussion of EBP curriculum evaluation.

2.1. Definitions of unhealthy substance use and substance use disorders

Unhealthy substance use is recognised as a global public health issue. It has been characterised as being either hazardous or harmful use of alcohol or drugs depending on the extent of the substance-related harms (Timko et al., 2016; Peltzer et al., 2009; World Health Organization, 2010). Hazardous patterns of substance use may lead to harmful consequences in the future if the hazardous use continues. Harmful patterns of use can impact an individual in various spheres of their life (World Health Organization, 2010). The harmful and hazardous use of substances may increase the risk for physical health problems, mental health problems, and possibly social problems as a consequence of current substance use (Babor et al., 2001; Humeniuk et al., 2010; Peltzer et al., 2009; World Health Organization, 2010).

Although individuals may engage in unhealthy substance use, they may not always meet criteria for a formal diagnosis of an SUD as defined by the Diagnostic and Statistical Manual of Mental Disorders Version Five (DSM-5) (American Psychiatric Association, 2013). According to the DSM-5, an SUD is defined as an individual who meets at least two of the eleven specific diagnostic criteria over the past 12 months. When an individual meets two or three criteria they are diagnosed with a mild SUD, while presenting with four or five criteria means they fit a diagnosis of a moderate substance use disorder, and six or more criteria can be equated to a diagnosis of severe substance use disorder (American Psychiatric Association, 2013).

Some individuals who use substances do not meet criteria for these categories however, they are still at risk of health consequences and social consequences, such as strained relationships, financial and legal issues (Nyashanu & Visser, 2022; Regenauer et al., 2020; Newcomb & Locke, 2005). For example, individuals who binge drink, that is, those who drink large amounts of alcohol over short times periods, are putting themselves at risk of long-term health consequences such as cardiovascular disease, injury or even death (Trangenstein et al., 2018; Vellios & Walbeek, 2018). Binge drinking is defined as having four or more drinks for females, and six or more drinks for males on one occasion. There are also individuals who engage in heavy episodic drinking, meaning that on five or more occasions per month, they consume six or more drinks for females, and eight or more drinks for males (American Psychiatric Association, 2013; Degenhardt et al., 2016; Parry et al., 2019; Parry et al., 2004; Trangenstein et al., 2018; Vellios & Walbeek, 2018; World Health Organization, 2018a). Therefore, even individuals who do not meet DSM-5 criteria for an alcohol use disorder, and who drink alcohol moderately, are at risk of health, social and mental health consequences, as well as those occasional binge or heavy episodic drinkers. Therefore, it is important to screen for alcohol use as these unhealthy patterns of drinking can still be harmful (Parry et al., 2019; Knox et al., 2019).

2.2. Prevalence and burden of disease associated with substance use

2.2.1 Global prevalence and burden of disease

According to the Global Status Report on Alcohol and Health, in 2016, there were 2.3 billion people globally who drink alcohol. The prevalence of heavy episodic drinking (including binge drinking) was estimated to be 18.2% of the population, with the highest prevalence being in Eastern Europe and sub-Saharan Africa where over 60% of people who consume alcohol engage in heavy episodic drinking (Griswold et al., 2018; Parry et al., 2011; World Health Organization, 2018a). In 2019, the World Drug Report stated that at least 5.5% of the global population (aged 15-64) reported using a drug at least once in their life, which is equivalent to almost one in every 18 individuals, and in the same year the global prevalence for any drug-related SUD was 0.7% of the global population (approximately 36.3 million individuals) (United Nations Office on Drug and Crime (UNODC), 2022).

The Global Burden of Diseases, Injuries, and Risk Factors Study 2016 (GBD 2016) examined the prevalence of specific SUDs. The investigators found that the global prevalence of alcohol use disorders was 100.4 million cases with an age-standardised prevalence of 1320.8 cases per 100 000 people. They also found that the age-standardised prevalence for cannabis use disorders was 289.7 cases per 100 000 people, 353.0 cases per 100 000 people for opioid use disorders, 77.6 per 100 000 people for cocaine use disorders and 64.7 per 100 000 people for amphetamine use disorders (Degenhardt et al., 2018).

Assessing the health status of a population is important to prioritise health research and policy and resource allocations. One way of doing this is to assess the health outcomes by evaluating the mortality and morbidity of diseases. The concept of burden of disease describes this death and loss of health due to diseases or conditions such as heart disease, cancers, SUDs and injuries and risk factors across the globe (Roser & Ritchie, 2016). To capture the burden of SUDs, the main statistical measurement used in the GBD study is disability-adjusted life years (DALYs). DALYs are a combination of the years of life lived with a disability (YLD), which are years of life lived with varying degrees of ill health, and years of life lost (YLL), which are years lost due to premature mortality (Rehm & Shield, 2019; Vos et al., 2020). While the high prevalence of unhealthy substance use and SUDs gives an indication of the public health burden, these data do not take into account the health consequences of substance use, including mortality. Globally there are estimated to be three million alcohol-related deaths each year with drug-related deaths estimated at 494 000 in 2019 (UNODC, 2022; World Health Organization, 2018a).

Data from the Global Burden of Disease 2019 study shows that SUDs contribute significantly to the global burden of disease. In 2017, globally it was reported that the DALYs that were lost to SUDs were 559.2 per 100 000 people. More specifically, DALYs lost to alcohol use disorders was 216.4 per 100 000 people, and DALYs lost to other drug use disorders were 342.8 per 100 000 people. Globally in 2019, specifically for ages 10-24 years old, drug use disorders ranked 18th in the causes lived with disability. For ages 25-49 years old, and drug use disorders ranked 16th and alcohol use disorders ranked 20th in the causes of YLDs (Institute for Health Metrics and Evaluation, 2020; Vos et al., 2020). These disorders also comprised the largest disability burden of all larger disease categories (e.g. infectious diseases,

noncommunicable diseases and injuries), making up 18.7% of all global YLDs (James et al., 2018; Kyu et al., 2018).

Apart from the death and disability directly caused by SUDs, these disorders also function as a risk factor for other physical health conditions. Thus, substance use contributes to death and disability for other conditions, and this is reflected in the attributable burden, along with the burden of SUDs (Degenhardt et al., 2018). Globally, in 2017, 4.2% of DALYs were attributable to alcohol use and 1.3% to drug use (Degenhardt et al., 2018). Alcohol use increases the risk for both non-communicable diseases, such as increases in cancer, cardiovascular disease and gastrointestinal diseases, and communicable diseases, such as tuberculosis and pneumonia (Degenhardt et al., 2018). The burden attributable to drug use includes death and disability due to HIV, hepatitis, sepsis, thrombosis, and endocarditis. Using any substances further contributes to the burden of disease by increasing the risk of unintentional or intentional injury related to road injuries, self-harm related to mental health problems, interpersonal violence, mental health problems such as depression and anxiety, as well as negative social consequences (Degenhardt et al., 2018; Nyashanu & Visser, 2022; Regenauer et al., 2020). The above is particularly relevant and evident in southern sub-Saharan Africa (Degenhardt et al., 2018; World Health Organization, 2010).

2.2.2 Prevalence and burden of disease of SUDs in sub-Saharan Africa and South Africa

Data from South Africa reflects a similar trend to that found globally and across Africa, showing high levels of alcohol consumption among drinkers. Recent data trends from the South African Community Epidemiology Network in Drug Use (SACENDU) indicate an increase in admissions to treatment facilities for alcohol use disorders, suggesting a possible rise in alcohol consumption throughout South Africa over the past few years. A limitation of this data, however, is that it represents only treatment-based admissions (Erasmus et al., 2024).

In South Africa, data used from the 2014-2015 National Income Dynamics Study, found that 33.1% of the total population drank alcohol of any amounts during this period. 43% of these individuals reported binge drinking recently, binge drinking equates to drinking five or more standard drinks on a day. The prevalence of binge drinking for the total population of South Africa, at this time, was 14.1% (Vellios & Walbeek, 2018).

Further, evidence from South Africa shows patterns of early onset of substance use (Ramsoomar & Morojele, 2012). Data trends from previous National Youth Risk Behaviour Studies, which surveyed a representative sample of students nationwide from 2002 to 2011, show, for example, that between 6.2% and 6.8% of learners had their first cigarette before the age of 10. The number of learners over the years have increased for the initiation of cigarette smoking (under age 10), alcohol (under age 13) and illicit substance use over the years (Reddy et al., 2003; Reddy et al., 2010, Reddy et al., 2013).

The most recent National Youth Risk Behaviour Study showed that in 2011, 49% drank alcohol at least once in their lifetime, with 32% for having drunk alcohol in the past month, and 25% engaged in binge drinking in the past month. For illicit drug use, 13% had smoked cannabis (dagga), 5% used cocaine, 5% Mandrax and 6% used methamphetamine at least once in their lifetime (Reddy et al., 2013). For early onset of substance use, there are many health-related consequences, including mental health concerns such as psychosis and aggression, unhealthy sexual activity that may lead to HIV, the contraction and spread of communicable or infectious diseases such as tuberculosis (Parry et al., 2011; Pluddemann et al., 2014; Weybright et al., 2016). Additionally, those initiating substance use early are at increased risk of developing an SUD, as compared to those initiate use at an older age (Jordan & Andersen, 2017).

In sub-Saharan Africa, the most common SUD is alcohol use disorder, with an age-standardised prevalence of 1515.0 cases per 100 000 people. This is followed by opioid use disorders, with 376.0 cases per 100 000 people, cannabis use disorders at 204.0 cases per 100 000 people, then amphetamine use disorders with 27.3 cases per 100 000 people and cocaine use disorders 20.0 cases per 100 000 people (Degenhardt et al., 2018). The overall disease burden in this region attributable to alcohol use as a risk factor was 5.1% of DALYs and 1.1% attributable to drug use. In South Africa, the DALYs attributable to alcohol use are approximately 3012.6 per 100 000 people and other substances are responsible for 572.0 per 100 000 people as compared to 3178.8 per 100 000 people and 434.6 per 100 000 in the Southern sub-Saharan African region (Degenhardt et al., 2018).

A few studies have been conducted in South Africa investigating SUDs. For example, the South African Stress and Health (SASH) study reported that the national lifetime prevalence for any SUD was 13.3%, with the Western Cape having the highest lifetime prevalence for SUDs of all provinces, estimated at 20.6% (Herman et al., 2009). Treatment data also gives an indication

of the prevalence of SUDs in the Western Cape, but only for people who actually access formal substance use treatment. According to the latest SACENDU report for the period between July 2022 and December 2022, treatment admissions in the Western Cape were predominantly for methamphetamine (33%), cannabis (known as dagga in SA) (22%), alcohol (19%), heroin (18%), and then cannabis/methaqualone (known as Mandrax in SA) (6%) as primary substance of use (Erasmus et al., 2022).

2.3. Treatment gap

As described above, the global and local prevalence and burden of disease for people using substances is high, however, the proportion of people using substances at unhealthy levels who receive treatment for their substance use or SUDs is quite low. This treatment gap is defined by the World Health Organization (WHO) as the difference in the number of individuals that need treatment for an SUD and those who receive the necessary or appropriate treatment (Jansen et al., 2015; Kale, 2002).

There is limited existing research on the need for early intervention and the gap in services for individuals who use substances at unhealthy levels who do not meet criteria for an SUD (Jiloha, 2017; Stockings et al., 2016), as well as on the accurate measurement of the treatment gap for SUDs. An exception is the World Mental Health Survey Initiative (WMHS), which was conducted in 26 countries and is one of the only existing global studies which estimates treatment coverage of mental disorders and SUDs (Degenhardt et al., 2017). The results of these surveys show that globally 2.6% of participants met criteria for SUDs in the preceding 12 months, with 39.1% of these participants recognising the need to seek treatment; yet only 61.3% of those recognising this need had received services for their substance use. Overall, only 7.1% of individuals meeting criteria for an SUD received the most basic substance use treatment available in their setting. In SA specifically, only 2.3% received minimally adequate treatment for their SUD (Degenhardt et al., 2017).

The proportion of individuals receiving basic treatment was higher in HICs as compared to LMICs, with less than 4% of individuals who may need services receiving adequate treatment in LMICs (Degenhardt et al., 2017). The latest United Nations Office on Drugs and Crime (UNODC) World Drug Report also suggests that one in eight individuals with an SUD receives adequate treatment globally. In HICs, 33% of individuals with mental, neurological and

substance use disorders (MNS) are able to access evidence-based treatment, while in LMICs such as South Africa, this is an estimated 10%. This means that for South Africa the treatment gap is much larger than in HICs (Chibanda et al., 2020; Shidhaye et al., 2015; UNODC, 2022).

For South African participants in the WMHS, 5.8% met criteria for an SUD in the previous 12 months, and of these participants 39.3% recognised that they need to seek treatment, and of these individuals recognising the need to seek treatment, 72% received some sort of treatment in the preceding 12 months. Of those accessing treatment, only 2.3% of the participants received adequate treatment for their SUD. Even for moderate to severe SUDs, only one in four individuals received any kind of treatment in the past 12 months. From these data, one can conclude that there is a need to address the treatment gap for SUDs in South Africa (Degenhardt et al., 2017; Seedat et al., 2009).

2.3.1 Barriers to accessing treatment

Due to the high prevalence of substance use and the existing treatment gap, many individuals with unhealthy substance use or a diagnosed SUD do not receive formal treatment. Several barriers to accessing treatment have been identified in the literature including psychosocial or internal factors (e.g. attitudinal, motivational, personal beliefs), and structural factors (e.g. stigma, social, political, financial, legal and service systems) (Myers et al., 2008; Priester et al., 2016).

2.3.2 Barriers to accessing SUD treatment globally

Research that has examined barriers to accessing treatment, has mainly been conducted in HICs. A systematic review by Cumming et al. (2016) has found that the main barriers to accessing treatment are psychosocial or internal factors influencing the person using substances in the form of attitudinal barriers. These attitudes or beliefs include beliefs that one can control the use of substances without the assistance of healthcare professionals as it is not seen as a severe health risk, or beliefs that of being ‘strong’ enough to overcome it on their own, or that the problem would go away on its own, the low perceived effectiveness of treatment and the presence of self-stigma and fear of enacted stigma (Andrade et al., 2014; Pinedo et al., 2020; Schuler et al., 2015).

Another barrier to accessing care for SUDs is stigma. According to the Stigma Framework, substance use stigma can be divided into internal self-stigma (when individuals internalise

public attitudes) and enacted stigma whereby people label, devalue and discriminate against those who use substances (Smith et al., 2016). An international review of studies investigating stigma and SUDs found that stigma is a barrier to accessing treatment. Over 20 studies in the review reported that the public has stigmatizing views about people who have an SUD. Besides the above mentioned, other psychological factors that may be psychosocial or internal barriers include, having a lack of motivation and confidentiality concerns around treatment (Crapanzano et al., 2018; Yang et al., 2017). Research also identified that there are structural barriers related to accessing treatment facilities (Cumming et al., 2016).

Structural barriers have also been found to hinder access to treatment. These structural barriers can be identified as low service availability (which equates to long waiting periods to access treatment), poor service provision, lack of health care provider training, racial and ethnic disparities in access to quality care, affordability of treatment is limited, and limited access to treatment (including time and transportation options) (Choi et al., 2014; Pinedo et al., 2020; Priester et al., 2016; Schuler et al., 2015). The systematic review by Cumming et al. (2016) also identified a shortage of staffing of treatment facilities as a barrier, as well as a lack of trained professionals in SUDs as a barrier to accessing treatment.

2.3.3 Barriers to accessing SUD treatment in South Africa

In South Africa, specifically the Western Cape, the types of barriers to substance use treatment have been found to be similar to barriers in other countries. Local research reported attitudinal and structural barriers to accessing care. These barriers included the inadequate awareness of the need for treatment, and challenges accessing appropriate services (Myers et al., 2009; Myers et al., 2010; Sorsdahl et al., 2012). Stigma was also reported as a barrier to receiving services for SUDs (Myers et al., 2009; Regenauer et al., 2020). Due to this barrier, people who use substances highlighted not feeling confident enough to access treatment; they often deny the need for treatment in order to avoid being labelled negatively by others (Myers et al., 2009; Myers et al., 2010; Sorsdahl et al., 2012; Magidson et al., 2022).

Gender has been associated with low treatment engagement. There is a gender difference in ability to access SUD treatment, as enacted stigma is reported as being more often directed at women who use substances (Myers et al., 2016). Women also have different treatment

needs to men, such as childcare services or flexible times in order to be able to take care of their children, intimate partner violence, unemployment, fear and stigma, which can affect their access to both outpatient and inpatient treatment (Dada et al., 2018; Howard et al., 2017; Myers, 2013; Myers et al., 2016).

Additionally, competing financial priorities are major barriers in South Africa due to widespread poverty. Individuals often do not access treatment because of financial difficulties, mainly due to unemployment, and are reluctant to spend their limited resources on care for substance use issues as mental health and SUDs are not seen as health conditions (Myers et al., 2010). Linked with these financial constraints, is the geographical locations of treatment facilities. Individuals may not be able to afford the cost of transport to travel, or there may be a lack of available transport which is another barrier to accessing available treatment programmes (Myers et al., 2010; Pasche et al., 2014).

During the Covid-19 pandemic and the various levels of lockdown in South Africa between March 2020 and April 2022 (Department of Co-operative Governance, 2022), some of the above-mentioned barriers to accessing substance use treatment became more apparent. Some treatment facilities were shut down completely during hard lock down, some limited their treatment access, and some centres and staff were used as Covid-19 wards (Harker et al., 2022). Stigmatised people who use substances were not prioritised, and these individuals were left to go through uncomfortable withdrawals on their own without access to specialised treatment. This is especially problematic when restrictions were placed on alcohol and tobacco use over the year (Dannatt et al., 2021; Myers, 2020; Myers et al., 2021; Parry, 2021).

While there are a number of factors that contribute to this gap in treatment for SUDs, the availability of health professional resources is one that warrants attention. It is important to ensure health professionals are equipped with the knowledge and skills to treat unhealthy substance use and SUDs appropriately. According to the latest Mental Health Atlas 2020, the median number of mental health care professionals available globally is 13 per 100 000 individuals. In HICs it is over 62 mental health care professionals per 100 000 individuals, whereas in LMICs, this ranges from fewer than 1.4 per 100 000 individuals (World Health Organization, 2021b). This is concerning because more than 80% of the world's population with a mental health condition, including SUDs, reside in LMICs where the mental health professional to client ratio is the lowest. The estimated shortage of trained and skilled health

professionals is said to be at 1.18 million workers in LMICs (Rathod et al., 2017; Shidhaye et al., 2015; World Health Organization, 2021b).

Besides the shortage of trained professionals, South Africa does have a mental health legislation and policy in place, but only 2.7% of its health care budget has been allocated to mental health care, which translates to slightly less than R100 per person per annum. There are 1.52 psychiatrists, 0.08 child psychiatrists, and 7.5 psychiatric nurses per 100,000 individuals who are usually the health practitioners that treat people with unhealthy substance use and SUDs (Jack et al., 2014; Myers et al., 2010; World Health Organization, 2018c). In South Africa, there are barriers related to a lack of specialised health care providers who treat unhealthy substance use and SUDs. Most health care providers have not had formal training specific to unhealthy substance use, and therefore lack appropriate knowledge, skills and confidence in treatment provision (Myers et al., 2008; Pasche & Myers, 2012a; Priester et al., 2016). Despite this, there are a number of existing evidence-based practice (EBP) approaches for unhealthy substance use and SUDs which can be implemented in various settings in South Africa by specialists and non-specialist healthcare workers (Sorsdahl et al., 2014). Given the shortage of skilled human resources, it is crucial to ensure that the healthcare workforce is effectively capacitated by providing them with proper training in EBP treatment approaches.

