Characteristics associated with attendance of follow-up at a post-rape care centre in Cape Town, South Africa

By

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DECLARATION

I, Nozwelo Ntombizami Ncube, 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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ABSTRACT

BACKGROUND: Rape is associated with a range of negative health and mental health consequences. Despite the establishment of post-rape care centres in South Africa, challenges of retaining rape survivors in care continue to be faced across the country. Very little evidence on the characteristics associated with rape survivors who return for follow-up and those lost to care at post-rape care centres has been documented in South Africa. This study sought to identify the demographic factors, rape incident characteristics and social support factors that are associated with attendance of follow-up appointments at a post-rape care centre in Cape Town, South Africa.

METHOD: A retrospective case file analysis was conducted on 254 files of rape survivors who presented and were given follow-up appointments at a post-rape care centre in Cape Town, South Africa from September 2010 to August 2011. Data were extracted using a data collection form which was developed using counselling and medical records in the survivors' files and analysed using SPSS version 21. Descriptive statistics were generated on the survivors' demographic information, rape incident information, medical information, and support systems. Chi-squared test and Fisher's exact test were used to test for differences between survivors who completed all their follow-up appointments, those who attended but did not complete follow-up appointments and those lost to care.

RESULTS: Of the total sample 64.6% (164) attended their one week follow-up appointment. From those who attended their one week follow-up appointment, 47% (77) came for their six weeks appointment and approximately half of those who attended their six weeks appointments (51%, n=39) attended their three month appointments. Survivors of rape were significantly more likely to attend follow-up appointments if they were female, incurred injuries during the time of the rape, or received family support post-rape.

CONCLUSIONS: Female gender, injury during rape and family support were associated with attendance of follow up care in this sample of rape survivors. Recommendations for future research and for enhancing attendance rates at rape treatment centres are considered.

Key words: rape, sexual assault, follow-up, post-rape care, attrition, attendance

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CHAPTER 1
INTRODUCTION

It is estimated that seven out of every 10 women experience sexual violence in the world (United Nations, 2011). Extensive short and long term physical injuries (Cox, Andrade, Lungelow, Schloetelburg, & Rode, 2007; Teerapong, Lumbiganon, Limpongsanurak, & Udomprasertgul, 2009), and the development of post-traumatic stress disorder (PTSD) and other mental health and social problems after rape (Campbell, Dworkin, & Cabral, 2009; Kaminer, Grimsrud, Myer, & Stein, 2008; Widom, Czaja, & Dutton, 2008) have been documented widely. Rape affects not only the survivor of rape but also has negative impacts on the family, community and society (Campbell, Litchy, Sturza, & Raja, 2006). Rape survivors need comprehensive short and long term post-rape care health services in order to cope with the physical and mental health consequences after rape (WHO, 2003). Although post-rape care is important, research shows that sexual violence victimization is associated with infrequent utilization of post-rape health care services internationally and in South Africa (Collings, Bugwandeen, & Wiles, 2008; Kapur & Windish, 2011; Olshen et al., 2006). Hence there is a need to investigate characteristics associated with follow-up attendance in order to enable appropriate and effective interventions that improve post-rape care follow-up attendance.

1.1 Prevalence of rape

The South African Sexual Offences and Related Matters AmendmentAct of 2007 defines rape as "any intentional act of sexual penetration with a complainant, without the consent of the complainant". This definition includes penetration of any part of the human body by any part of another human body or animal body or object without consent (Sexual Offences and Related Matters Amendment Act, 2007).

A high prevalence of rape worldwide has been reported (Irwin & Rickert, 2005). Despite the fragmented data on accurate estimates of rape prevalence in different countries, the World Health Organisation (WHO) was able to conduct a multi-country study and reported that 23% to 59% of men were sexually violent towards

their female partners in conflict and post conflict settings (WHO, 2005). A study which reviewed 77 articles on the prevalence of non-partner sexual violence covering 56 countries worldwide showed that sub-Saharan Africa had the highest prevalence of non-partner sexual violence perpetration worldwide (a rate of 21%) (Abrahams et al, 2014).