2.4. Evidence-based practice (EBP) approaches

Evidence-based practice for people using substances at unhealthy levels, as well as for people diagnosed with SUDs, have been widely researched and studied, and strong evidence exists for their effectiveness in reducing substance use and related harms globally. These EBP approaches range from prevention to early detection and intervention strategies such as Screening, Brief Interventions and Referral to Treatment (SBIRT), for low to moderate risk substance use (Barata et al., 2017; Carney et al., 2020; Del Boca et al., 2017; Young et al., 2012), to more longer-term treatment approaches for substance use disorders such as brief treatment and specialised treatment approaches (Del Boca et al., 2017; Mueser et al., 2003).

SBIRT is an EBP approach to provide appropriate treatment services to individuals at risk of adverse health consequences due to the unhealthy use of substances. SBIRT programmes have been integrated into a range of healthcare facilities and other settings (Agerwala &

McCance-Katz, 2012), allowing providers to identify at-risk individuals who would benefit from services, whether they were seeking help for a substance use or other health-related problem. For the continuum of care for the varying levels of risk associated with substance use, it is vital that the relevant EBP are implemented appropriately (Babor et al., 2017; Del Boca et al., 2017; van der Westhuizen et al., 2019).

In terms of specific EBPs, SBIRT, especially, has been shown to be an effective EBP approach globally, as well as within South Africa. There are local studies that have shown its effectiveness in various settings that address substance use (Sorsdahl et al., 2015; Sorsdahl et al., 2012; Wechsberg et al., 2013). There is also evidence of the benefits of integrating SBIRT into various low-resourced settings (van der Westhuizen et al., 2019).

Firstly, screening, as part of SBIRT, briefly screens a person's level of risk of harmful use and its consequences due to using substances, and this determines the recommended intervention needed (Del Boca et al., 2017). There are many tools that screen for unhealthy substance use, it is recommended to use validated tools such as the Alcohol Use Disorders Identification Test (AUDIT), the Drug Use Disorders Identification Test (DUDIT) or the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST), which provide information on the level of risk due to substance use (Babor et al., 2017; Berman et al., 2005; Rachel Humeniuk et al., 2010; World Health Organization, 2001).

Brief interventions (BIs), as part of SBIRT, were initially used with individuals who are at low to moderate risk of substance use related harms, however, there is evidence that shows that they can also be used with individuals that are at high risk or have an SUD, and for those awaiting to be referred to specialised treatment (Barata et al., 2017; Fernandez et al., 2019; Young et al., 2012). BIs are short (5-60mins), individual psychosocial sessions (up to 5 or 6 sessions) offered to provide information, to motivate individuals to change behaviour and reduce substance use in order to reduce the harms related to substance use (Del Boca et al., 2017; Dutra et al., 2008; Young et al., 2012). Motivational Interviewing (MI) is the most widely used EBP incorporated in a BI to facilitate behaviour change and is sometimes combined with other EBPs for behavioural change, such as Cognitive Behavioural Therapy (CBT) and Problem-Solving Therapy (Rubak et al., 2005). BIs may also use the EBP elements of Feedback, Responsibility, Advice, Menu of options, Empathy and Self-efficacy (FRAMES) in providing

feedback on the risks of use and motivating behaviour change (Del Boca et al., 2017; Dutra et al., 2008; Smedslund et al., 2011; Sorsdahl et al., 2015a; Young et al., 2012).

Motivational Interviewing (MI) is a an EBP counselling approach that was developed in the 1980s to assist with the treatment of SUDs. It is a counselling approach that is a conversation about change in a collaborative, person-centred approach to strengthen an individual's own motivation and commitment to make behaviour changes related to their health behaviour, specifically SUDs (Miller & Rollnick, 2013). There is global and local evidence that MI is an effective form of treatment to reduce substance use and foster behaviour change (Jensen et al., 2011; Rubak et al., 2005; Sorsdahl et al., 2015b).

Problem solving therapy (PST) is another modality that is used on its own or in combination with MI in a brief intervention. PST is a step-by-step approach to solving health and life problems. In therapeutic interventions, clients are taught skills to process problem solving techniques in order to overcome challenges. PST has been shown to be effective in health and mental health challenges as well as SUDs (Malouff et al., 2007; Sorsdahl et al., 2015b).

Brief Treatment (BT) is the next step in the continuum of care (Aldridge et al., 2017; Babor et al., 2017). BT can be used as an early intervention for moderate to high risk using individuals, and the treatment approach is more intense and longer than BIs, but less intensive than specialised treatment and more goal focused. BTs can be used to support individuals whilst awaiting access to specialised treatment. BTs may include two to twelve sessions up to an hour long each, with more sessions conducted if needed (Aldridge et al., 2017; Del Boca et al., 2017). The focus of these sessions is also to foster motivation for behaviour change related to substance use, and to manage any factors that perpetuate substance use. The clinical components of a BT are often EBP approaches such as Cognitive Behaviour Therapy (CBT) and Motivation Enhancement Therapy (a version of MI) (Aldridge et al., 2017; Boren & Carroll, 2000; Del Boca et al., 2017). BT has flexible goals compared to BI and considers the continuum of use with treatment approaches related to harm reduction as well as abstinence, which is dependent on the individual's motivation to change (Center for Substance Abuse Treatment, 1999).

Cognitive Behaviour Therapy (CBT) is an effective EBP that is rooted in behavioural theory with its basis in classical and operant conditioning (Ruiz & Strain, 2011). CBT is integrated into

individual and group counselling for SUDs. The components of CBT intervention aim to assist the client with goal setting, teach the client drug refusal skills, relapse prevention skills, identify people, places and things that can trigger substance use. CBT intervention focuses on changing negative emotional and cognitive states as determinants of behaviour by using a functional analysis (Dutra et al., 2008; Morin et al., 2017; Ruiz & Strain, 2011).

Referral to Treatment (RT) is often recommended based on screening tool scores. Individuals who have high scores may be at risk of a severe SUD and in need of a referral to further assessment and specialised substance use treatment. Effective RT includes a 'warm-hand off' approach, collaborating with facilities, and navigating the referral process to access appropriate treatment for individuals (Babor et al., 2017; Del Boca et al., 2017). A referral to specialised EBP treatment facilities includes both short-term and long-term treatment approaches. These range from outpatient programmes which offer weekly sessions, intensive outpatient programmes which includes daily sessions (e.g. Matrix model), in-patient treatment programmes (e.g. 12 Step facilitation, Motivational Enhancement Therapy, MI, CBT, Dialectic Behaviour Therapy), medically assisted treatment programmes including detoxification (e.g. Methadone, Buprenorphine, Naltrexone) and medication for long term assistance and maintenance. Medical detoxification is important for high-risk individuals who use substances and is completed in combination with a specialised psychosocial treatment plan (Del Boca et al., 2017; Perry et al., 2015; Rawson et al., 1995; Timko et al., 2016). Recent evidence also shows the effectiveness of psychosocial interventions with pharmacological interventions for the treatment of SUDs, used either as the sole treatment approach, or in combination (Amato et al., 2011).

Unhealthy substance use and SUDs can be treated in a number of different settings. Globally, SBIRT is offered in primary or emergency care for unhealthy substance use, however, it is not implemented routinely in South Africa. In this country, there are a number of registered SUD treatment facilities. In the Western Cape, there are over fifty inpatient or outpatient government facilities registered with the Western Cape Department of Social Development (Dada et al., 2021; Western Cape Government, 2023). While these treatment facilities need to meet specific minimum norms and standards, it is not known to what extent they are implementing EBPs.

In the Western Cape, specifically, there have been successful initiatives outside dedicated treatment facilities using EBP to reduce the harms related to unhealthy substance use. One of these programmes was a brief intervention implemented in emergency centres as part of the Alcohol Harm Reduction Game changer based on a prior randomised controlled trial (Project STRIVE) in Western Cape emergency centres (van der Westhuizen et al., 2018). Project Strive offered a blended MI-PST intervention for patients screening at moderate to high risk for substance use-related harms, showed a reduction in substance use, with participants receiving up to five sessions of the intervention (Sorsdahl et al., 2015a).

Among other programmes tested in South Africa, a randomized control trial (RCT) conducted in a hospital setting found that a SBIRT programme for harmful or hazardous alcohol use yielded a reduction in heavy episodic drinking among patients. The EBP used in this RCT was a health education leaflet on responsible drinking for the control arm and a one session BI with education and a brief counselling session for the experimental arm (Pengpid et al., 2013). An adolescent EBP brief intervention, Reducing Alcohol and Drug use and other Problem behaviour in Adolescent Learners (RAD-PAL) was also tested in the Western Cape. This single arm study tested an intervention on recruited substance using adolescents and their caregivers by combining MI and CBT which aided to reduce adolescent substance use and unhealthy behaviour (Carney et al., 2020). Additional research is ongoing regarding interventions based at primary health care for alcohol use. For example, Project Mind is testing a three-session MI-PST intervention for hazardous alcohol use and depressive symptoms in chronic care patients diagnosed with HIV or diabetes (Myers et al., 2018).

As mentioned previously, there are many facilities in the Western Cape that treat SUDs. There are outpatient and inpatient facilities implementing various treatment approaches which range from three weeks to sixteen weeks of treatment. EBPs are used in the following programmes: City of Cape Town Matrix programme using the Matrix model; South African National Council on Alcoholism (SANCA) using MI, BI, aftercare groups and reintegration; and the Cape Town Drug Counselling Centre (CTDCC) using MI and CBT. There are also facilities that provide detoxification and medically assisted treatment (opioid substitution therapy) such as Stikland Hospital and Groote Schuur Hospital (Dannatt et al., 2014; Western Cape Government, 2023). Whilst there are these facilities, it is important for them and their health

care workers to adopt appropriate EBP in treating unhealthy substance use and SUDs throughout South Africa (Myers et al., 2022; Sorsdahl et al., 2014).

2.5. Training opportunities

Training opportunities related to interventions or treatment for unhealthy substance use or SUDs are mostly available in HICs. There are existing formal education options such as certificates in addiction medicine for physicians, undergraduate degrees specialising in addiction care, as well as postgraduate degrees in addictions counselling (Pavlovská et al., 2017; Rieckmann et al., 2011). However, in some LMIC countries, training options are limited for general health care workers such as doctors, nurses, social workers, and counsellors who are not offered adequate formal academic information related to EBPs with regards to substance use (Pasche et al., 2014; Pasche & Myers, 2012b; Senreich et al., 2017; World Health Organization, 2021b).

Recently, three studies have been conducted to identify an overview of the academic programmes in addictions care in USA, Europe and Africa. In the USA, there are 333 universities offering nearly 400 addiction study programmes of which over 300 were degree programmes with some clinical training for medical professions such as doctors, registrars and nurses. In Europe, there are approximately 25 universities with 34 addiction academic degree programmes. In Africa, there are only six universities with nine formal addiction care programmes (Lososová et al., 2020; Pavlovská et al., 2017; Pavlovská et al., 2019) and of these, two universities in Kenya have a postgraduate diploma in Addiction Treatment Science, a Master's degree in Counselling Psychology: Chemical Dependency counselling and a Master's degree in Counselling Psychology: Addiction Studies (Kenyatta University and Africa Nazarene University). Universities in Botswana and Ghana have developed shorter courses or integrated addiction courses into undergraduate or postgraduate degrees (Lososová et al., 2020). The remaining six programmes are based at South African Universities, with two universities offering Master of Philosophy degrees as well as postgraduate diplomas in addictions care (Stellenbosch University and UCT) and the remaining two programmes are an online certificate and an online course in addiction counselling (Lososová et al., 2020).

Whilst there are many short certificate courses or non-university based education programmes for addictions care offered at private organisations or non-governmental

organisations around the globe and Africa, there are some concerns around the lack of standardised addiction training programmes, as well as a lack of trainees' implementation of EBPs being taught on these programmes in their daily practice (Klimas, 2015; Lososová et al., 2020). The only existing study examining the substance use treatment workforce in South Africa, Sodano et al. (2009) found that whilst counsellors working in the substance use field were trained as either psychologists or social workers, only one third had received formal training in EBPs for unhealthy substance use such as CBT and MI. Findings indicated that South Africans working with clients who use substances at unhealthy levels or are diagnosed with SUDs and mental illness, could benefit more from formal training in implementing EBPs appropriately rather than from short courses (Sodano et al., 2009). In addressing the training needs for healthcare providers and addiction care specialists to detect and treat the growing number of individuals using alcohol and drugs, there is a need to upscale existing quality academic programmes in many countries, including South Africa, in order to implement EBP widely (Kazdin, 2017; Klimas, 2015; Pasche et al., 2014).

2.6. Curriculum evaluation of EBPs

2.6.1 Approaches to EBP evaluations

Globally, there are various studies that investigate the effectiveness of EBP for substance use in postgraduate education curricula predominantly within the social work, nursing and medical professions, using various methods of assessment (Brousselle & Champagne, 2011; Campbell-Heider et al., 2009; Happell et al., 2002; Rassool & Oyefeso, 2007; Senreich et al., 2017). Evaluations have either been discipline- or programme-specific, limiting the generalisability of evaluation tools. Additionally, the most commonly evaluated domains assess a change in knowledge, attitudes and skills, yet these studies rarely evaluate the implementation of the EBP for substance use treatment in participants' workplaces (Carroll, 2014).

Most investigators have evaluated EBP education curricula using instruments that are related to the clinical practice of a certain profession. Shaneyfelt et al. (2006) conducted a systematic review to evaluate instruments for assessing education in EBP and found that instruments were mostly administered to medical students and postgraduate trainees to evaluate their EBP skills related to profession-specific scenarios, such as the Fresno Test and Berlin

Questionnaire; reliable and validated instruments used to evaluate knowledge and skills regarding realistic medical scenarios (Shaneyfelt et al., 2006).

A number of other studies have used intervention-specific evaluation tools to evaluate short-term training for interventionists, or to evaluate a more substantial educational programme or curriculum. For example, the instruments used focused on how well the EBP steps were performed in practice, where the practitioner self-reported retrospectively on their use of the steps. The domains assessed across the various instruments used were knowledge of the specific EBP, skills, attitudes, behaviours and self-efficacy (Straus et al., 2004). However, a systematic review by Albarqouni et al. (2018) found that most EBP evaluation instruments do not address all the domains described above and that the use of validated instruments was rare.

Other studies have expanded their evaluation approach to include practitioners' self-reported satisfaction and implementation of EBP teaching and curriculum taught. For example, Rassool and Oyefeso (2007) developed course specific instruments to evaluate the Postgraduate Diploma in Addictive Behaviour for nurses called the Post-Course Satisfaction Questionnaire (PCSQ), which addressed post course satisfaction with 18 items related to the course structure and organisation, as well as course satisfaction around the course approaches to teaching and learning activities. They also developed the Course Impact Questionnaire (CIQ) which has 17 items measuring the impact that the course had on their professional development, this included clinical practice, communication and management in addiction care (Rassool & Oyefeso, 2007).

More recently, the focus in medical training has been on the impact of EBP on patient-level outcomes using objective measures in addition to the measurement of practitioner outcomes related to stand-alone short training courses and EBP curricula within other programmes, providing data on the 'real-world' impact of EBP training (Albarqouni et al., 2018). Outcomes measured include reduction of substance use, a reduction in health and social consequences of use, or total abstinence of use and an overall improvement in functioning (Albarqouni et al., 2018; Kiluk et al., 2019; Shaneyfelt et al., 2006). However, there is still a scarcity of data on how the training intervention affects patient outcomes (Albarqouni et al., 2018; Ramos et al., 2003).

In another study, Prochaska et al. (2008) evaluated an EBP curriculum for psychiatry residents aimed at skills for treating tobacco use for patients with mental health problems; they used a self-report survey developed for the programme, the Psychiatry Resident Self-Report Survey, and patient charts documenting changes in tobacco use to evaluate the curriculum. They found that the curriculum showed an enhancement in the knowledge, attitudes and confidence of these residents in treating tobacco use in their patients. Whilst the study did not measure patient outcomes of tobacco smoking, it did find that there was also an improvement in residents' counselling skills, assessing readiness of patients to quit smoking, as well as assisting patients with quitting (Prochaska et al., 2008; Rassool & Oyefeso, 2007).

In summary, there are no comprehensive, generalisable measures to assess training for EBP in the substance use field (Shaneyfelt et al., 2006). Ideally, such instruments would be available to highlight areas for improvement in EBP education curricula in order to improve practitioners' competencies and knowledge, increase the uptake of skills in practice and improve patient outcomes.

2.6.2 Evaluating attitudes towards EBP

A broader approach is using instruments or tools to evaluate participants' attitudes towards acquiring and using knowledge and skills related to the use of EBP during courses, such as the Evidence-Based Practice Attitude Scale (EBPAS) developed by Aarons (2004) and the Evidence-Based Practice Questionnaire (EBPQ) developed by Upton and Upton (2006). This approach recognises the importance of measuring a general attitude towards adoption of EBP amongst health care workers as there is evidence that links attitudes with the effective learning of new knowledge and skills (Aarons, 2004; Hardeman et al., 2002). This approach is supported by theories such as the Theory of Planned Behaviour (TPB) which has been widely used in planning behaviour change interventions. Although there are critiques of this theory, TPB offers a useful conceptualisation of the role of attitude as a precursor, if not a sufficient pre-condition, to behaviour (St Quinton et al., 2021). The TPB is a theory which describes a hypothesised mechanism by which a person's behaviour is influenced by their beliefs and self-efficacy related to the behaviour. When an individual has a positive attitude towards a certain behaviour, and the environmental factors are favourable, the individual feels confident, and there is a positive intention towards the behaviour, it may then lead to the behaviour being implemented (Armitage & Conner, 2001). TPB has been used in various fields ranging from

the adoption of behaviour change interventions related to health issues such as substance use, exercise and food, to consumerism, recycling behaviour, ethical behaviour, social networking as well as education related to selection of promising students and student performance (Alas et al., 2016; Hardeman et al., 2002; Holdsworth et al., 2019).

Within the field of implementation science, a number of studies have shown that the implementation of EBP should take into consideration the attitude of the service provider as an important aspect of implementing a new treatment or approach in a setting (Aarons, 2004; Lau et al., 2020; Newhart et al., 2021). In EBP curricula evaluations, these tools may be useful in evaluating the change in attitudes, and can be applied to diverse programmes, allowing for a comparison of methods employed to improve attitudes towards EBP (Aarons, 2004; Upton & Upton, 2006).

Whilst there are some studies in medical training settings as mentioned above, there are relatively few studies evaluating education curricula related to EBP for the treatment of unhealthy substance use and SUDs. More specifically there is a gap in knowledge regarding the impact that such education has on the knowledge, skills and attitudes and implementation of EBP of professionals working with people who use substances. Such evaluations are vital in assessing whether a programme is meeting its objectives (Pattersen et al., 2014; Shaneyfelt et al., 2006). This study attempts to fill this gap in South Africa by evaluating the attitudes of PgDip trainees and graduates in implementing EBP taught on the PgDip.

2.7. Postgraduate Diploma in Addictions Care curriculum

In order to address the limited professional workforce in addiction care, the PgDip curriculum at the University of Cape Town (UCT) was developed to build capacity for health professionals to implement EBPs in their work with people using substances at unhealthy levels. It was also a priority identified by the Department of Social Development for inclusion in the Western Cape Provincial Government's strategic plan, which led to a directive to prioritise interventions for the prevention and treatment of unhealthy substance use and SUDs (Pasche et al., 2014). The programme was established in 2011, shortly after a similar PgDip was started at the Stellenbosch University (SU) in 2010. UCT and SU are the first universities in sub-

Saharan Africa to offer specialised training programmes in the EBP approaches for the treatment of SUDs (Pasche et al., 2014).