Police statistics and studies conducted in South Africa have reported increasingly high numbers of sexual violence crimes which result in survivors needing to access post-rape care health facilities. Although South African police statistics only reflect sexual violence cases that are reported at the stations which is the tip of the iceberg (Jewkes & Abrahams, 2002), an increase in the number of reported cases from 64 514 in 2012 to 66 387 in 2013 (South African Crime Statistics, 2012/2013) was published. The high numbers of sexual violence crimes are further shown in a large study on gender based violence and HIV conducted in an urban area in South Africa with pregnant women visiting an antenatal clinic, which showed that 30.1% of women reported being sexually assaulted by an intimate partner (Dunkle et al., 2004). A study on the prevalence of sexual violence conducted with 400 males and 400 females aged 16 -17 years old from South African urban and rural settings also showed that 17% of the girls reported being raped and 26.3% reported having experienced other forms of sexual violence besides rape (Peltzer & Pengpid, 2008).

Studies on rape perpetration also report a high prevalence of sexual violence in South Africa. In a study of 1737 South African men from rural areas, farmlands and small towns in eastern South Africa, 27.6% of the respondents reported that they had raped a non-partner (Jewkes, Sikweyiya, Morrell, & Dunkle, 2011) and similarly a baseline survey of 1370 young males, recruited from 70 villages in rural South Africa, reported that 24.7% had raped a non-partner, participated in gang rape or had been sexually violent towards an intimate partner (Jewkes et al., 2006).

Taken together, these data suggest that a substantial percentage of South Africans have been victims of sexual assault, and may therefore be at risk for both the physical and the mental health difficulties that have been associated with rape.

1.2 Consequences of rape

South African studies have shown that many survivors of rape incur body injuries after rape, such as bruises, abrasions, tears, scratches and stab wounds (Jina et al., 2015; Killian, Suliman, & Seedat, 2007; Lammers, Martin, Andrews, & Seedat, 2010; Vetten et al., 2008.). Vetten and colleagues (2008) further show that these injuries were found on the head, neck, upper and lower limb of the body. Genital injuries have also been reported to be common in survivors of rape and they presented with abrasions, scratches or tears on their genitalia (Cox et al., 2007; Jewkes et al., 2009; Jina et al., 2015; Vetten et al., 2008).

The absence or presence of injuries on the survivor of rape does not eliminate the risk of contracting sexually transmitted infections (STIs) from the perpetrator. An American review article on the prevalence of STIs after sexual assault showed that in some studies, up to 14% of female adolescent rape survivors contracted STIs (Bechtel, 2010). An African prospective study conducted on 58 sexually assaulted women admitted at a government hospital in Uganda found that 72.4% of the women reported having developed vaginal discharge after being raped (Ononge, Wandabwa, Kiondo, & Busingye, 2005).

Although low figures of HIV infections are reported after rape, both children and adult survivors remain at risk of contracting the virus (Bechtel, 2010). A South African empirical study conducted at a post-rape care centre in a rural setting reported a 2.5% to 9% rate of HIV infection of children after rape (Meel, 2005), and these infections are higher than the HIV infection rate of 0.1% reported in an empirical study conducted at an urban post-rape care centre for children in the USA (Girardet et al., 2009). A South African observational study on preventing human immunodeficiency virus infection among sexual assault survivors in Cape Town showed that 3.7% of 131 survivors tested HIV positive after six months (Roland et al., 2011). On the other hand, other studies have shown that there was no association between rape and contracting HIV (Dunkle et al., 2004; Jewkes et al., 2006). While these South African studies show low rates of HIV infection after rape, survivors have to be protected against HIV infection.

Besides incurring physical injuries and being at risk of contracting STI's after rape, psychological disorders as a result of rape have also been reported worldwide. These may be evident during presentation at a post-rape care centre or may manifest over time. With regard to the former, a descriptive study of 105 survivors of sexual violence conducted at a post-rape care centre in Bloemfontein in South Africa showed that 39% of survivors presented with fear, 34% anger, 21.9% shock and 14% feeling dirty (Roos, Nel, & van Vuuren, 2006).