The PgDip at UCT was developed by experts in interventions for unhealthy substance use and the treatment of SUDs. The curriculum was based on the U.S. Substance Abuse and Mental Health Services Administration's (SAMHSA) guidelines regarding the core competencies for addiction care professionals, as well as internationally accredited curricula including the International Programme in Addiction Science (IPAS) and other programmes from the United Kingdom and United States (Centre for Substance Abuse Treatment, 2015; Pasche et al., 2014). The PgDip is run by a course convenor, (clinical psychologist with experience in substance use treatment); course assistant, part-time assistant lecturer with specialist guest lecturers invited to cover various topics in the PgDip. The admission requirements are that applicants have an approved Bachelor's Degree in Health Sciences (medicine, dietetics, occupational therapy and nursing) or Humanities (such as social auxiliary workers, social workers, registered counsellors, psychologists), and are registered as an independent practitioner with the Health Professions Council of South Africa (HPCSA), South African Nursing Council (SANC) or the South African Council for Social Services Professions (SACSSP). If applicants do not meet the above criteria, they can also apply on the basis of Recognition of Prior Learning (RPL). These applicants provide a portfolio of evidence reflecting their prior experience and/or professional work in the field of substance use (University of Cape Town, 2022b).

The Diploma comprises eight modules and an integrated assessment (portfolio and oral examination), as well as a 180-hour practical component. Students have the option to complete the Diploma in one or two years and modules are offered in seven to eight-week lecture blocks. This format makes it easier for students in full-time employment to select modules based on their availability over the two years. Each module has a written assignment and examination attached to it and comprises 15 National Qualification Framework (NQF) credits on the Higher Education Qualification Sub-Framework (HEQSF) Level 8 as part of a postgraduate qualification. See Table 1 below for modules (Pasche et al., 2014; University of Cape Town, 2022b).

Table 1: Curriculum of the Postgraduate Diploma in Addictions Care

Course Code	Description	NQF Level	HEQSF Level
PRY4013F	Understanding Addictive Disorders	15	8
PRY4009F	Screening and Assessment of Addictive Disorders	15	8
PRY4011F	Managing Co- Occurring Mental Disorders	15	8
PRY4015F	Managing Children and Adolescents with Addictive Disorders	15	8
PRY4008W	Evidence Based Treatment Approaches	15	8
PRY4016S	Working with Family and Social Networks	15	8
PRY4012S	Ethics and Professional Development	15	8
PRY4010S	Case Management and Service Monitoring	15	8
PRY4023F/S	Integrated Assessment (Portfolio & Oral Exam) [not for credit]	0	8

(University of Cape Town, 2022b)

Generally, there are a lack of studies evaluating education curricula related to EBP for the treatment of unhealthy substance use and SUDs in South Africa. Despite the fact that there were challenges when the programme was first implemented such as capacity for supervision, differences in work and training environments, a wide range of academic abilities between students, a lack of competencies related to counselling and diagnostic skills (Pasche et al., 2014), the PgDip has trained a number of individuals working in the substance use field. Despite this, the programme is yet to be formally evaluated.

2.8. Theoretical framework and the evaluation of the PgDip

For this study, programme-specific aspects of the PgDip offered at UCT were evaluated by applying a logic model, and a broader view informed by the field of implementation science was adopted to evaluate attitudes to implementing EBP using the EBPAS questionnaire (Aarons, 2004). The theoretical framework for strategies for the PgDip is based on a logic model (Brousselle & Champagne, 2011; Armitage & Conner, 2001) and the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2009).

For the programme-specific approach, a logic model of the existing PGDip programme was used as a framework (see Table 1). Logic models are widely used in programme evaluation (Brousselle & Champagne, 2011). The use of the logic model as a framework assists with understanding the underlying mechanisms addressing the objectives of the PgDip course (Davidoff et al., 2015; Proctor et al., 2012).

In this study, the logic model has been used to identify factors relating to the inputs, outputs and outcomes of the PgDip. The inputs are the resources used by an organisation to achieve its outcomes (see Figure 1). These include (i) financial resources (covered by Department of Social Development) to cover operational costs such as salaries, administrative costs, communication costs, equipment and student bursaries, (ii) staffing, (iii) time spent coordinating the programme and liaising with students, (iv) reading material and (v) collaboration with treatment facilities for practical placements. There are also financial resources for student bursaries each year. The outputs are the activities used by the organisation to achieve its outcomes and include: (i) the delivery of modules addressing EBP in addictions care, (ii) group supervision conducted with students, (iii) meetings held with the DSD, students and faculty, (iv) the development and adaptation of curriculum resources, and (v) assessment of assignments and examinations.

The short-term outcomes of the PgDip are improved attitudes, knowledge and practical skills related to EBP to assess and treat substance use. The medium-term outcomes are the transfer of skills to screen and assess for substance use to other practitioners in the graduates' working environments, as well as graduates' use of EBP to treat substance use. It is hoped that the long-term outcomes of the PGDip will contribute to: (i) change in clinical practice at both individual level and organisational level, (ii) improved organisational policies regarding intervention and treatment for unhealthy substance use and SUDs, (iii) an increase in numbers of trained professionals and (iv) improved access to care and a decreased treatment gap for unhealthy substance use and SUDs in South Africa. In this study the focus will be on assessing the short- to medium-term outcomes of the PgDip. This study will not be able to assess the long-term outcomes related to the proper implementation of EBP as well as organisation policy changes, as it was not the focus of the study.

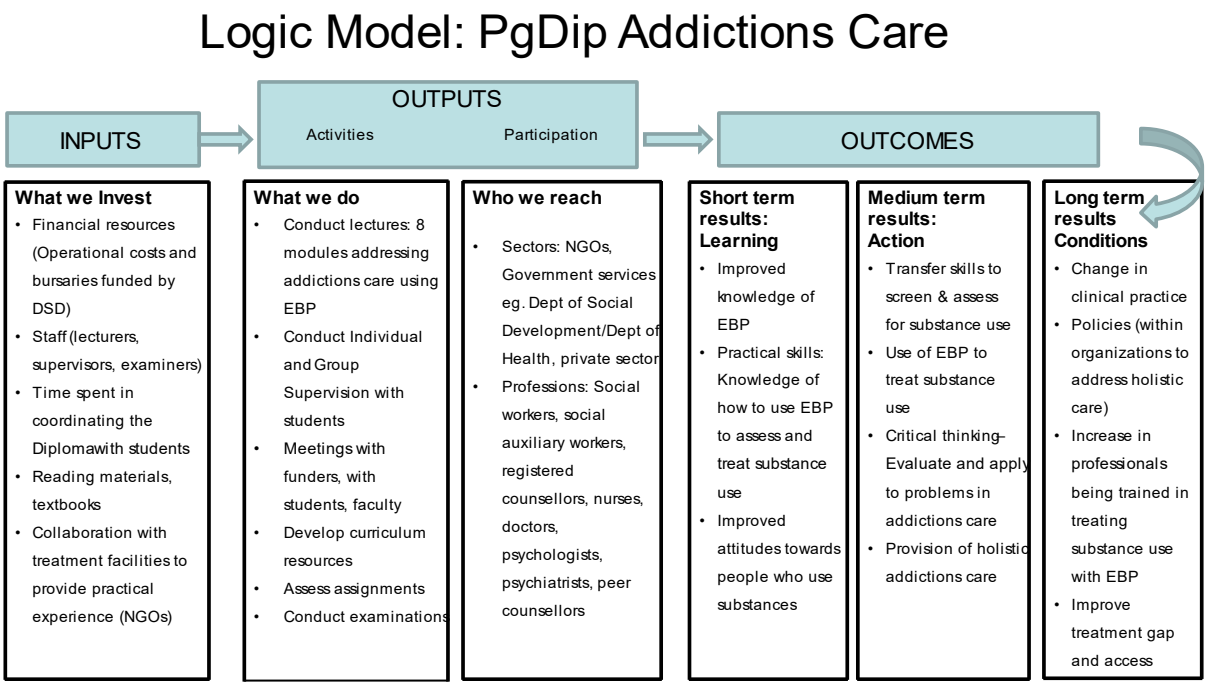


Figure 1: Logic Model: PgDip Addictions Care

Lastly, the Consolidated Framework for Implementation Research (CFIR), is a comprehensive framework looking at the domains that influence the successful implementation of interventions or programs, such as the PGDip. The CFIR provides a structured approach for understanding and addressing barriers and facilitators to implementation success (Damschroder et al., 2009). The CFIR consists of five major domains, the first domain is intervention (PGDip) characteristics such as the curriculum content of EBPs, design of the PGDip and quality. The second domain, the outer setting, comprises of the social and political context, policies and economic factors, whilst the third domain, the inner setting, includes cultural factors, resources, organisational structure and policies which affect the implementation process. The fourth domain, characteristics of individuals includes factors such as knowledge and beliefs, attitudes and behaviour, self-efficacy and interests. The fifth domain is the implementation process with essential activities which include planning, engaging, executing, and reflecting and evaluating (Damschroder et al., 2009).

2.9. Conclusion

The PgDip was designed to build capacity in the addiction care workforce in South Africa and has trained approximately 120 students since 2011 at UCT. However, it is not clear whether the knowledge, attitudes and skills gained on the PgDip are sustained, and whether

students/graduates implement the skills learned in their daily practice. This study aims to fill this gap by evaluating students' knowledge and attitudes of EBPs and exploring integration of the knowledge into their practice. Additionally, the study elicits practitioners' experiences of both being taught EBP in the PgDip at UCT, as well as incorporating EBP into their practice. The findings from this study will inform improvements to the programme as well as advise other training programmes in South Africa as well as on the African continent.

3. Chapter Three: Research Methods

3.1. Study design

This research study utilised a mixed methods explanatory sequential study design to investigate students' knowledge, attitudes and experiences related to evidence-based practices (EBP) taught on the PgDip programme. This study took place in two phases: Phase 1 of the study employed a quantitative design to obtain descriptive statistical data of attitudes related to EBP intervention techniques as well as a questionnaire of the satisfaction of the PgDip. This was done using a web-administered questionnaire disseminated by email to all individuals who had registered for the Postgraduate Diploma in Addictions Care at the University of Cape Town (UCT) from 2011 to 2018. Phase 2 of the study was qualitative in nature and comprised of in-depth semi-structured interviews with a sub-sample of Phase 1 participants to allow the investigators to explore knowledge gained of EBPs taught on the course, experiences of the lectures being taught, and experiences in implementing EBPs in practice. For Phase 2, the Consolidated Criteria for Reporting Qualitative (COREQ) research guidelines were employed (Tong et al., 2007).

3.2. Participants and sampling

UCT is located in Cape Town, in the Western Cape Province in South Africa, and it is one of four major universities in the province. It is one of the oldest universities in Africa and was ranked first in Africa and 173rd in the world in 2023 (University of Cape Town News, 2023). In the same year, UCT had 18 154 undergraduate students and 11 880 postgraduate students (University of Cape Town, 2023). Since 2011, the PgDip has been offered by the Department of Psychiatry and Mental Health, which is based in the UCT Health Sciences Faculty, and has admitted approximately 170 students according to Departmental records.

For Phase 1, the study participants were graduates of the PgDip or postgraduate students that enrolled in the programme between 2011 and 2018. An initial email was sent to potential participants, which outlined the study information and objectives and asked them to opt-in to receive further communication on the study. Those who opted in were sent a follow-up email with Phase 1 information (see Appendix A). A list of students registered between 2011 and 2018 was developed through accessing the UCT PeopleSoft student administration

system with permission granted from UCT Human Research Ethics Committee (HREC) and the Development and Alumni Department (DAD). PeopleSoft is a software product that is owned by Oracle and is used at UCT to capture student information (Rouse, 2019).

From the Phase 1 pool of participants, those who had graduated from the PgDip were identified, and a purposive sample of 20 participants was recruited for Phase 2. Purposive sampling was used for Phase 2 to achieve maximum variation of participants by profession, gender and year of graduation. Professions included peer counsellors, social workers, registered counsellors, psychologists, nurses, occupational therapists, and medical doctors. Additional criteria that were considered during sampling included: (i) year of first registration and (ii) gender– efforts were be made to include at least two male participants as the majority of the students on the PgDip were female. Purposive sampling was employed to gain a detailed understanding of the experiences and insights from the various relevant professionals within the limited group of participants (Palinkas et al., 2015).

3.3. Procedure, data collection tools and analysis

The researcher is currently employed as an assistant lecturer on the PgDip programme. As part of the PgDip co-ordinating team, she has access to information, which was only extracted for the study after permission was granted as described above.

Research assistants (RAs) were employed to assist the researcher in collecting the data to minimise any bias due to the researcher being part of the PgDip faculty. The relationship established by the researcher with the participants during the PgDip programme may have allowed research participants to engage more easily and possibly feel more comfortable during participation. However, given the potential for social desirability bias the research team opted for external research assistants to collect the data in phase 2 of this study (Latkin et al., 2017).

During the study, two external RAs were employed at different times, and both had completed an Honours degree and had qualitative research experience. Once employed, the RAs underwent ethics training, as well as training regarding study procedures and qualitative interviewing techniques. Standard operating procedures (SOPs) were developed for the RAs to utilise and to ensure that the research was conducted as planned, and a staff agreement

of confidentiality of information was signed. The researcher provided regular supervision to ensure that the interviews were of a high quality, and that confidentiality was maintained.

See the procedures for Phase 1 and Phase 2 below, including data collection tools and analysis.

3.3.1 Phase 1

Phase 1 was conducted by the researcher, whereby emails were sent to all 113 students on the list with an invitation to participate in the study. Participants could opt-in by clicking on the questionnaire link where it took them to the study information leaflet (Appendix B) as well as the questionnaire on the Cognito Forms platform (Cognito, 2021). Informed consent (Appendix C) was obtained electronically via questionnaire, and was completed before the questionnaire could be accessed. The questionnaire link was available for access between January 2020 up to end of September 2020, and email reminders were sent fortnightly to encourage participation. The length of access to the questionnaire link was kept up longer than anticipated due to the low rate of completion, which could have been due to some participants working on the front line during the start of the Covid-19 pandemic. Cognito Forms was accessed by the researcher via password login and all data received were secure and password encrypted.

Measures. The design of the questionnaire (see Appendix D) was informed by two theoretical frameworks, namely the Theory of Planned Behaviour, CFIR, as well as the programme logic model. Thus, attitudes, knowledge and use of skills were addressed in the questionnaire. Additionally, to inform future PgDip improvements, participants' opinion of course aspects (outlined in the PgDip logic model above) were also included, such as the supervision structures for the course and the course material.

The initial part of the questionnaire included sociodemographic information, degree qualifications, current place of employment, information related to the course such as first date of registration and graduation year, as well as a question around whether participants assessed clients for risk or conducted interventions for substance use as part of their usual duties.

The next part of the questionnaire included an 11-item questionnaire developed by the researcher and the supervisors and focused specifically on: (i) satisfaction with the PgDip

programme overall; (ii) satisfaction with course material, administration processes, clinical components and knowledge of the lecturers; (iii) perceptions of the knowledge and skill gained through the PgDip. Participants rated each statement on a Likert scale, ranging from 0= 'not at all' to 5= 'to a very great extent.

Finally, the Evidence-Based Practice Attitude Scale (EBPAS) developed by Aarons (2004) was used to assess the attitudes of participants in relation to the implementation of EBP approaches taught on the PgDip programme. The EBPAS was developed to measure the attitudes of mental health care providers towards the implementation of EBP, measuring individual factors as well as organizational characteristics. It is a 15-item questionnaire with four subscales.

- Subscale 1 (questions 11, 12, 13) relates to the 'Requirements' set out by the organisation, the supervisor and regulatory bodies.
- Subscale 2 (questions 9, 10, 14, 15) is the 'Appeal' scale with questions related to EBP being appealing to the health care worker and their colleagues, making sense to them, and feeling competent to implement it correctly.
- Subscale 3 (questions 1, 2, 4, 8) addresses 'Openness' to using new interventions and following an EBP treatment manual or therapy developed by researchers, and openness to implementing a new treatment approach.
- Subscale 4 (questions 3, 5, 6, 7) is the 'Divergence' scale which has questions related to the perceptions that research-based interventions are less useful than the clinical experience of health workers (Aarons, 2004; Aarons et al., 2010).

The EBPAS uses a Likert scale to rate responses ranging from 0= 'not at all' to 5= 'to a very great extent' and the scores are computed by tallying all the subscale scores, with subscale 4 being scored in reverse (Aarons, 2004).

Data analysis. Data were captured by the researcher in the Statistical Package for Social Sciences (SPSS version 28) and then descriptive statistics were conducted. Categorical data for year of graduation and screening and intervention for substance use were analysed using chi-square tests comparing groups by year of graduation. The categorical variable for year of graduation was calculated as the years 2012-2016 and 2017-onwards. This splitting of the

years into two groups was because the programme structure changed over the years, and the study wanted to compare the retention of knowledge and skills between the two time periods. ANOVA tests were performed to compare the mean scores on the EBPAS and subscales across the three profession/occupation groups. These results are interpreted with the following limitation in mind: since the sampling pool is small (113 students registered from 2011-2018) and 47.8% of the past students responded to the questionnaire. Further inferential statistics were not performed as the study was not adequately powered.

3.3.2 Phase 2

Participants who had completed the questionnaire in Phase 1 and graduated from the PgDip programme were eligible to take part in Phase 2. The RAs contacted a sample of eligible participants to explain Phase 2 of the study and invited participants for an interview. Recruitment continued until data saturation was reached whereby no new information or themes emerge from the data being collected. Once participants agreed to participate in the audio-recorded interview, the interview date and time was set. No face-to-face interviews took place due to the Covid-19 pandemic. All interviews were conducted via telephone or Zoom calls.

Before the interview was conducted, written informed consent was obtained with participants sending a signed scanned copy or an electronically signed copy of the informed consent form (see Appendix C). The RAs checked and stored all consent forms and made sure that the participants had retained an electronic copy for their records. All consents forms were stored in a password-encrypted file that is only accessed on the researcher's laptop. The full details of the study were explained again before the interview. Participants were made aware that participation is voluntary and confidential, and all potential benefits and risks of the study were explained.

All interviews took place via a telephonic call or a Zoom call (audio or video). The challenges of this approach included difficulty in establishing rapport with the participant, as well as practical barriers, such as internet connectivity issues and disruptions (Farooq & de Villiers, 2017). The interviews lasted up to an hour and, since the PgDip was taught in English, all interviews were conducted in English. All interviews were audio-recorded with the participants' permission. Participants in Phase 2 were compensated for their time with an

instant money cash voucher of R100. Participants could withdraw the money from any ATM using a unique pin code.

The RAs ensured that each participant had a pseudonym to be used in the transcription of the interview, so as to anonymise the participant data to reduce the chance that the researcher could identify the participant. The interview audio-recordings and transcripts were identified by the chosen pseudonym and the researcher was blinded to who participated in Phase 2 of the study.

Interview schedule. A semi-structured interview schedule (see Appendix E) was used to collect the qualitative data which allowed the researcher to gain a rich narrative from participants as well as in-depth descriptions of their experiences and perceptions. The researcher aimed to gain an understanding of graduates' attitudes towards EBP, and experiences of integrating EBP taught on the PgDip programme into substance use services as part of their occupation, as well as to elicit recommendations on improving the PgDip programme.

The interview schedule addressed a number of broad topics, including: (i) graduates' career paths after completing the PgDip; (ii) what they understood by EBPs; (iii) challenges and facilitators experienced by participants in gaining EBP knowledge and using the EBP competencies gained from the PGDip course; (iv) opinions of the content taught on the PgDip; (v) the delivery of the course and (vi) recommendations of how the PgDip can be improved. Similar to the Phase 1 survey, the interview schedule was informed by the PGDip logic model, which was employed to explore aspects of the PGDip programme which could be improved.

Data analysis. All audio recordings were transcribed verbatim by a professional transcriber. When any participant's real name was mentioned in the interview by mistake, the transcriber omitted it in the transcript and replaced it with the pseudonym. The transcripts were imported into the qualitative software programme, NVivo version 12, for analysis.

The data were analysed using thematic analysis and the 32-item Consolidated criteria for reporting qualitative research (COREQ) guidelines were also adhered to (Braun & Clarke, 2019; Tong et al., 2007). Specifically, reflexive thematic analysis was used in this analysis, and it is defined as a research method that identifies, analyses and describes themes emerging from the data collected during the interviews (Braun & Clarke, 2006; Braun & Clarke, 2019).

Reflexive thematic analysis assisted in organising the data and gained a detailed narrative of the objectives set out above. Using reflexive thematic analysis, the researcher and two supervisors, separately read through some of the transcripts to get familiar with the data, in order to then develop the coding framework. The codes were then collated into potential themes. A group discussion then took place to review the coding framework in order to finalise the codes in relation to the themes that emerged. The coding framework was modified and applied to the rest of the data; changes were made along the way when necessary and applied to the full sample of transcripts (Braun & Clarke, 2019).

Trustworthiness of the data. To ensure trustworthiness of the qualitative data, the four strategies by Lincoln and Guba (1985) were used. These included credibility, transferability, dependability, and confirmability (Stahl et al., 2020). For credibility, the researcher used investigator triangulation by discussing the collected data with two supervisors who individually analysed the data. Employing reflexivity and acknowledging the role of the researcher in relation to the participants, two research assistants were employed to collect the data. Data saturation and researcher triangulation strategies were also used for credibility of the data. For transferability, to ensure that results are able to be transferred from one setting to the next, the data collection strategies have been described in detail with a 'thick description' by the participants and detailed description of the research process, with the importance of the sampling strategies and data collection strategies. For dependability of the data, having two supervisors analyse and code the data separately ensures that the data is trustworthy. Lastly for confirmability, with the write up of the data, member checking between the researcher and two supervisors took place at every step of the research process, ensuring that the data captured accurately represents the information provided by the participants. These supervisors had no engagement with the participants throughout the study.

4. Chapter Four: Results

4.1. Quantitative analysis: Phase 1

For Phase 1 of the study, 113 individuals were invited to participate in an online questionnaire and 54 (47.8%) participants completed the questionnaire (see Table 1). Of these, 45 (83%) were female, and the mean age of the sample was 38.9 years old (SD=8.3). The majority of participants currently reside in the Western Cape (n=51, 94.4%), and have a formal qualification in a Social Sciences discipline (n=37, 68.5%), such as social work or psychology, with a further 12 (22.2%) who have a Health Sciences Degree, such as medicine, occupational therapy or nursing. Five participants (9.3%) have no formal tertiary qualification but were accepted into the programme via recognition of prior learning (RPL) and were recovery assistant counsellors with lived experience. Most participants (n=43, 79.6%) currently work in clinical practice (social worker, psychologist, registered counsellor, doctor, psychiatrist, nurse, occupational therapist), with another five (9.3%) that are based in academia as lecturers, researchers or students. Six participants (11.1%) currently work in peer support (recovery assistant counsellors). Regarding place of work, 12 (22.2.%) work in a government facility, nine (16.7%) work in substance use treatment facilities, 10 (18.5%) in other health care facilities, nine (16.7%) at non-governmental organisations and nine (16.7%) reported working in private practice (see Table 2).

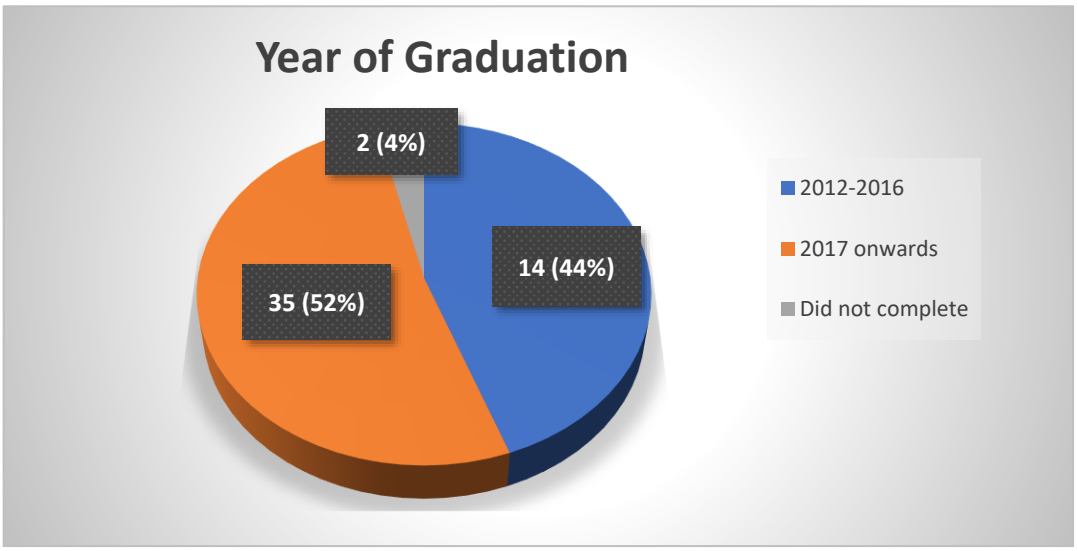
Table 2: Socio-demographic characteristics of PgDip students/graduates

Total sample (n=54)	**n (%)**
Age in Years (M, SD)	38.9, 8.3
Sex	
Male	9 (17.0)
Female	45 (83.0)
Relationship status	
In a relationship	31 (57.4)
Not in a relationship	23 (42.6)
Current place of residence	
Western Cape	51 (94.4)
Other provinces in South Africa	1 (1.8)

Other countries	2 (3.7)
Education/Discipline	
Social Sciences	37 (68.5)
Health Sciences	12 (22.2)
Recognition of Prior Learning (RPL)	5 (9.3)
Current Occupation	
Clinical	43 (79.6)
Academia/Research	5 (9.3)
Peer Support	6 (11.1)
Total	54 (100.0)

Of the sample, 14 (44%) graduated between 2012 and 2016, 35 (52%) graduated from the year 2017 onwards, and 2 (4%) participants did not graduate (see Figure 1).

Figure 2: Participants by year of graduation



The findings show that the proportions of participants having screened or assessed for SUDs and provided SUD intervention are similar for the earlier graduates and the more recent graduation cadre. Therefore, there is no statistical significance found between the year of graduation and screening and intervening for SUD (p= 0.52 and 0.93) (see Table 3).

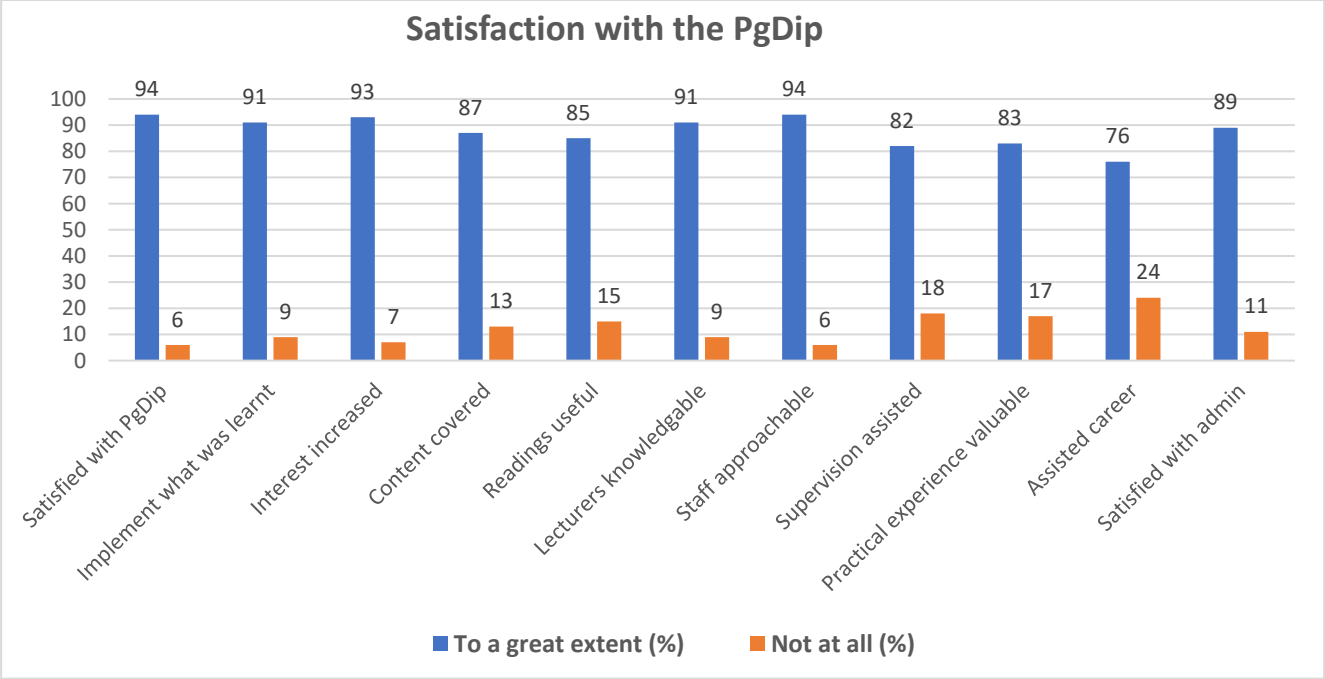
Table 3: Screening and intervention for substance use by year of graduation

Year Graduated (n=52)	n (%)	SUD Screen (yes)	SUD screen (no)	p-value	SUD Intervention (yes)	SUD intervention (no)	p-value
2012-2016	24 (46.2%)	17 (70.8%)	7 (29.2%)	0.52	16 (66.7%)	8 (33.3%)	0.93
2017 onwards	28 (53.8%)	22 (78.6%)	6 (21.4%)		19 (67.9)	9 (32.1%)	

Footnote: Two participants dropped out of the programme and were therefore not included in this analysis.

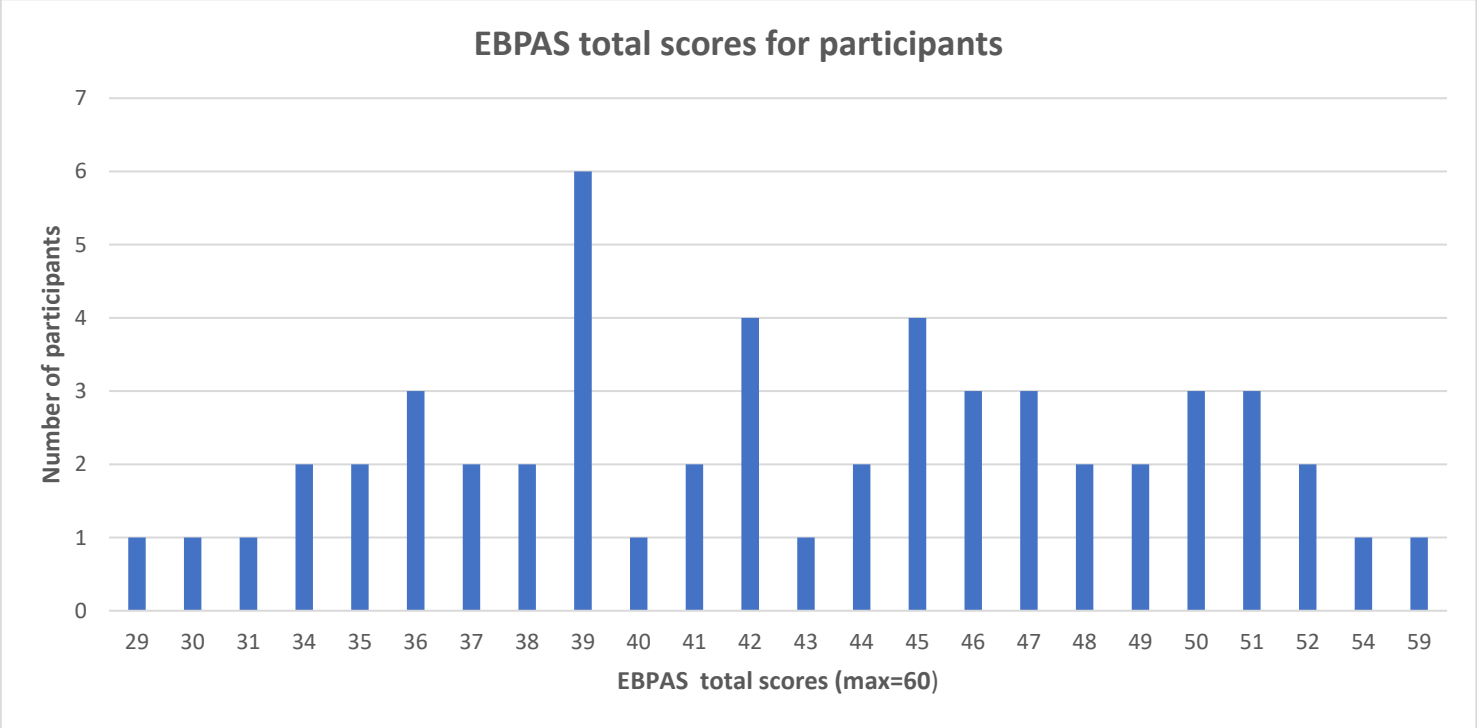
For the PgDip questionnaire there was an overall positive attitude towards the PgDip, with the majority responding with “to a great extent”. Most participants were satisfied with the overall running of the PgDip course (n=51, 94%), with 49 (91%) participants reporting that they have been able to implement what they were taught on the PgDip into their workplace with clients. Fifty (93%) participants reported that their interest in addictions care increased because of the PgDip. Most participants reported that the volume of course content covered on the PgDip was satisfactory to a great extent (n=50, 87%) and that all the readings and lecture notes were useful during their studies (n=46, 85%).The majority of the participants agreed to a great extent that the lecturers on the PgDip were knowledgeable on the subject matter (n=49, 91%) and that the core PgDip team was highly approachable during their time at UCT (n=51, 94%). A slightly lower proportion of the participants found that the supervision framework on the PgDip assisted them in their client case management (n=44, 82%) and that the practical experience of 180 hours was valuable in their learning experiences (n=45, 83%). Approximately three quarters of the participants felt that the PgDip assisted in career progression (n=41, 76%). The majority of the participants found that they were satisfied with the overall administrative processes related to the PgDip course (n=48, 89%) (see Table 4).

Table 4: PgDip Questionnaire



As can be seen in Table 5. all 54 (100%) participants completed the Evidence-based Practice Attitude Scale (EBPAS). The average score was 42.85 (SD=6.55), with the lowest score being 29 and the highest score being 59. The most common score reported was 39 (n=6 participants). The mean scores and standard deviations for the four EBPAS subscales are as follows: Appeal subscale was 3.18 (SD=0.62), the Openness subscale was 3.22 (SD=0.57), the Divergence subscale was 2.40 (SD=0.92), and the Requirement subscale mean score was 2.55 (SD=1.11).

Table 5: EBPAS Total Scores (max total score = 60) of participants



The differences between the group mean scores on the EBPAS for the current profession/occupation groups and total mean scores for the EBPAS approached statistical significance, F(df) = 3.07 (2), p= 0.06. Clinicians mean scores were slightly higher than academic and peer support occupations (see Table 6).

Table 6: Profession/occupation and EBPAS total scores (mean)

Profession/Occupation	**Mean (SD)**	p=0.06
Clinical (n=44)	43.86 (6.61)	
Academia/Research (n=5)	38.00 (5.39)	
Peer Support (n=5)	38.80 (2.95)	

There are no statistically significant mean scores for any of the four EBPAS subscales between the three profession/occupation groups (see Table 7), with the exception of the scores on the Divergence subscale approached statistical significance with the peer support group scoring lower than the clinical and academia groups.

Table 7: Profession/occupation and EBPAS total scores (mean) with ANOVA

	Clinical	Academia/Research	Peer Support	
Subscales	Mean (SD)	Mean (SD)	Mean (SD)	F (df=2), p-value
Appeal	3.22 (0.63)	2.65 (0.42)	3.35 (0.52)	2.20, 0.12
Requirements	2.61 (1.12)	1.73 (1.28)	2.80 (0.65)	1.58, 0.22
Openness	3.29 (0.59)	3.05 (0.33)	2.75 (0.40)	2.34, 0.11
Divergence	2.49 (0.91)	2.50 (0.83)	1.50 (0.73)	2.83, 0.07

4.2. Qualitative analysis: Phase 2

Results of the qualitative analysis of this study is arranged according to the themes that emerged from the interviews conducted. Firstly, this section will report on the participant socio-demographics data and then secondly, a detailed description of the eight themes from the data analysis from the interviews.

Twenty out of 22 participants who were invited to participate from Phase 1 agreed to participate in Phase 2 which comprised qualitative interviews. Participants had graduated from the PgDip programme between 2012 and 2019 with only 1 (5%) response from 2012, 1 (5%) response from 2013 and none from the 2015 class. (see Figure 3).

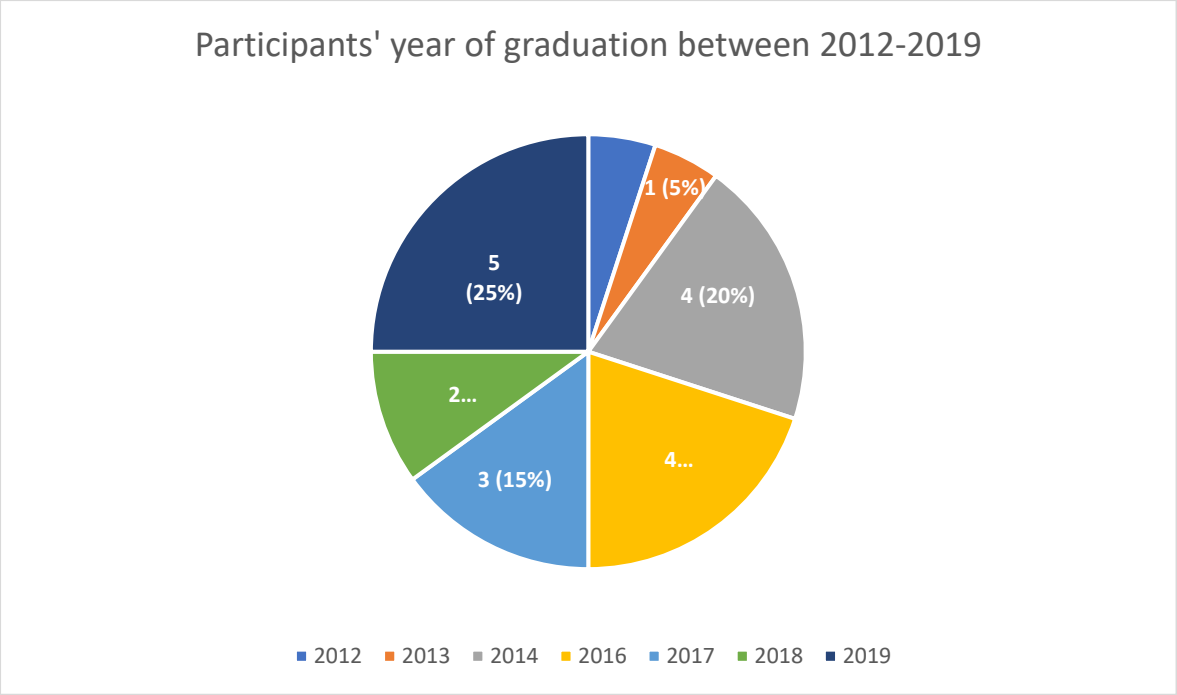


Figure 3: Participants' year of graduation

Of the sample, 16 (80%) were female and 4 were male (20%) and the mean age of participants was 38 years old with a standard deviation of 8.5. All participants reported that they currently reside and work in the Western Cape, South Africa (see Table 8).