Rape can also cause other psychological problems that manifest over a period of time. A retrospective study on the psychological and psychiatric history of adult survivors of sexual assault who presented at a post-sexual assault care centre in the United Kingdom showed that 49.7% were diagnosed with affective disorders which included depression, anxiety and bipolar disorder (Creighton & Jones, 2011). The same study also reported 29% deliberate self-harm incidences and 22% attempted suicide cases (Creighton & Jones, 2011).

A United States study showed that some of the survivors of rape blamed themselves for the rape (Miller, Handley, Markman, & Miller, 2010). The same study showed that continuous self-blame exhibited by the survivors over a long period of time may eventually lead to post-traumatic symptoms (Miller et al., 2010) and may also develop into avoidance behaviour and increased PTSD (Campbell et al., 2009). Another United States study conducted in one of the cities in which survivors of rape were interviewed and assessed for PTSD showed that 81% of survivors had symptoms of PTSD after one month and at 3 months 53% of survivors met the full criteria for PTSD (Gutner, Rizvi, Monson, & Resick, 2006).

A study in South Africa which examined the relative risk for PTSD associated with political, domestic, criminal, sexual and other forms of assault also showed that there is a strong association between rape and PTSD for women (Kaminer et al., 2008).

These consequences of rape indicate a need for post-rape health care that will address the physical and mental health needs of the survivors.

1.3 Post-rape care services

In response to the high incidence of rape in South Africa, forensic medicine centres which focus on post-rape care were introduced by the government in 2002. The main objectives of establishing these facilities were to (i) have specialized post-rape health care services accessible 24 hours daily for the holistic management of survivors of rape, (ii) reduce secondary victimization, and (iii) increase prosecution and case turn-around time (South African Department of Health, 2005; Thuthuzela Care Centres-National Prosecuting Authority, 2002).

An integrated post-rape care package is offered at post-rape care centres in South Africa to rape survivors on their initial and follow-up visits. Post-rape care follow-up and services offered to rape survivors are listed in the table below:

Table 1.

Summary of post-rape care visits and services offered at the post-rape care centres

Post –rape care visits	Post-rape care services offered
Initial visit	Mental health counselling, medical services (forensic examination, medical assessment, post exposure prophylaxis (PEP), STIs tests, emergency contraceptives), social services, legal services, and referral for long term counselling.
Follow-up visit one (one week after the initial visit)	HIV testing (if it was not done on the initial visit), STIs test results, assessment of PEP adherence and PEP administration, and assessment of injuries.

Follow-up visit two (six weeks after the initial visit)	Assessment for PEP adherence, assessment for healing of injuries, HIV counselling and testing, and pregnancy test.
Follow-up visit three (three months after the initial visit)	Assessment for healing of injuries, HIV counselling and testing, and pregnancy test.

(South African Department of Health, 2005; WHO, 2003).

Due to the high prevalence of rape and the extensive physical and psychological after effects of rape, attending post-rape care follow-up visits at forensic medical centres is critical for facilitating the improvement of the survivor's health and may play a role in reducing risk for mental health difficulties associated with the rape (South African Department of Health, 2005). Despite recommendations promoting follow-up for rape victims to improve their health, there are very low rates of follow-up attendance in South Africa with only 26%-34% of survivors retained in care (Abrahams et al., 2010; & Collings et al., 2008). A need to understand retention in follow-up has been documented (Ackerman et al., 2006) and must be addressed. This study aims to address this need by examining factors associated with attendance and with attrition at a post-rape care centre in Cape Town, South Africa.

1.4 Structure of the dissertation

Chapter 2 of this study will review literature on post-rape care follow-up. Thereafter, Chapter 3 will give a description of the methodology used in the study. Chapter 4 will present results of the study followed by Chapter 5 which will discuss the results and their relationship to existing literature, and lastly give recommendations for future research, policy and practice.

CHAPTER 2

LITERATURE REVIEW

This chapter will review literature on post-rape care follow-up rates, characteristics associated with post-rape follow-up attendance, and barriers associated with accessing post-rape follow-up services.