At the time of the interview, participants worked in various settings. Four participants (20%) were employed in specialist substance use treatment facilities; three were employed in primary health care facilities, three were employed in tertiary educational institutions such

as universities and colleges, with one participant studying further at a university, while two participants were working in private practice as substance use counsellors. Another four participants were working in local government facilities and were active in the substance use field. One participant was working at a non-governmental facility that does not treat clients for substance use, one participant was employed but not in the substance use/medical/psychology or social work field and lastly, one participant was unemployed.

Table 8: Sociodemographic characteristics of sample

Variable	**Total sample (n=20, %)**
Gender	
Female	16 (80)
Male	4 (20)
Age (m, sd)	38, 8.5
Profession/Training	
Social Worker	5 (25)
Registered Counsellor	5 (25)
Psychology Training	4 (20)
Addiction Counsellor	4 (20)
Nurse	1 (5)
Teacher	1 (5)
Current Place of Work	
Substance use treatment facility	4 (20)
Healthcare facility	3 (15)
Tertiary institution	4 (20)
Private practice	2 (10)
NGO	1 (5)
Government	4 (20)
Other	1 (5)
Unemployed	1 (5)

Theme 1: Perceived impact of the PgDip programme on career trajectories

Participants reported various benefits of the PgDip programme in their workplace and for furthering their careers. First, participants reported that they had opportunities to practice their knowledge and skills in their workplace, enhancing the service they provided. One participant mentioned being able to "*kind of specialise in the prevention and the treatment of substance use disorders*" in their job at the time, and another participant working in a substance use outpatient setting reported that they were "*obviously using the material and the stuff that they taught us in the diploma course*".

Second, completion of the PgDip led to some participants gaining employment in the substance use treatment field with the PgDip programme setting them apart from other applicants and opening *"doors in different avenues"*. Participants reported that they were able to gain specialised substance use treatment positions, with leadership or management opportunities. One participant described the knowledge of substance use treatment gained during the PgDip led to these opportunities:

> *"I think a big part of why my interview went as well as it did was because I was doing the PgDip. So, it allowed me to have a broader perspective in terms of treatment with regards to people that have dual diagnoses, substance use, in conjunction with a severe mental disorder. So that was a very big motivating factor I would think, on the part of the employer."* (Participant 18)

Third, others felt that participating in the PgDip diversified their career options to include starting their own private practice, joining multi-disciplinary teams at private facilities, engaging in academia and research, as well as eligibility for additional postgraduate study opportunities. At the time of the interviews, a few graduates mentioned that they were registered to further their education and others have since completed Masters-level degrees. Additionally, two participants described moving from clinical work and treating clients directly, into managerial roles in their various organisations:

> *"…I was working as a social worker, and after completing those studies [PgDip] … a very specialised program within [government department]. I moved onto the regional office, so in that whole [district name] region I became responsible to coordinate substance abuse programming."* (Participant 16)

Theme 2: Retention of Knowledge of EBP

Most participants discussed that they retained at least some knowledge that they were taught on the PgDip. They could describe and define evidence-based practices (EBP) as shown by the following two quotes:

> *"So, it's on the foundation of evidence that is gathered from studies, from data, from clinical practices that has proven to have worked, and utilising those strategies and those theories in order to incorporate it into one's, you know, working setting."* (Participant 8)

> *"I think it's more following based on scientific principles and ideas. So, if a person would undergo the program this would be the result, and then more so it would be something that has been implemented not only here in South Africa, but it has been tested in other areas, in other places and it will hold the same result."* (Participant 16)

However, participants reported various levels of retention of their knowledge of EBP that were taught on the PgDip, depending on certain factors. Those participants who had completed the PgDip more than five years ago, and who do not work directly with clients who use substances, had some difficulty remembering and describing EBP, as one participant mentioned *"[I am] trying to remember the specific modules that we also did, and it's been some time since I've worked with clients also*." (Participant 5). Once those participants were reminded of specific EBP they could easily recall the information. Others recalled the EBP information more easily, particularly if they had found it relevant and could apply the skills with their clients, as described below:

> "*I'm not sure if this fell under the evidence-based treatment, but I remember there was a big focus on motivational interviewing, and the stages of change model. I enjoyed that because it fell in line with the work that I was doing at the time and even now the work that I'm doing."* (Participant 1)

> "*We were taught quite a range of it. But I think the two that really stood out for me that I thought was extremely helpful was the CBT, cognitive behavioural therapy, and then the motivational interviewing, because I think besides that being taught to us as*

an evidence-based practice to use with our clients, it was also something that we could apply to ourselves." (Participant 19)

There are a number of EBP approaches, including Cognitive Behavioural Therapy (CBT) and Motivational Interviewing (MI) mentioned above, that were taught on the PgDip that participants mentioned specifically, describing elements of the approaches. Participants retained the knowledge and skills of the various EBP that they were taught on the PgDip and could name and describe them well. Some of the EBP approaches that participants mentioned specifically included Dialectic Behavioural Therapy (DBT), Family Treatment approaches, Harm reduction, 12 Step programs (AA, NA, Al anon), Screening, Brief Intervention and Referral to Treatment (SBIRT), the Minnesota Model, the Matrix Model, Opioid Substitution Therapy (OST), and the Assertive Community Treatment (ACT) model. Amongst these various approaches, participants generally retained knowledge about CBT, more specifically around the ABC model and functional analysis; and then specifically for MI the five principles, spirit of MI, and the core counselling skills:

"CBT is about changing thoughts and beliefs and you go through the A, B, C method where there is an antecedent, there's a specific event because of that event the person believes something and then there's consequences [using substances]." (Participant 10)

"It focused a lot on like for example having the spirit of motivation of MI, going in with collaboration, and then using more the ratio of open-ended questions to close-ended questions ... then you can then follow through how you are going to direct the conversation. So, I could identify when to use the elicit method." (Participant 17)

It was also evident that most participants retained knowledge of Screening, Brief Intervention and Referral to Treatment (SBIRT) as another EBP that was taught on the PgDip. A number of participants could describe in detail what SBIRT entails and the skills that they learnt from it. Some participants mentioned specific screening tools that they were taught, including the Alcohol Use Disorders Identification Test (AUDIT), Drug Use Disorders Identification Test (DUDIT), the Alcohol, Smoking and Substance Involvement Screening Tool (ASSIST), Drug Abuse Screening Test 10 (DAST 10) and CAGE (Cut, Annoyed, Guilty, Eye-opener) questionnaire for adults and the CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble)

questionnaire for adolescents. Another participant mentioned in detail how the evidence-based screening assisted in identifying clients who would benefit from a brief intervention:

> *"Of course, having a brief intervention looking at what is the screening result, engaging with the client again based on what you found in terms of the screening because the screening tool would also identify where the person is in terms of his or her own addiction, and then what would the -- what service would be recommended so to speak"* (Participant 16).

Theme 3: Implementation (changes) of EBP in the workplace

There are many aspects of the PgDip that participants reported implementing in their workplaces. These aspects ranged from applying knowledge and client-centred approaches taught on the PgDip to their clinical practice, implementing specific evidence- based practice (EBP) approaches and supervision frameworks, and implementing training and changes within their organisations.

A few participants mentioned that they could take the theory and EBP treatment approaches and implement it with their work with their clients. Participants were able to learn theoretical approaches to understanding substance use disorders and apply it to their clients as they created case formulations and treatment plans. As a participant mentioned:

> *I learned a lot more about case formulation or about keeping notes for my clients. Genograms, being able to do that and also being more conscientious about case management. That was something that I learned a lot about that was very new for me, and also recognising -- in counselling recognising your precipitating or perpetuating risk and protector factors, so being much more aware of those four groupings when counselling. So, I used a lot of the information that I received in my training."* [Participant 2]

A second participant mentioned how they had changed the way that they prepared their psychoeducation sessions by using the theory taught on the PgDip "*So, for instance, you know, I think before I finished the diploma, I think a lot of the psychoeducation I did was the internet-based research where now I'm using evidence-based research and practices*" (Participant 3).

Participants highlighted that the PgDip had not only broadened their knowledge but also changed their attitudes towards treatment approaches for individuals who use substances. The change in attitude further added value to service delivery, for example it improved their counselling skills and the way that they engage with their clients. As one participant mentioned:

> *"So, you know, all the other things that I learned … I integrated into my practice and piled on top of it, and it actually just like broadened my scope of practice hugely. "My counselling style is quite confrontational, so I really had to push myself to get to grips with the core principles of MI. And I was constantly reminded by my supervisor, who was amazing for the two years, that I had to like in some instances I had to push myself to return to using motivational interviewing techniques, especially with the resistant clients so I did that as well. "* (Participant 6).

Participants were also able to implement specific EBP, such as using validated screening tools for substance use and evidence-based treatment approaches such as MI and CBT within their clinical work. For example, a few participants mentioned that they were able to implement changes in their individual counselling sessions as well as the organisational treatment programme using EBP approaches. Further programme changes included adding supervision frameworks as a clinical tool that participants had implemented for themselves and for their colleagues within their organisations to improve their client treatment services. One participant mentioned how they used a range of EBP approaches in practice and how it was implemented within the treatment team:

> "*I then facilitated various interventions such as the SBIRT, such as the harm reduction … whereby we (me and my other colleagues that had actually done the PGDip program in various other institutions as well as at UCT) became a specialist team for managing and consulting with all issues of the substance abuse difficulties, challenges and so forth, and as well as assistance for family members within the work setting*" (Participant 15).

Besides improving services for clients, participants were also able to extend their EBP into improving services for their families and community members as well. A few participants mentioned that they had implemented group therapy sessions for clients and families, as well

as some started doing psychoeducation talks or workshops in workplaces, specifically on awareness and prevention of substance use. One participant mentioned how these sessions took place:

> "*So, various forms of delivery such as informational sessions, such as training for the parents, training for families, training for managers, informational sessions for individual employees on the effects of substances. Those I have seen quite a significant and amazing turnaround which I've been able to apply over the years*" (Participant 15).

Participants felt that the PgDip provided them with an opportunity, not only to implement EBP approaches within their work with clients, but also to facilitate implementation of EBP by training colleagues and making changes at an organisational level. The implementation of these approaches took place on different levels within their organisations. Firstly, participants had trained their colleagues on what EBP entails, and "enjoyed sharing with my colleagues what I was learning" how to do screening and assessment, and some started training their colleagues on some of the practical elements of SBIRT and MI:

> "*So, although they had training, I would also be part of giving training. So, I was involved in the motivational training part, as well as how to train in terms of screening tools, and then also gearing the organisation to what is evidence-based."* (Participant 17).

Participants also mentioned that they had colleagues who were open to hearing what was taught on the PgDip, and the implementation of the approaches was a collaborative process within the team incorporating their colleagues and managers. A participant gave an example about how the training received facilitated some changes within an organisation "*I was able to share information with my colleagues and we were able to shift some of our internal policies like say for example around referrals… so we were able to change some policies internally*." (Participant 6).

Further, participants mentioned that they were able to apply their knowledge to policy development and implementation within their organisation related to substance use services, including the use of EBP for screening and assessment:

"*We are currently reviewing the student drug policy so it's a work in progress so some of the modules that we had to complete during this course; the one was around policy and implementation. So, we tried to use some of that information or some of that knowledge in terms of policies*" (Participant 8).

"So, for me there was no screening tools used. I used to work at XXXXX so I introduced all the screening tools; the AUDIT, the ASSIST, the DUDIT…and the CRAFFT. So, that then became part of the screening process." [Participant 10)

Lastly, a couple of participants mentioned that they had used what they learnt about monitoring and evaluation tools and implemented it into their organisations to assess how aspects of their treatment programme and staff are performing:

"'I'll tell you in my first year we were taught these monitoring tools of which there were no monitoring tools at [organisation] … since then there's been like a box where they will put like the comments about the service … at least one person will pick it up, the manager at the end of the week then we will discuss from there the shortcomings where we need to improve the service. So, ja, so I think that was a change that I brought in [organisation]." (Participant 14)

Only two participants mentioned that they were unable to make any changes within their organisations. The various reasons they gave for this will be discussed in the challenges/barriers to implementation of EBP theme.

Theme 4: Facilitators for the implementation of EBP in the workplace

There are a number of factors mentioned by participants that facilitated the implementation of EBP, and what was taught on the PgDip, into their workplace. These factors included availability of resources and subject experts, the reputation of the PgDip programme, and existing national and organisational level policies.

First, the availability of key research resources, such as published journal articles and books ensured that participants could access the information as needed and were able to engage with lecturers. A participant mentioned: *"The resources that we were given during the PgDip; I still have them, I still use them, I refer to them a lot. We had a reading list that I still use so that has been a great source of information for me"* (Participant 2).

Second, lecturers were perceived as being knowledgeable and experts in their fields, they were engaged with students, provided guidance and were available during the PgDip, this seemed to have further facilitated participants' implementation of EBP. Another participant mentioned that the lecturer engagement during the course was a key facilitator in improving services: *"after going through the course I have engaged with reputable subject matter experts, so I got to build on that network, and then it has helped me refer students or individuals to relevant places or NGOs or rehabilitation centres"* (Participant 8).

Third, participants report that other staff members of organisations had high levels of trust in the PgDip course and held it in high regard which facilitated changes in the implementation of EBP. The PgDip at UCT, being one of only two postgraduate qualifications in South Africa, specialising in addiction care, has generated a lot of interest and built up its EBP reputation. Participants mentioned that management was open to ideas about improving services, while supervisors and other colleagues were supportive and had a positive attitude towards implementing what was taught on the PgDip. As a participant summarised:

> *"After completing the course and having spoken to senior management, they seemed a bit more forthcoming to invite some of these changes that we've been discussing or the proposals to review certain policies that have been in existent because they understood that the course had provided that platform to find some of those gaps"* (Participant 8).

Fourth, another facilitator was that most of the organisations followed national policies and guidelines around substance use prevention and treatment. Because the policies and guidelines were already in place, it was easier to implement EBP as it fitted into the policies. Participants mentioned that there were substance use workplace policies, and the organisations also followed the Prevention of and Treatment for Substance Abuse Act 70 of 2008. One organisation was described by a participant as supporting the Act, but staff were not all knowledgeable about all the details in the Act. They assisted the organisation to ensure that EBP are in place according to the legislation:

> *"I think the Prevention and Substance Abuse Act. Even when I started here now, I could say listen, in terms of certain policies need to be in place, is that I could help the team by saying you need to make sure that this and that is in place. You need to make sure*

that you look at your group notes, you need to look at this is a criterion of the Act. So, although certain stuff is not in place, I could help the team to make sure that that is what we are supposed to be doing." (Participant 17).

Fifth, organisation-level policies were in place, and this facilitated the implementation of EBP. A participant mentioned: *"I don't think I have any challenges or had any challenges. It's an organisation that tries very much to be in line with evidence-based methods to move with the times so no challenges really, no"* (Participant 2). These benefitted the participant's ability to implement and change treatment services to EBP to be in line with national guidelines. Similarly, another participant stated, *"Internal policies, because we are a department that is responsible to render services to those that are vulnerable, our policies and everything is geared by the way to be in a position to render such a service."* (Participant 16).

The sixth facilitating factor mentioned by participants was the increase in knowledge and confidence in implementing the EBP approaches in treating clients with unhealthy substance use, which led to a higher level of motivation to invest more in their occupations, especially those who provided services to people who use substances:

"I could understand things more because it was more clinical and medical so that helped give me confidence in presenting a case and contributing towards the multidisciplinary team. I think if I didn't have the addictions care knowledge it would've been very intimidating." [Participant 10]

"And the other factor I think that is that I felt more motivated to invest more in my practice…. I felt more confident because of the diploma that I could put myself out there." [Participant 6]

Theme 5: Challenges/barriers to implementation of EBP

There were a number of challenges or barriers to implementing EBP into participant's workplace. The barriers included management style of organisations and scepticism from individual managers, pressure on existing resources, working in a multidisciplinary team, uncertainty about EBP and clients not completing their treatment programme.

The first challenge that was mentioned is the bureaucratic management style of some organisations. This meant that any implementation of EBP or changes to policies or workflow, needed to come from management and any changes suggested by PgDip graduates were not possible as traditionally *"many of these organisations we work in was very, hierarchical so it could only come from top management"* (Participant 7). Other participants felt that they were not senior enough in the organisation to challenge the hierarchy and motivate for change as one participant explained, "*you have the knowledge, if you don't have the perceived power or influence you were nothing, so you didn't -- you weren't able to make any changes."* (Participant 4). Participants also mentioned that they faced resistance from their organisations in the form of a lack of managerial support of EBP treatment models as managers were sceptical, had a lack of understanding of EBP, and were unwilling to adapt existing treatment approaches to recent EBP. It was also mentioned that those organisations were stuck using old policies and were not open to updating them. This made these organisations resistant to implement the EBP taught on the PgDip that were presented to them from participants.

> *"Where I worked people were reluctant or they were resistant to change. There was the few that was open minded and enjoyed new ways of doing things, but a lot of people were resistant to change, and felt like maybe it was a threat. And also, the -- I don't actually want to get into that but ja (yes), you know how it goes in organisations, it's often difficult to present something new and implement and all the bureaucracies"* (Participant 5)

Another barrier or challenge to implementation of EBP was related to the anticipated additional pressure on existing resources and "*not enough funding to do more of what you would like to do"* (Participant 2). There were challenges to gaining access to resources such as paper, workspaces for sessions, funding for security and funding to employ more staff. This barrier was sometimes compounded by competing clinical priorities whereby the number of clients needing treatment for SUDs outweighed the number of clinicians providing general services. One participant described challenges implementing what was learnt on the PgDip into the clinical services:

> *"The biggest challenges are really to incorporate addiction care with your clinical work. You have just a certain amount of time with the patient and the biggest challenge is*

resources … space as well … It's also more about time or time is a resource … it's time, your amount of patients that you are seeing and that is also having other clinical duties to perform" (Participant 12)

Another challenge that was mentioned by a few participants was working in a multidisciplinary team as a social work professional, which included clinical and medical professionals. These participants felt that they have gained enough knowledge from the PgDip but were not comfortable implementing what they had learnt about EBPs, due to reasons related to scope of practice and anticipated scepticism from colleagues about their knowledge gained on the PgDip. As a participant mentioned: *"[I] think the challenge here now is because there are doctors and psychiatrists and if I say something, it will be like 'how do you know?'."* (Participant 17). Another participant mentioned that because she was a social work professional, there may be a perceived clash of scope of practice:

> *"I think because I was the only social worker and maybe they were clinical psychologists and psych counsellors and occupational therapists. By looking, reflecting back maybe they were intimidated because, you know, how can you tell me how to do my job? And the doctors were very protective and the psychiatrists over what they know and how can you tell me more about what I'm doing?"* (Participant 10).

Three participants found it challenging to apply the knowledge gained from the theory and EBP approaches that were taught on the PgDip due to their own uncertainty about the use of the EBP. These participants expressed their own ambiguity about EBP and the relevance and application in the South African context. One participant implemented screening tools into the organisation but found it challenging navigating the technicality of the approaches and the implementation into a real-life setting: "*So, that for me is now totally evidence based but it's more focused on the evidence-based practice than the actual therapy … I don't know where I must divert from evidence based or can -- is there a gap for me to actually have a relationship with the client or the patient? Because everything is time bound and evidence based and set, it's very structured"* (Participant 10). Another participant mentioned that they were not sure that these EBP approaches, especially MI, were contextually relevant:

> *"So, like for instance the motivational interviewing, it can -- like you can learn the theory and then you apply it to the South African context … and the framework is kind*

of the same, but I think some of the things were too structured and rigid in their approach and needed a little bit of wiggle room, if you can say that, to be relevant in that South African context" (Participant 3).

Another challenge mentioned was that a number of clients did not complete their treatment programmes, and this made it difficult for participants to implement what they had learnt and to provide the necessary EBP on the continuum of care spectrum. Some clients started their treatment programme but often dropped out prematurely for various reasons as described by a participant: "*And also, another challenge was clients … [not] continuing the program so they would relapse or they would think they're cured and then they wouldn't follow through on their program, you know. I think that was one of the greatest challenges was that people didn't follow through completely"* (Participant 13). More recently, the Covid 19 restrictions, particularly during lockdown level 4 or level 5, affected the continuity of treatment as facilities were operating with minimal services or closed for a period of time. As a participant mentioned: "*I do groups very seldom because of COVID now. I think we were doing [treatment] groups before and working at XXX we did groups on a daily basis, like three groups a day. So, that was quite intensive."* (Participant 7).

Theme 6: Positive aspects of the PgDip Course

Overall, participants were pleased with the coordination of the academic and administration of the PgDip and also found that the curriculum content of EBP approaches was beneficial. As mentioned by one participant *"No challenges at all. But obviously they told us what to do and so they basically instructed us and guided us in the process. Everyone was very helpful and friendly, and it was just an overall positive experience. I would recommend that anyone do the course"* (Participant 7).

Participants mentioned that small classes on the PgDip was beneficial for them to participate in class, make connections and network with others in the substance use field. Being from different organisations assisted participants set up their referral networks as well. As a participant mentioned *"It brought me in contact with the other network of people, I'm still friends with some of these people who either are at private institutions or highly specialised facilities operating services in substance use disorders"* (Participant 16). Another participant

also mentioned *"Lots of resources, opportunities, you know, at the university to make yourself comfortable, lots of networking opportunities with external service providers, external lecturers, external organisations that would come up. So, all those really seemed to have worked looking at that time"* (Participant 15).

All of the participants found the structure of the PgDip to be well-suited for academic studies. The Diploma was offered over one year full-time or two years part-time. Participants found that doing the course on a part-time basis was beneficial as they could balance working full time and their academic and module requirements, as one participant mentioned, "*I think what worked well for me is the fact that the course was presented after hours [in 2011], like in the afternoon so it didn't impact on my clinical work in the morning"* (Participant 12). Participants also found that the structure of module block weeks, assisted in being able to manage work and family commitments. As a participant mentioned *"The block week did work well and the ambience, the environment, the welcoming … all those things really worked well because you sort of had a table of resources at your hand"* (Participant 15).

All of the participants found that the course curriculum had a good balance of theory and practical information. They found that the assignments assisted in applying the theory to real life cases. One participant described their experience of the PgDip curriculum:

> "*I think the program covered important areas and it included comprehensive knowledge of the theory that was applicable to the field of addiction. It also incorporated like practical counselling skills to deal with clients who have substance abuse disorders….It was very well structured…And a nice thing of the structure of the course if you're a first year there were two mandatory modules that required completion as it provided the foundation to understanding the field of addiction and set the tone for the entire course. And the rest of the modules was left upon me as an individual or as a student to decide which best suited me and that was around my own work schedule"* (Participant 8).

Another participant mentioned that the assignments and examinations were reasonable: *"the examinations, the assignments were good. The assignments were very relative to what I was going through, very relative to all the studies that we did. It was also nice and practical, you know. Ja, so the assignments were relative, the exams were great"* (Participant 13). Another

participant also mentioned: *"I have no complaints about the exams. I thought they were fair and ja, and not too easy and not too difficult. I think they were fair."* (Participant 2)

Participants found that the group supervision that was provided throughout the PgDip course was beneficial for applying the theory of what they have learnt to case formulations. They also liked the structure of supervision. Participants found that the smaller groups in supervision was a good practical learning experience for them to present a client's case and to learn from each other and to gain guidance from the supervisors. As a participant mentioned:

> *"So, we had group supervision. It was divided into groups, a combination of first years and second years, and each student had an opportunity to present two or three client cases and that are completed and comprehensive. This process was facilitated by qualified highly skilled clinical psychologists in the field and you presented your case and they provided feedback, active and reflective and like students needed to ask questions if they needed further clarity on a case. And the facilitators, which were the psychologists, they were able to provide their professional perspective of possible recommendations and how to explore difficulties with clients or cases and encourage to explore this further with their -- with our own respective individual supervisors.* (Participant 8)

All participants were satisfied with the staff that coordinated and taught on the PgDip, mentioning that the team was approachable, friendly and supportive with good communication skills. As a participant mentioned "*UCT was very supportive and the staff and like all of that who were behind, the course conveners, everything, I was very impressed by that, and I didn't ever feel alone, and I didn't ever feel like I didn't know what I was doing"* (Participant 9). Participants felt that they could email or phone the team for guidance on any matter related to their studies and they would get assistance immediately. Participants felt that they were supported both administratively and academically. *"If I emailed one of them, they'd get back to me within the same day or the next day. Ja [Yes], there was no problem with open lines of communication and support and access to the staff at all."* (Participant 6).

Participants were also happy that there was a mixture of professional lecturers and lecturers who were persons in recovery from substance use. Participants generally felt that lecturers

were competent and approachable. As a participant mentioned "*Lecturers were very approachable, and the way the lecturers – so they would – everyone had a different style, everyone had a different way of presenting the information. But they were quite knowledgeable about their field. So, each person that came, was an expert at what they knew"* (Participant 17).

Another aspect participants appreciated was the feedback that they received during lectures, group supervision and with their assignments. As participants mentioned *"So, that was great because we did a lot of practical role plays in class and things like that while they were giving us feedback. So, that was wonderful…. And the feedback that we would get on our assignments was very thorough and that was helpful."* (Participant 1). Participants were also happy that they were able to provide feedback to the team regarding the lectures, and curriculum content after each module.

Participants also found that the UCT platforms were user friendly and that they had easy access to everything on Vula (UCT student online platform). As a participant mentioned *"They put all the slides, you know, on the system [Vula]. So, everything was available, ja (yes).*" (Participant 3). Participants were happy that they could download all the resources easily as they studied. Registration and access to student information was also easily accessible on Peoplesoft. Overall, there was great satisfaction with the PgDip logistics; participants found that the lecture and examination venues were accessible, also for persons with disabilities. Access to the library and resources on campus was available and the location of the medical campus was central for most.

All of the participants received funding from the Department of Social Development for their tuition for the PgDip at UCT. Participants were pleased and grateful that they were able to access the funding, they found that they would not have been able to afford the Diploma themselves without this opportunity. Participants found the application process simple and signing the bursary contract process easy. As a participant mentioned *"I didn't have to try and access funding because (XXX) and the Department of Psychiatry took it upon themselves to get this funding from the department of -- so it was at Social Development. And, you know, forever and a day I will be totally grateful for this course having been paid by the department"* (Participant 2).

Theme 7: Challenging aspects of the PgDip Course

Although most participants found that the academic and administrative aspects of the PgDip had worked well for them, there were some challenges that participants mentioned. Some of these challenges related to lack of professional registration with the Health Professions Council of South Africa (HPCSA), aspects of the administration of the PgDip related to module structure and content, a lack of support from organisational supervisors or managers, challenges finding a suitable internship practical placement, challenges with the performance of the PgDip faculty, and lastly some personal challenges.

A high-level challenge that two participants mentioned, was that the PgDip did not lead to them becoming registered counsellors with the HPCSA. They felt that it would have been beneficial if they were able to register with the HPCSA once they had completed the PgDip. As a participant mentioned *"The fact that the course still doesn't get any real accreditation or recognition by the Health Professionals Council, you know. So, I've done an honours, I've done a PGDip in addiction and still, you know, I cannot be registered with the statutory body"* (Participant 2).

There were some challenges related to the layout and administration of the PgDip. While most participants found the block weeks acceptable, a few mentioned challenges, such as the early morning lectures and the long days: *"it's tiring. I mean, for a whole day to sit and listen to lectures was quite tiring, but overall, I think it was well presented."* (Participant 5). One participant felt the content did not always fit comfortably into the block weeks and spoke about needing additional lectures to grasp the information. One participant also found that the reading material was too extensive and that it was a challenge to read everything for a part-time course whilst working full time. As the participant mentioned *"Like as I said, you know, obviously my preference would've been more interactive and some lectures were, but for the most part it was a lot of reading involved, and that's very time consuming especially when you're working."* (Participant 11). Another participant mentioned, "*It's quite a bit of articles and it just was difficult also to juggle having a full-time job and also studying and doing readings and just handling life. So, I know it covers a great amount of content, it's just maybe time management; it's difficult for me to juggle that."* (Participant 1).

A few participants found that at times it was challenging to gain support from their supervisors or line managers to access study leave to attend lectures and examinations. Even though there were benefits to participants completing the PgDip, attending block weeks meant that they were out of work for a week at a time and then they would have to contend with a backlog of work upon their return. Often participants had to take their annual leave to attend lectures and examinations. As a participant mentioned *"But I remember one of the challenges was getting leave and having the support from our organisation, not in a -- I mean, they supported me a lot. I don't know how to say it but it's just, you know, I'd have to fight for leave to get it, you know. And then when I go back to work after that week, I'd have to work harder than normal"* (Participant13). Another participant mentioned *"Being away from your work for two weeks at the time, I mean, if you work under pressure and you run a case load of 300, it's never a good idea to be away from your work for two weeks."* (Participant 16).

There were a few participants that found the information for the Co-occurring Disorders module and the Neurobiology lecture and content were difficult to grasp. They felt that some of the information could have been simplified, as a participant mentioned: *"the neurobiology was difficult for me to absorb because I didn't have any knowledge of that. So, that was difficult for me and like schizophrenia was difficult also for me. I didn't do psychiatry that in depth, so it was difficult for me to adjust but the others [lectures] was fine."* (Participant 10).

One participant found it challenging to get an organisational placement for the 180 practical hours needed to complete the Diploma. Some participants were not working in substance use treatment facilities and therefore had to juggle working during the day and then going to their practical placement after hours. "*Yes, obviously me, because I wasn't part of an NGO, so I had to first find placement…. I go to head office, and then my work takes me out to the field. So, I will go and do workshops. My issue was the fact that I wasn't placed, I wasn't part of an NGO that is rendering the services already"* (Participant 20). Another participant felt that going to a 12 Step NA/AA meeting as preparation for a lecture was challenging to access and attend. Participants also mentioned that more practical innovative ways are needed to disseminate the information and that practical skills be incorporated into the theoretical learning aspects of the course.

The PgDip faculty comprised of the dedicated staff members based at UCT, guest lecturers, who are experts in their field, and group or individual supervisors. Whilst most participants

found the PgDip faculty engaging and knowledgeable, a couple of participants felt that they could not relate to or engage with certain PgDip faculty members. This led to some class members taking "a backseat" and avoiding participation. It was also mentioned that there were challenges related to the pedagogical competence and knowledge of certain lecturers, as a participant mentioned *"they need new lecturers because I think sometimes like just because someone is a professional in their field it doesn't mean they can deliver content, and you need to really look at that. So, I think it's great that they're an expert, but can they teach?"* (Participant 9).

There were some personal challenges that participants experienced that affected their experience in completing the Diploma. These included challenges with health, feeling intimidated or inadequate in the classroom or supervision, intimidated by technology, challenges with time management between academic expectations, work and family life.

Theme 8: Recommendations on how the PgDip can be improved

Based on experiences that participants had with the PgDip, there were some recommendations made regarding how to improve student academic and administrative experiences. There were many recommendations and suggestions around various aspects of the course structure and curriculum content of the PgDip as well as including further academic support for RPL (recognition of prior learning) students.

Firstly, it was recommended that the PgDip should be offered as a fully online PgDip, or have a hybrid version of in-person and online lectures. This would ensure that individuals throughout South Africa could gain access to the Diploma, it would also cut down on the costs; so as to avoid expenses for transport and accommodation to attend the modules in person. As a participant mentioned "*Webinars would work great. You can do a whole class as just a webinar. So maybe UCT should start thinking like Stellenbosch, doing it online. There is the option of doing it online too, and then you can reach the whole of South Africa" (Participant 20).*

Secondly, participants mentioned that there should be an equal distribution of time between all the modules, with perhaps extra time given to some of the content, as well as some

additional, booster lectures. As a participant mentioned "*And I think maybe one or two of those lectures needed a follow-up lecture to be honest with you so for example, CBT I feel like another added lecture would have been beneficial." (Participant 8).* Additional to this, a participant also recommended that more time can be given for students to complete their assignments to ensure that they produce quality written pieces.

Leading on from the above recommendation, a couple of participants also mentioned that the structure of the lecture block weeks was challenging, this was because the days were long, they needed to take leave from work, and there was a lot of content to get through with lecturers on each day. The recommendation is to spread out the content over a few weeks and to ensure there are after hours classes to accommodate those who could not obtain leave from work, it was also recommended that additional individual supervision slots be made available per month. As a participant mentioned, *"During my time the lectures were back-to-back, it was quite heavy, you know, block weeks so maybe they could look at having time to integrate, maybe have space in between days or in the day to sort of -- for one to be able to absorb the information because sometimes there was no time to absorb the information, there was just so much to be done and the timeframe of the block week and because that we were working." (Participant 15).*

Thirdly, for the PgDip's course content, there were many recommendations to update the curriculum content as well as to include other behavioural addictions. Participants suggested that the curriculum content needs to be updated to include culturally relevant journal articles, books and cases studies from South African based resources as well as from the African continent. As one of the participants mentioned:

> *"Recommendations would be to contextualise the content even further, particularly when it comes to different ethnic groups, in terms of the application, examples, practicality, articles, journals, it would be nice if the program can actually look at contextualising these issues because addiction, mental health is no longer a western or first world country issue. It is unfortunately a pandemic on its own in Africa, in South Africa amongst our different ethnic communities. So, I think I would recommend that, that case studies and so forth be contextualised within our different ethnic communities."* (Participant 15)

Participants also recommended that additional, in depth, lectures on behavioural addictions be presented with more information on screening tools and counselling strategies for these. As a participant mentioned, *"I think like what I would have liked more on process addictions because I see that a lot in my practice like eating disorders, gambling, gaming, sex and love addiction. We did do sex and love addiction; I would've liked more on that on process addictions and how to deal with them and in the same way that we did the other[substance] addictions" (Participant 6).*

Fourthly, also related to the structure of the content, participants recommended to include practical ways to cement the theoretical learning, to simplify complicated theoretical aspects of the information, and to ensure that the correct level of information is disseminated to the target audience. As a participant recommended *"You get all this theoretical knowledge, which is great, and you need theoretical knowledge, but I just wish that the theoretical knowledge would become so much more practical, so much more real. And they would teach it to us in a way that it's real, more like real life application as opposed to these hypothetical situations where you don't even use half the stuff you learn when it comes into reality"* (Participant 9).

Additional to above, it was also recommended that lecture content delivery methods include more practical elements such as videos, role plays, and to ensure that it is more participatory. The cognitive behavioural therapy (CBT) and family intervention lectures, as an example, should include more practical elements within the lecture week to practice what was taught. Therefore, practical guidance and role plays on how to do CBT and family intervention counselling skills. Also, it was recommended that lecturers should improve on their teaching skills and simplify information in order to make it understandable as well as practical. Participants appreciate that the lecturers are experts in their fields, however, teaching delivery methods could be improved upon. As a participant mentioned "*and to innovate by using different styles and techniques to teach because didactic teaching is quite boring."* (Participant 19).

Fifthly, in addition to the course content, participants also had recommendations for the PgDip examinations. A couple of participants thought that the exams were only based on theoretical knowledge outcomes, and that the exams could be improved on to ensure that the knowledge can be applied practically: *"I kind of feel the exams were stuck in the sort of 80s, regurgitating knowledge kind of thing, whereas the assignments were more practical*

application of doing it … it's easier to regurgitate than it is to apply." (Participant 13). Further to this, a couple of participants recommended that the PgDip be HPCSA accredited so that one is able to register professionally as an addictions counsellor once they have completed.

Lastly, the PgDip comprises of students who had no previous academic qualifications but have years of experience in the addictions field. These students are known as RPL (recognition of prior learning) students. A couple of these participants recommended that more support for RPL students should be put in place to assist with orientation to the university and academic writing; since RPL students have no previous qualifications and extra support could be beneficial to them: *"I think in the first semester perhaps people who, like me, were RPL students and didn't have an idea about how to navigate UCT on the system, perhaps more attention to be paid to them in so far as how to write an assignment, how to -- lecture notes, it's just basically how to be a student, you know"* (Participant 6).

5. Chapter 5: Discussion

This mixed methods study was one of the first to evaluate students' attitudes and knowledge, and explore their experiences, related to evidence-based practice (EBP) approaches taught during the Postgraduate Diploma in Addictions Care (PgDip) at the University of Cape Town (UCT). The study specifically aimed to: (i) assess attitudes and perceived knowledge gained related to EBP approaches, (ii) explore the experiences of graduates in integrating EBP into substance use services as part of their occupation, and (iii) elicit graduates' recommendations on how the PgDip programme can be improved.

The main findings of the study indicated that overall, participants had a positive attitude towards EBPs. This was found as measured by the Evidence-Based Practice Attitude Scale (EBPAS) on the four subscales; intuitive appeal, openness to new practices, lower divergence of usual practice and requirements given to adopt EBP. Further, as reported in the qualitative interviews, they were willing to implement EBPs. Participants highlighted various facilitators of EBP implementation, including the presence of national and organizational policies regarding EBPs in substance use treatment. However, there were also a number of barriers to implementing addiction care EBPs, which included organizational and resource-related issues. Lastly, they also made recommendations for improving the PgDip to optimise the impact of the programme.

The main findings of this study are discussed further by objective, followed by the strengths and limitations of the study, recommendations and finally, the study conclusions.

5.1. To assess attitudes and perceived knowledge gained by graduates related to EBP approaches taught on the PgDip programme

5.1.1 Attitudes towards EBP approaches

Using the findings from both the quantitative (EBPAS) and the qualitative interviews in this study, we gained an understanding of the graduates' and non-graduates' attitudes towards EBPs. Participants also discussed the strong possibility of the adoption of EBPs into substance use treatment programmes and other health services. Although there is existing research on the attitudes of health care workers towards providing care for people who use substances in general (van Boekel et al., 2013), there is limited published data on the attitudes of health

care workers in the implementation of EBPs to treat these individuals. The available data is mainly qualitative in nature with the findings highlighting the importance of understanding an individual's attitudes towards EBPs and its influence on the adoption of EBPs into daily practice (Blake et al., 2023; Powell et al., 2017; Ubbink et al., 2013).

The current study uses a validated scale to define and measure the construct of attitudes. A recent systematic review found that the majority of included studies did not define the construct of attitude and utilized inadequate measures (Fishman et al., 2021). In South Africa, there are few studies that have used validated tools to measure attitudes, specifically the EBPAS with the exception of Magidson et al (2018) who investigated factors influencing health care workers' openness to adopting EBPs in substance use treatment (Magidson et al., 2018). Thus, the findings of the current study show there is a need for further quantitative research and the use of validated tools such as the EBPAS for substance use in low-resource settings (Aarons, 2004; Aarons et al., 2010).

The results also indicate that the positive attitudes and knowledge gained by graduates during the PgDip influenced their attempts at implementation of EBPs. Previous research indicates that having a positive attitude towards EBPs increases the likelihood of new EBPs being adopted and implemented by individuals into their work (Aarons, 2004). Overall, this study's findings show that there were positive general attitudes towards adopting EBPs as interpreted by the total scores on the Evidence-Based Practice Attitude Scale (EBPAS), as well as the high mean scores for all four subscales of the EBPAS.

More specifically, the majority of participants scored highly on the openness subscale of the EBPAS, indicating a positive attitude towards implementing EBPs. According to specific items on this measure, participants were open and liked using new interventions with their clients and they are willing to try new techniques or interventions that has been developed by researchers, and they were willing to use a manualised approach. This finding was further highlighted in the qualitative findings. PgDip graduates were eager to learn about specialised EBPs for substance use interventions and developed a positive attitude change towards treatment approaches for people who use substances.