2.1 Search strategy

Three databases, namely Medline, Psychinfo and Academic Search Premier, were searched. The following terms were used in combination with each other to identify articles from the databases: rape, sexual assault, sexual violence, sexual abuse, follow-up, post-rape care, post exposure prophylaxis, adherence, compliance, and treatment therap*. All searches were limited to studies written in the English language, peer reviewed, and published between 1996 and 2012.

Figure 1 shows that a total of 202 articles were initially identified from the three databases using the mentioned search terms. From these, 172 articles were excluded either because they did not have information on post-rape follow-up care (114 articles) or because they reported on sexual offenders (58 articles). From the remaining thirty articles, seven were excluded because they were not in the English language and 13 were also excluded because they were duplicates. Ten articles were included in the study and added to these were four articles from manual searches from the reference list of the ten articles included in the study, as well as two articles recommended by supervisors. A final total of 16 studies were included in the review. Of the 16 studies, 12 reported on post-rape care follow-up rates, three reported on characteristics associated with post-rape follow-up attendance and five studies reported on barriers associated with post-rape care follow-up attendance.

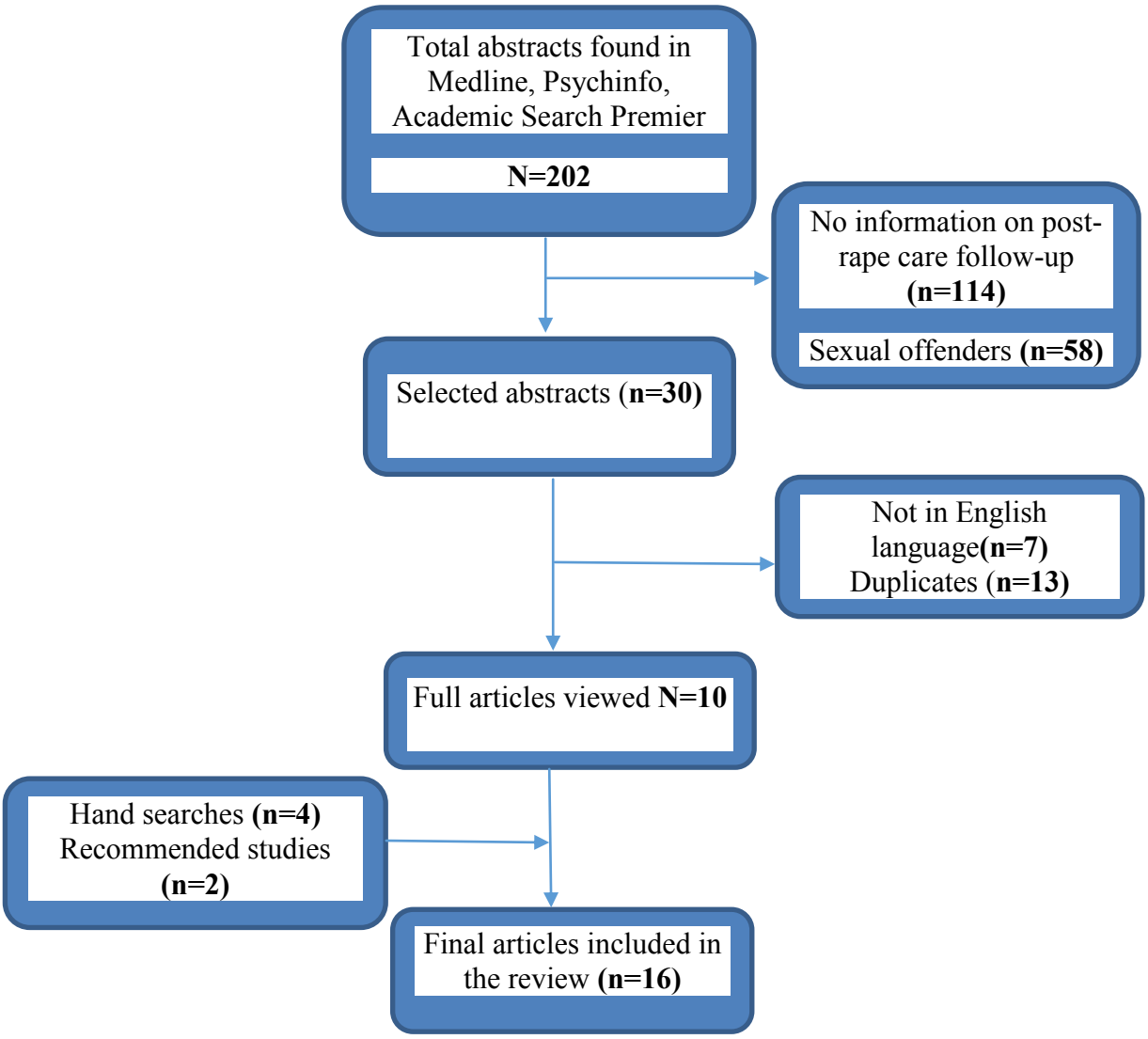


Figure 1 Flow chart of literature search

2.2 Overview of the studies

The studies selected for the review were from six countries. Three studies were from North America and the other thirteen studies were from middle and low income countries in South America, Central and Southern Africa. These studies were published between 1996 and 2010. The methodologies of these studies are summarised in Table 1 below. All studies were carried out at various public health based post-rape care facilities, named as: Child Abuse Referral and Evaluation Clinic, Paediatric Sexual Abuse Clinic, Urban Emergency Department, Sexual Assault Follow-up Examination Clinic, Rape Crisis Centres, Sexual Assault Centres, State hospital, and University Hospital. Six of the studies were retrospective file

reviews and 10 were prospective studies. Ten studies included both males and females and six studies included only females. The survivors' ages varied across the studies. Two studies included only children under the age of 18 years and another two studies included the age group 0-19 years. Six studies reported on survivors of all ages. One study reported on adults 18 years and above only, while another three studies included both adults and adolescents from ages of 12, 14 and 15 years old respectively. Two more studies had ages for the survivors between 19 to 43 years and 16 to 73 years, respectively. The duration of the studies ranged from six months to four years; however, two studies did not indicate their duration.