5.1.2 Knowledge and skills

This present study provides some evidence that the PgDip has effectively disseminated EBP knowledge and skills to its students. Study findings show that graduates have retained a substantial amount of knowledge they were taught on the PgDip, and could describe and define EBPs. Globally, there are some research studies conducted to assess the perceived knowledge acquired and retained from addiction training programmes (John et al., 2020; Martin et al., 2020), these studies found that there was a significant increase in knowledge similar to the current study. However, there are no known research studies in South Africa that assesses the retention of knowledge amongst those who have completed addiction qualifications.

Firstly, the length of time of the accumulated knowledge (year of graduation) from the PgDip, and whether participants use the knowledge in their current occupation had an effect on participants' knowledge retention. Most of the participants in this study graduated more than five years ago, yet once prompted, they could recall some information. Research suggests that there is some atrophy of retention of knowledge over the course of a qualification and after graduating (Malau-Aduli et al., 2013). This is not surprising, since research finds that when graduates do not use the knowledge gained, one third of the knowledge acquired will be forgotten, and after two years, up to 60% of that knowledge is lost (Custers & ten Cate, 2011).

Secondly, participants' current occupation was another factor that affected the recall of EBP knowledge. For those who are currently working with clients who use substances, they could easily recall and describe what EBPs are, and could also recall in depth EBP information on what they were taught on the PgDip and then apply these concepts. Whilst there are limited studies in the field of substance use research, some studies in the medical and nursing fields found that when graduates found clinical relevance and could apply the knowledge gained in a practical manner in their place of work, they were better able to retain the knowledge that was taught (Malau-Aduli et al., 2013; Rassool & Oyefeso, 2007; Rudman et al., 2012).

Thirdly, participants included in the current study gained and retained knowledge in specific EBPs, namely in Screening Brief Intervention, Referral to Treatment (SBIRT), Cognitive Behavioural Therapy (CBT) and Motivational Interviewing (MI). These findings are important

since the diploma's primary objective is to build capacity amongst graduates to implement these EBPs into substance use treatment services. Being able to include these individual EBPS in a formal training qualification of longer duration such as the PgDip is beneficial, although other studies have found short-term stand-alone courses to also increase knowledge.

In a systematic review by Walters et al. (2005), it was found that short courses or workshops in training EBP skills for substance use treatment, do improve knowledge, attitudes, and confidence in treating clients with unhealthy substance use. The systematic review also found that when they measured the knowledge and skills gained, it was found that the uptake and use of the EBP are seen immediately after the training, however, over time, this knowledge and skills are less frequently maintained. The last major finding from this review is that even though shorter trainings are important, there needs to be follow up training sessions, and supervision sessions to attain long term adoption of the EBP skills (Walters et al., 2005).

In South Africa there are various short courses and trainings available that can serve as additional, booster sessions. Since Covid-19, many of these courses are accessible online and affordable. Examples include the Universal Treatment, Prevention and Recovery Curricula (International Society of Substance Use Professionals, 2023) and the South Africa International Transfer Centre (SA ITTC) at UCT(Scott et al., 2020). Some of their trainings include, MI and SBIRT (International Consortium of Universities for Drug demand Reduction, 2023). By creating a platform and access to short courses through the Addictions division at UCT, this could increase long term adoption of EBPs.

Lastly, completing the PgDip facilitated the dissemination of EBP knowledge and supervision framework within their organisations. This is important as resources for EBP training of EBP is not always readily available in such organisations. Having graduates train their colleagues can assist with the shortage of skills in low resource settings such as South Africa. With the support of management and other staff, this can further assist the commitment and implementation of EBPs in substance use treatment services. Further, with graduates, by adopting up-to-date EBPs within existing programmes, it should increase access to care. Although this study did not examine client-level outcomes, given the available evidence on EBP approaches and implementation into substance use services, one can expect that there may have been improvements in clients' recovery journeys (Bagøien et al., 2013; Scott et al., 2023).

5.2. Explore the experiences of graduates in integrating EBP into substance use services as part of their occupation

The findings of this study indicated that participants of this study were positive about adopting new EBPs into substance use services. There were some facilitators that assisted the implementation of these EBPs, however, also some barriers to the use of EBPs discussed in utilizing EBPs in the workplace. Facilitators of implementation included having access to up-to-date EBP curriculum, expert lecturers, alignment with national governmental policies as well as individual characteristics such as a positive attitude towards EBPs. Conversely, barriers to implementation mentioned were aspects such as the bureaucratic management styles and scepticism about EBPs by management, lack of support from line managers, challenges functioning in a multi-disciplinary team, resource constraints.

Guided by the five domains of the Consolidated Framework for Implementation Research (CFIR), the facilitators and barriers associated with the implementation of EBPs, will now be discussed (Damschroder et al., 2009; Means et al., 2020). The CFIR has been used in LMICs including South Africa, as demonstrated in a recent systematic review by Means et al. (2020), which helps contextualise study findings to assist with guiding any changes that needs to be made.

The intervention/programme characteristics: The PgDip was conceptually designed and developed due to the challenges of substance use in South Africa. Its curriculum design has built a positive reputation across South Africa and on the African continent (Pasche et al., 2014). Having specialist academic and administrative staff ensures that the academic resources and curriculum is one which is based on the most recent available global evidence. Including EBP approaches that have proven efficacy into the curriculum, is important for the implementation by organisations and their staff. As an example, SBIRT is one of the EBP approaches that has been shown globally and locally to be effective and has been taught and implemented by this study's participants into their daily practice (Babor et al., 2017; Barata et al., 2017; van der Westhuizen et al., 2018). The inclusion of expert lecturers on the PgDip who are highly knowledgeable and skilled on the subject matter and EBPs may have increased the acceptance and perceived effectiveness of the programme for students. According to the literature, when there is doubt on the EBP's effectiveness and complexity, then that acts as a barrier to implementation (Chan et al., 2021; Louie et al., 2021; Peltzer et al., 2008).

Further barriers include the operational costs of running the PgDip at the university, as well as the fees associated with it. The high fee cost of R59 570.00 for the PgDip acts as a barrier to accessing the course (University of Cape Town, 2024). Fortunately, for this study, all participants received bursaries to complete the PgDip but would not have been able to do so without the funding. Another barrier was that students needed to be in face-to-face block lecture weeks, for full days, throughout the course, this made things challenging to attend and be away from their heavy caseloads.

The outer setting: One of the main facilitators in the outer setting context includes external policy and regulations. In South Africa, there are national government policies that guides and regulates the prevention and treatment of substance use already in place which facilitate the implementation of EBPs, such as *The National Drug Master Plan (2019-2024)*, *The Prevention and Treatment of Drug Dependency Act (No. 20 of 1992)* and the draft policy of *Substance Abuse Act: The Prevention of and Treatment for Substance Use Disorders Policy* (Department of Social Development, 2023a; University of Cape Town Libraries, 2023).

As an example of EBP implementation, South Africa's National Department of Health and Social Development has included in its action plan the use of SBIRT in order to provide early detection and evidence-based treatment. These need to be accessible and affordable for South Africans. Such a national action plan further assists the workforce in implementing EBPs and also ensures that amendments to policies are actioned (Department of Social Development, 2019). Furthermore, when organisations are guided by national policies, managers and staff are more likely to have a positive attitude towards the adoption and implementation of EBPs (Chan et al., 2021; Ubbink et al., 2013). However, there are barriers such as the lack of support from supervisors and managers due to organisational resource constraints coupled with the high case load of clients. Without the support from management, participants found it challenging to get study leave due to organisational resource constraints and therefore had to use their personal annual leave to attend lectures and examinations.

Inner setting: The facilitators for implementation in the inner setting domain included organisational/workplace policies, and organisational support and culture within the workplace where substance use services are provided. When workplace policy aligns with national governmental policies, it is easier to adopt EBPs into services. Some additional

benefits to this include legal adherence to the requirements set out by these policies and guidelines. This increases the probability that organisations meet the minimum norms and standards to treat individuals with substance use problems. It also assists with standardizing treatment delivery as well as integration of EBPs into daily work practice. For example, SA has a manual on the minimum and norms for substance use treatment facilities that was developed by the Department of Social Development and the United Nation Office on Drugs and Crime (Department of Social Development, 2023b). When management of an organisation creates a supportive culture towards EBPs, then they are more likely to ensure that their staff are trained and the EBPs are implemented (Powell et al., 2017). Conversely, some of the barriers that were mentioned include bureaucratic management styles, sceptism from management, resource constraints and challenges working in a multi-disciplinary team. Previous literature has found that when these barriers are overcome, then the chances of implementing EBPs increases (Powell et al., 2017).

Individual characteristics: When individuals have positive attitudes and beliefs towards EBPs, they have confidence in their knowledge and skills, then the likelihood of them implementing EBP approaches into their daily work increases (Chan et al., 2021; Louie et al., 2021; Ubbink et al., 2013). Behaviour change theories take into account an individual's characteristics such as perception, attitude and skills, and readiness to implement new EBPs into their daily work (Ober et al., 2017). An organisation's readiness to change comprises of an individual level, a collective level (units or departments) as well as the leadership or management of organisations (Shea et al., 2014). Consistent with the theory of planned behaviour (TPB), the participant's characteristics and behaviour appears to be shaped by their attitude, favourable work environment and belief that they are able to implement EBPs (Ajzen, 1991). This theory describes a hypothesised mechanism by which a person's behaviour is influenced by their beliefs and how easily implementation can be facilitated in the specific setting, as well as self-efficacy related to the behaviour. However, on the contrary, this could also be a barrier to implementation.

Process of *implementation:* Study participants reported that EBPs are beneficial, valuable and effective within their workplaces and that they were able to implement EBPs especially when their organisational environment was favourable. The qualitative findings demonstrated that a number of participants' managers were open to adopting the EBP approaches shared by

graduates, and that colleagues were also generally supportive and displayed a positive attitude towards implementing the EBPs as well. It is found that organisation factors such as organisation and management support is important at the organisational level in order to adopt and implement changes (Chan et al., 2021).

Transformational leadership within organisations is an important management style to facilitate change within organisations related to EBP. These types of managers influence the staff's attitude and behaviour towards facilitating and implementing EBPs (Farahnak et al., 2019). From a study conducted in South Africa, it was found that managers play a crucial role in building relationships with staff to encourage the use of EBP and minimize resistance to it. This facilitates the adoption and implementation of EBPs. Also, with the managers support to upskilling staff, it assists with an openness and positive attitude to implementation of quality care (Brooke-Sumner et al., 2022).

5.3. Elicit graduates' recommendations on how the PgDip programme can be improved

Participants made a number of suggestions which could assist to improve the PgDip at UCT. Some of the recommendations are highlighted below.

For the curriculum design, it was recommended that more practical elements be added. Some of the suggestions included role plays, interactive activities and video demonstrations. Whilst the course covering MI, CBT and SBIRT included these experiential learning activities, graduates wanted other lecture topics to also have diverse learning designs. There are existing studies that have shown that knowledge alone is ineffective in using EBPs, and that training should connect the theory to real-world experiences (Warren et al., 2012). According to previous research, engaging in practical and interactive learning activities enhances an individual's ability to further comprehend the knowledge and skills in addictions care training (Ferch et al., 2006; Warren et al., 2012). Therefore, it would be beneficial to include more practical elements into all aspects of the curriculum in order to develop higher order thinking and learning that could lead to more thorough and long-lasting knowledge and skills.

Further for curriculum updates, it was recommended that additional content on behavioural process disorders be included. Whilst the PgDip covers gambling addiction and sex addiction, graduates wanted additional content on EBPs to address these and other behavioural

addictions. The suggestion is to place as much attention on these disorders as covered for SUDs. The DSM-5 has included problem gambling as a diagnostic disorder, and it has included internet gaming addiction to be further researched for future inclusion in the diagnostic category. There is mention also that other behavioural conditions may be included once there is more research evidence available (American Psychiatric Association, 2013; Polychronopoulos, 2014). It is suggested that PGDip include the current research and findings on behavioural disorders into their curriculum (Sinclair et al., 2016).

Another valuable suggestion from the graduates is that the PgDip encompasses a hybrid mode of teaching (in-person and online lectures), or to have a fully online PgDip programme. Prior to 2020, the PgDip was only offered as an in-person qualification, however, since Covid-19 in 2020, it has been placed on an online platform. There are many benefits to having an online diploma. It will reduce costs for those travelling from outside of Cape Town. This means the PgDip would be accessible to applicants from all over South Africa, but also those on the African continent. This is important as it will ensure that knowledge and skills in addictions care are disseminated widely in LMICs (Afrouz & Crisp, 2021; Paudel, 2021). This specialised training can possibly impact on the treatment gap and improving treatment outcomes.

5.4. Strengths and limitations

This study has some limitations to be considered when interpreting its findings. Firstly, the possibility of researcher bias is one of the first limitations of this study. The researcher is part of the PgDip academic team and therefore may have interpreted the qualitative data in a way that leads to biased conclusions. To mitigate this bias, a research team approach (researcher, research assistants not involved in the PgDip and two supervisors) was used to collect and analyse the qualitative data and interpret the findings. The research assistants collected all the qualitative data in the interviews ensuring that the researcher remains blinded to their identity. Once the data was transcribed, the researcher and supervisors developed the coding framework to analyse the data. Also, member checking of the data was not done by the participants, therefore findings may lack accuracy and depth.

Secondly, the study used a recognised tool the EBPAS to measure attitudes towards EBPs. The one limitation is that this scale is geared towards clinician attitudes toward general EBPs, therefore, it was not designed specifically for EBPs for SUDs therefore we need cautiously

interpret of the results related to substance use EBPs. The rationale for using this tool in its current form was that it effectively measured the focus of this study. In future research this would need to be adapted and revised. The second limitation of the EBPAS is that the wording in the items of the 'Divergence' subscale could have been confusing or misunderstood in that it had double negatives in the statements (see Appendix D). There is evidence that this subscale does not have good internal consistency and reliability; and some studies have also found that the subscale has issues with the way it is worded (Aarons et al., 2010; Santesson et al., 2020). This may explain the higher scores found in this study suggesting that graduates would use non-evidence-based approaches, which is inconsistent with the scores on the other subscales.

Thirdly, the quantitative phase of the study could have included a larger sample size to assist with the generalisability of the findings to the larger group of PgDip graduates. The results are interpreted with the limitation in mind that the sampling pool was small with only 113 students registered for the PgDip from 2011 to 2018. Also, unfortunately, data were collected during the Covid-19 pandemic, and most of the participants were frontline workers and this affected participation. Fourthly, also related to the pandemic, all interviews in the qualitative phase of the study were conducted online. The disadvantages of this were that there were internet connectivity issues at times and the research assistant was unable to establish rapport. Despite the sample size and interview challenges, this study has provided rich data from a graduate's perspective.

The final limitation for this study was that the study team was not able to assess the EBP competencies of the graduates, or their impact on client outcomes, which were not measured. Despite this, the findings indicated that graduating with a PgDip in Addictions Care was perceived to improve clinical practice.

5.5. Implications for policy, practice and research

There are a number of recommendations for capacity building of people who work in the field of substance use treatment in South Africa which can be made based on the findings of this study. Some of these recommendations are discussed below.

Firstly, since there are currently no South African core competency guidelines for addiction counsellors and addiction education and training, it is recommended these be established,

and that the Health Professions Council of South Africa (HPCSA) to create a sub-speciality registration for addiction counsellors (Collins et al., 2015; Kader et al., 2023). The benefits of published competencies will ensure that there is a standard set of clear guidelines which should contribute to the provision of quality services. The professional registration will also ensure that individuals are meeting the required legal, ethical and education standards to treat individuals with SUDs. Furthermore, for addictions care counsellors to be professionally acknowledged as a valuable human resource and be compensated fairly for their services, it is essential to ensure they can continue delivering high-quality treatment and ensure to use EBPs.

Secondly, the support of existing capacity building initiatives and implementation of further initiatives in South Africa (SA) to upskill the workforce is vital. As mentioned previously, it is important for PgDip graduates to stay updated with their knowledge and skills through training. It is therefore recommended that they attend regular booster sessions such as lectures, webinars, short courses and workshops. If healthcare workers do not have the capacity or means to complete the PgDip, attending these shorter training opportunities can assist in upskilling to ensure that the workforce of substance use services in SA and other LMICs are upskilled. This can be achieved by, for example, an SBIRT train-the-trainer model, to disseminate knowledge and skills throughout SA to ensure that the workforce is prepared to engage in early prevention, detection, referral and treatment of SUDs and unhealthy substance use, as suggested by previous literature (Connery et al., 2020; Kuo et al., 2021).

Thirdly, obtaining organisational management support is important for capacity building and the implementation of EBPs. Organisations involved in SUD and healthcare should update their workplace policies to include capacity building and the implementation of SUD EBPs. This will encourage staff at all levels to attend capacity building trainings and to implement the EBPs with the support of management.

Lastly, it is recommended that additional funding sources for trainings and bursaries be secured for capacity building of the addiction workforce in SA. One of the positive aspects of the PgDip is that all participants in this study were able to complete the PgDip because they were fully funded by the Western Cape Department of Social Development. Unfortunately, after more than 10 years, the funding mechanism for the PgDip operations and bursaries has been stopped (Kader et al., 2023). This is unfortunate because fewer students will be able to

enrol in the future, particularly given the high cost of PgDip programmes. This puts the PgDip at risk of terminating if it cannot be supported financially at UCT.

Recommendations for future research including a similar study with other established PgDips in Addiction Care in South Africa, and potentially other LMICs to evaluate their programmes. Since the mode of learning is also rapidly changing globally, conducting research on the current online version of the PgDip at UCT could provide other settings with guidance on how to adapt in-person trainings to increase course access. A final recommendation is to conduct long-term studies with clients to evaluate the impact of this PgDip training on clinical competencies and client outcomes.

5.6. Conclusions

This study was the first known study to evaluate the experiences of graduates of the PgDip in Addictions Care at UCT, as well as explore the uptake of EBP approaches that were taught in the PgDip. The study highlights the importance of the ongoing existence of the PGDip at UCT, especially as it is the only one of two of formal qualifications that exist in South Africa with no other qualifications as such in the pipeline. It is therefore important to ensure the accessibility across South Africa, particularly to individuals who are currently working, or pursuing a career in the addictions care field. Barriers to implementing the EBPs as taught in the PgDip course in practice need to be considered, including addressing accessibility and affordability. It is imperative that this qualification remains accessible to all, irrespective of geographical location, allowing individuals from various regions in South Africa to benefit from the valuable education provided by UCT. This will ensure that there is a continued fostering of a skilled workforce.

There are currently financial constraints faced by the PGDip at UCT, with a cut in funding from government for operational costs as well as for bursaries. Many professionals working in the Department of Social Development (DSD) and the Department of Health (DOH) are also unable to self-fund their studies. These dedicated individuals play a crucial role in addressing addiction-related issues in communities across South Africa. To facilitate their continued education and professional development, it is proposed that the availability of additional funding, specifically designated for those employed within the DSD and DOH be made available. By providing financial support to these professionals, we not only invest in their

personal growth but also enhance their ability to contribute effectively to the field of addictions care. This, in turn, will positively impact the quality of services provided and contribute to the overall improvement of addiction treatment and support systems in South Africa.

Finally, integrating EBP in substance use treatment training programmes is essential for addressing the global and local substance use challenges that is described in the introduction and literature review of this study. By adopting the best available EBPs, the substance use treatment workforce can effectively improve treatment outcomes of clients and ensures the standardization of care for those with substance use challenges.

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Appendices

Appendix A: Development & Alumni Department letter

Initial email to students:

Dear Sir/Madam,

I am Shaheema Allie, doing my MPhil in Public Mental Health, and I am wondering if you would like to participate in my study. My thesis title is “A mixed methods evaluation of the Postgraduate Diploma in Addictions Care at the University of Cape Town: students’ experiences and uptake of evidence-based intervention techniques”

Attached is my information leaflet outlining all the details of my study. If you would like to opt-in for further communication, please respond to this email replying ‘opt-in’ to receive additional information on the study, alternatively, you can opt-in by completing the questionnaire at this link: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. (Additional study information is also supplied at the start of the questionnaire.)

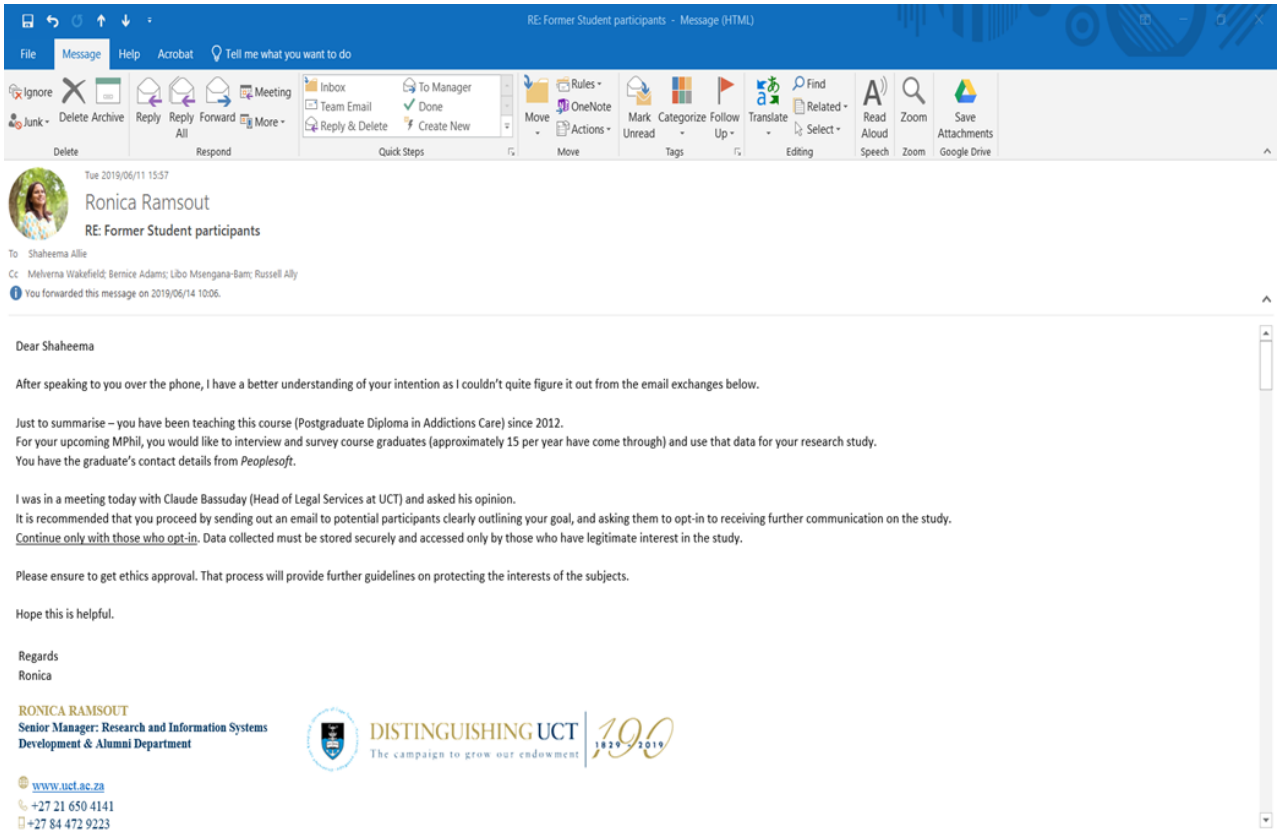
If you do not want to receive further communication related to this study, please reply ‘opt-out’.

Your participation on this would be much appreciated.

Kind regards,

Shaheema Allie

Communication with Development & Alumni Department for approval to contact students:



RE: Former Student participants - Message (HTML)

File Message Help Acrobat Tell me what you want to do

Ignore Junk Delete Archive Reply Reply All Forward Meeting More Delete Respond Inbox Team Email Reply & Delete To Manager Done Create New Quick Steps Move Rules OneNote Actions Move Mark Unread Categorize Follow Up Tags Translate Find Related Select Editing Read Aloud Speech Zoom Zoom Save Attachments Google Drive

Tue 2019/06/11 15:57

Ronica Ramsout

RE: Former Student participants

To Shaheema Allie

Cc Melverna Wakefield; Bernice Adams; Libo Msengana-Bam; Russell Ally

You forwarded this message on 2019/06/14 10:06.

Dear Shaheema

After speaking to you over the phone, I have a better understanding of your intention as I couldn't quite figure it out from the email exchanges below.

Just to summarise – you have been teaching this course (Postgraduate Diploma in Addictions Care) since 2012.
For your upcoming MPhil, you would like to interview and survey course graduates (approximately 15 per year have come through) and use that data for your research study.
You have the graduate's contact details from *Peoplesoft*.

I was in a meeting today with Claude Bassuday (Head of Legal Services at UCT) and asked his opinion.
It is recommended that you proceed by sending out an email to potential participants clearly outlining your goal, and asking them to opt-in to receiving further communication on the study.
Continue only with those who opt-in. Data collected must be stored securely and accessed only by those who have legitimate interest in the study.

Please ensure to get ethics approval. That process will provide further guidelines on protecting the interests of the subjects.

Hope this is helpful.

Regards
Ronica

RONICA RAMSOUT
Senior Manager: Research and Information Systems
Development & Alumni Department

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Appendix B: Information leaflet

Information sheet

We are conducting a mixed methods research study that aims to investigate students' knowledge, attitudes and explore experiences related to evidence-based practice (EBP) approaches taught in the Postgraduate Diploma (PgDip) in Addictions Care at the University of Cape Town. The research forms part of Ms Shaheema Allie's MPhil in Public Mental Health which she is completing through the Alan J Flisher Centre for Public Mental Health at the University of Cape Town. She is supervised by Dr Claire van der Westhuizen from CPMH and Dr Tara Carney from the Alcohol, Tobacco and Other Drug Research Unit at the South African Medical Research Council.

We would like to invite you to be part of the study. Participation is entirely voluntary. For Phase 1 of the study we ask you to complete a 10-minute web-administered questionnaire focusing on your perceptions of the knowledge gained through the PGDip, your attitudes and experiences related to the PgDip course as a whole and the EBP approaches taught.

Phase 2 of the study requires only 20 participants who have graduated from the programme since 2011; thus, only some people who have completed Phase 1 will be invited for this phase. Phase 2 involves a 60-minute audio recorded semi-structured interview based on a schedule of open-ended questions to gain an in depth understanding of and to explore attitudes towards EBP, and experiences of integrating EBP taught on the PgDip into substance use services as part of your occupation as well as to elicit recommendations on improving the PgDip.

No personal information is required for this research and all information gained from this study will be strictly confidential. Your identity will be kept confidential and your contact details will be handled by a research assistant and not disclosed to Ms Allie or Associated Professor van der Westhuizen and Dr Carney. All questionnaires and interview transcripts will be marked with a unique study number which cannot be linked to you. Names or contact details will not appear in any report or publication. Your participation is completely voluntary, and you may withdraw at any time without giving any

reason. If you require any further information on this research, please Contact Dr Claire van der Westhuizen at claire.vanderwesthuizen@uct.ac.za or by telephone on 021 650 4487.

This study is funded by African Mental Health Research Initiative (AMARI), which is a mental health research capacity building grant funded through the Wellcome Trust's Developing Excellence in Leadership, Training and Science (DELTAS) programme. The overall goal of AMARI is to build an Africa-led network of mental, neurological and substance use (MNS) researchers offering the Master of Philosophy (MPhil) in Public Mental Health.

Appendix C: Informed consent

Title: A mixed methods evaluation of the Postgraduate Diploma in Addictions Care at the University of Cape Town: student experiences of evidence-based practice (EBP) approaches.

Researcher: Shaheema Allie (JHDSHA004)

Introduction

Good day, my name is XXXX , I am a Research Assistant from the Alan J. Flisher Centre for Public Mental Health at the University of Cape Town. I am asking you if you would agree to be interviewed as part of a study that aims to investigate students' knowledge, attitudes and explore experiences related to evidence-based practices (EBP) approaches taught in the Postgraduate Diploma (PGDip) in Addictions Care at the University of Cape Town. This research is being undertaken to guide improvements to the PGDip and it also forms part of Shaheema Allie's Master of Philosophy degree in Public Mental Health. Before you agree to take part, it is important that you understand what it involves. This consent form is to help you decide if you want to take part in this study. Please feel free to ask me if you have any questions. You should not agree to this request unless you understand and agree to all that is involved.

What We're Asking of You

If you agree to take part in an interview, you will be one of up to 20 graduates that we will individually interviewed. You will be asked questions about your experiences with the PgDip programme as well as what you have you learnt on the course that you have used since graduating. We are asking your permission to audio-tape these interviews so that we can transcribe them. The interview will last about an hour. We will schedule the interview at a time and location that suits you. The information we receive from you will assist us in improving the PgDip programme.

Potential Risks and Discomforts

We do not expect that the research will expose you to any risks. You will never be pressured to answer the questions. If any of the questions make you feel uncomfortable, you do not have to answer that question. You can also stop at any time. If you feel distressed, a referral to a mental health worker will be done to FAMSA (Families South Africa).

Potential Benefits of Taking Part in the Study

There are no direct benefits to you for taking part in this study. Your participation will help us provide suggestions and recommendations to improve the PgDip programme.

Confidentiality and Privacy

Any information that you give us will remain confidential and your identity will remain anonymous. You may choose a pseudonym that we can be used for the duration of the interview. We will not share the information with anyone unless you are going to hurt yourself, someone else or are involved in the neglect or abuse of a child, then legally I have to report this. Anyone who is working with any of the information you give us must sign an agreement not to share what you tell us.

Discussions will be audio-recorded, transcribed and checked. After they have been checked, they will be stored in a password-encrypted file on the researcher's laptop. We will ensure that only a pseudonym will be used for the audio-recordings and transcripts. These audio-recordings will then be deleted once the transcripts have been completed and checked. The transcripts will be destroyed after fifteen years of completion of these interviews.

The only confidential information will be on the consent forms, which will be stored separately from the interview data in locked filing cabinets. These consent forms will be destroyed after fifteen years of completion of these activities. The University of Cape Town's ethics committee will have access to all data. We will use the information you provide to write up a dissertation and publish papers in academic journals. Your name will not appear anywhere in any published material.

Participation and Withdrawal

Participation is voluntary. You can choose not to participate in this interview. If you decide to participate, you may choose to stop your participation at any time. There will be no consequences. You may also refuse to answer any questions that you do not want to answer.

Who is funding the study?

The study is being funded by the African Mental Health Research Initiative (AMARI).

Reimbursement

We will give you a Pick 'n Pay grocery voucher to the value of R100 to thank you for your participation in this interview today.

Rights of Participants. This study has been approved by the University of Cape Town Faculty of Health Science Human Research Ethics Committee (HREC). It will be conducted according to the ethical guidelines and principles of the International Declaration of Helsinki, and the South African Guidelines for Good Clinical Practice. If you have any questions about your rights as a participant, concerns or complaints, please call the chairperson of the UCT ethics committee, Lamees Emjedi at lamees.emjedi@uct.ac.za.

Who To Contact With Questions. If you have any questions or concerns about the research, please contact the principal investigator of this study Dr Claire Van Der Westhuizen at Claire.vanderwesthuizen@uct.ac.za or Shaheema Allie at Shaheema.allie@uct.ac.za.

Indicating Consent

Please let us know if you have any questions before checking this consent form. Please initial next to each item to show that you agree to what is required (leave blank if you do not agree):

Initials	What we're asking of you
	I agree to take part in the study, which has been fully described to me. I will answer questions today.
	I agree that the research team may contact me to ask if I would like to take part in future projects.
	The information (without names or place names) can be shared with other interested parties.
	I understand that my participation in this interview is completely voluntary, and there will be no penalty if I choose not to participate.

Please also provide initials to show whether you agree or disagree to this interview being audio-taped.

Initials	
	I agree to the interview being audio-taped
	I disagree to the interview being audio-taped

Signing this consent form indicates that you have read this consent form (or have had it read to you), that your questions have been answered to your satisfaction, and that you _____ (full name) voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.

Signature and Printed Name **Date**

Person Obtaining Consent (Signature and Printed Name) **Date**

Witness (Signature and Printed Name) **Date**

*A witness is required if the research patient or legal representative cannot read (e.g. blind or illiterate) or if it is required by the study plan. The witness should participate in all of the discussions with regards to the participant research during the consent process. By signing this consent term, the witness guarantees that all the information within the consent has been explained to the participant, and that the consent seemed to have been understood and given by free will.

Appendix D: Questionnaire

Please check the most appropriate box and specify where applicable:

Gender	Male ☐ Female ☐ Other☐ Specify…….
Age	
Marital status	Single ☐ Married ☐ Divorced ☐ Widowed ☐
Which city do you live in?	Western Cape ☐ Specify City…… Other Province ☐ Specify…… Specify city…… International ☐ Specify country and city…….
Degree qualification(s) at time of PgDip	Bachelor's degree of Social Work ☐ Bachelor's degree of Psychology ☐ Honours Degree in Psychology ☐ MA Clinical Psychology ☐ Bachelor's degree of Occupational Therapy ☐ Bachelor's degree of Nursing ☐ MBChB ☐ Degree in Psychiatry ☐ None ☐ Other…….
Current Occupation	Social Worker ☐ Peer Counsellor ☐ Registered Counsellor ☐ Clinical Psychologist ☐ Occupational Therapist ☐ Professional Nurse ☐ Medical Doctor ☐

	Psychiatrist ☐ Other ☐ Specify……
Does your role include assessing for or treating unhealthy substance use or SUDs?	Yes ☐ No ☐
If yes, how frequently?	Daily ☐ Weekly ☐ Monthly ☐ Less than monthly ☐ Describe these activities:……..
Current place of work	Dept of Social Development ☐ Healthcare facility ☐ SUD treatment facility ☐ NGO ☐ Government ☐ Private practice ☐ Other (specify):……
First year of registration on the PgDip	2011 ☐ 2012 ☐ 2013 ☐ 2014 ☐ 2015 ☐ 2016 ☐ 2017 ☐ 2018 ☐
Which year did you graduate from the PgDip?	2012 ☐ 2013 ☐ 2014 ☐ 2015 ☐ 2016 ☐ 2017 ☐ 2018 ☐ Still in the programme ☐

	Did not complete ☐ Reasons:……..

The following questions relate to the Postgraduate Diploma in Addictions Care (PgDip):

Fill in the circle indicating the extent to which you agree with each item using the following scale:

0	1	2	3	4
Not at All	To a Slight Extent	To a Moderate Extent	To a Great Extent	To a Very Great Extent

	0	1	2	3	4
1. I am satisfied with the PgDip at UCT……..	○	○	○	○	○
2. With the knowledge and skills gained with the PgDip I have been able to implement what I learnt at my place of work……..	○	○	○	○	○
3. My interest in addictions care has increased due to the PgDip.……	○	○	○	○	○
4. The PgDip modules covered an appropriate amount of content …….	○	○	○	○	○
5. I found the readings and lecture notes in all or most modules to be useful…….	○	○	○	○	○
6. The lecturers on the PgDip were knowledgeable in the delivery of the content…	○	○	○	○	○
7. The core staff on the PgDip are approachable……..	○	○	○	○	○
8. Individual and group supervision assisted with managing my cases……..	○	○	○	○	○
9. The practical experience component was valuable……..	○	○	○	○	○
10. The PgDip has assisted with my career progression in substance use ……	○	○	○	○	○
11. I was satisfied with the administration processes (e.g.registration/Vula)for the PgDip……	○	○	○	○	○

Evidence-Based Practice Attitude Scale

EBPAS© Gregory A. Aarons, Ph.D.

Reference:

Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale. *Mental Health Services Research, 6*(2), 61-74.

The following questions ask about your feelings about using new types of therapy, interventions, or treatments. Manualized therapy refers to any intervention that has specific guidelines and/or components that are outlined in a manual and/or that are to be followed in a structured/predetermined way.

Fill in the circle indicating the extent to which you agree with each item using the following scale:

0 Not at All	1 To a Slight Extent	2 To a Moderate Extent	3 To a Great Extent	4 To a Very Great Extent

	0	1	2	3	4
1. I like to use new types of therapy/interventions to help my clients……..	○	○	○	○	○
2. I am willing to try new types of therapy/interventions even if I have to follow a treatment manual……	○	○	○	○	○
3. I know better than academic researchers how to care for my clients.…….……..	○	○	○	○	○
4. I am willing to use new and different types of therapy/interventions developed by researchers……	○	○	○	○	○
5. Research based treatments/interventions are not clinically useful…….……	○	○	○	○	○
6. Clinical experience is more important than using manualized therapy/treatment……	○	○	○	○	○
7. I would not use manualized therapy/interventions……	○	○	○	○	○
8. I would try a new therapy/intervention even if it were very different from what I am used to doing……....	○	○	○	○	○
For questions 9-15: If you received training in a therapy or intervention that was new to you, how likely would you be to adopt it if:					
9. it was intuitively appealing?...…….……	○	○	○	○	○
10. it "made sense" to you?……	○	○	○	○	○
11. it was required by your supervisor?……	○	○	○	○	○
12. it was required by your agency?……..……	○	○	○	○	○
13. it was required by your state?…….……	○	○	○	○	○
14. it was being used by colleagues who were happy with it?……..	○	○	○	○	○
15. you felt you had enough training to use it correctly?……..	○	○	○	○	○

Any other comments:

……

……

Appendix E: Interview schedule

Pseudonym	
Gender	*Male/Female/Other*
Age	
Marital status	
Place of residence	
Occupation	
Current place of work	
First date of registration on the PgDip	
Date of graduation	

1. Tell me about your career path after completing the Postgraduate Diploma in Addictions care at UCT.

   Possible prompts: where are you working currently/NGO/Government/private practice? /if not in the field of substance use, what are you currently doing? Further studies?

2. Please name and briefly describe the Evidence-based Practices you were taught in the PGDip.

   Possible prompts: What do you understand by EBPs? Have you been taught MI, CBT, SBIRT?

3. After completing the Diploma, please tell me about any changes that you made in your organisation (previous or current) based on what you learnt in the PGDip.

   Possible prompts: case formulations/screening tools/supervision/treatment groups/psychoeducation/support groups/referral networks/ anything else?

4. What factors have assisted you in implementing EBP in your work with SUDs?

   Possible prompts: Think about your colleagues, managers, clients/work policies/or anything else?

5. What are the challenges or barriers to using the knowledge and skills gained from the Diploma in your organisation?

   Possible prompts: structural or organisational difficulties that have prevented you from using your knowledge?

6. What worked well for you during your time studying at UCT?

   Possible prompts: How was some of the following delivered well: lectures/content covered/reading lists or resources/assignments/examinations/accessing student info (Vula/Peoplesoft)/supervision/access to staff

7. What challenges did you face while you were completing the PgDip at UCT?

   Possible prompts: How was some of the following not delivered well: lectures/content covered/reading lists or resources/assignments/examinations/accessing student info (Vula/Peoplesoft)/supervision/access to staff

8. What recommendations do you have to improve the PgDip course?

   Possible prompts: anything else you would like to see covered/delivery of the lectures and activities/ practical aspects of the course e.g. times of lectures, how long the overall course/ anything else you would like improvements on?