Table 2.

Summary of methodologies of reviewed articles of post-rape care follow-up attendance

Studies on follow-up attendance rates							
Authors	**Title of study**	**Date of study**	**Data collection method**	**Sample size**	**Study area**	**Age**	**Gender**
Girardet et al., 2009	HIV post exposure prophylaxis in children and adolescents presenting for reported sexual assault.	January 2001 to March 2004	Retrospective study (Case record review)	4234	Paediatric Sexual Abuse Clinic, USA	0-19 years	Males and females
Bello & Pather, 2008	Profiles of rape victims attending the Karl Bremer Hospital Rape Centre, Tygerberg, Cape Town.	1 April 2006 to 31 March 2007	Prospective study	820	Hospital-based Rape Centre, Cape Town, South Africa	6-70 years	Males and females
Collings et al., 2008	HIV post-exposure prophylaxis for child rape survivors in KwaZulu-Natal, South Africa: Who qualifies and who complies?	October to December 2004	Prospective study	200	State Hospital, Durban, South Africa	0-17 years	Males and females
Du Mont et al., 2008	HIV post exposure prophylaxis use among Ontario female adolescent sexual assault victims: A prospective analysis.	September 2003 to January 2005	Prospective study	325	Sexual Assault Centre, Ontario, Canada	12-19 years	Females

Garcia et al., 2005	Post exposure prophylaxis after sexual assault: A prospective cohort study.	May 1997 to March 2001	Prospective study	347	University Hospital, Brazil	All ages	Males and females
Killian et al., 2007	Rape survivors and the provision of HIV post exposure prophylaxis.	January - June 2005	Retrospective study (Case record review)	363	Hospital-based Rape Centre, Cape Town, South Africa	All ages	Females
Linden, Oldeg, Mehta, McCabe, & LaBelle, 2005	HIV post-exposure prophylaxis in sexual assault: Current practice and patient adherence to treatment recommendations in a large urban teaching hospital.	1 October 1999 to 30 September 2002	Retrospective study (Case record review)	181	Emergency Department of Medical Centre, USA	18years+	Females
Ononge et al., 2005	Clinical presentation and management of alleged sexually assaulted females at Mulago Hospital, Kampala, Uganda.	1 March 2000 to 31 December 2000	Prospective study (Interviews)	58	Hospital Emergency Gynaecological Ward, Uganda	All ages	Females
Meel, 2003	A study on the prevalence of HIV sero-positivity among rape survivors in Transkei, South Africa.	1 November 2000 to 30 May 2002	Retrospective study (Case record review)	243	Hospital based Rape Crisis Centre, Eastern Cape, South Africa	All ages	Males and females
Lane, Dubowitz, & Harrington, 2002	Child sexual abuse evaluations: Adherence	Not indicated	Prospective study (Questionnaire)	67	Child Abuse Referral and Evaluation Clinic, USA	0-11 years	Males and females

	to recommendations.						
Holmes et al., 1998	Follow-up of sexual assault victims.	1 January 1995 to 30 June 1997	Retrospective study (Case record review)	389	Sexual Assault Follow-up Examination Clinic, USA	12 years +	Females
Putz et al., 1996	Sexual assault victims' compliance with follow-up care at one sexual assault treatment centre.	Not indicated	Prospective study (Interviews)	26	Sexual Assault Treatment Centre, USA	10-43 years	Females
			Studies on characteristics associated with follow-up attendance				
Ackerman et al., 2006	Sexual assault victims: Factors associated with follow-up care.	July 2001-June 2004	Retrospective study (Case record review)	812	Urban Emergency Department, USA	15 years+	Females
Garcia et al., 2005	Post exposure prophylaxis after sexual assault: A prospective cohort study.	May 1997 to March 2001	Prospective study (Case record review)	347	University Hospital, Brazil	All ages	Males and females
Holmes et al., 1998	Follow-up of sexual assault victims.	1 January 1995 to 30 June 1997	Retrospective study (Case record review)	389	Sexual Assault Follow-up Examination Clinic, USA	12 years +	Females
			Studies on barriers to follow-up attendance				
Roland et al., 2012	Preventing Human Immunodeficiency Virus infection among sexual assault survivors in Cape Town, South Africa: An	March to September 2004	Prospective study (Observational)	135	Rape Centre, Western Cape, Cape Town, South Africa	14+	Males and females

	observational study.						
Abrahams & Jewkes, 2010	Barriers to post exposure prophylaxis (PEP) completion after rape: a South African qualitative study.	2005-2006	Prospective study (interviews)	29	Sexual Assault centre, South Africa	16-73 years	Females
Vetten & Haffejee, 2008	Supporting rape survivors in adhering to post exposure prophylaxis (PEP) to prevent HIV infection: The importance of psycho-social counselling and support.	30 June 2002 to 31 May 2003	Prospective study (Interviews)	67	Rape Centre, Johannesburg, South Africa	14 years+	Males and females
Lane et al., 2002	Child sexual abuse evaluations: Adherence to recommendations.	Not indicated	Prospective study (Questionnaire)	67	Child Abuse Referral and Evaluation Clinic, USA	0-11 years	Males and females
Putz et al., 1996	Sexual assault victims' compliance with follow-up care at one sexual assault treatment centre	Not indicated	Prospective study (Interviews)	26	Sexual Assault Treatment Centre, USA	10-43 years	Females

2.3 Post-rape care follow-up attendance rates

Post-rape follow-up attendance rates were reported in 12 studies of which six of the studies were from high income countries and the other six were from middle and low income countries. These studies defined post-rape follow-up attendance differently.Three studies in the United States which reported on follow-up attendance reported follow-up for survivors returning for at least one follow-up visit (Du Mont et al., 2008; Linden, et al., 2005; & Putz, Thomas, & Cowles, 1996) however the total number of follow-up visits survivors are expected to attend in these settings are not known. In the first study, Putz and colleagues (1996) conducted a prospective telephonic survey on compliance with follow-up care of a small sample of women (n=26) between the ages of 9 and 43 years, of whom 50% returned for at least one post-rape care follow-up visit. Reasons why half of the survivors could not access post-rape care included not having time off from work, not having someone to mind the children, and forgetting their appointments (Putz et al., 1996).

In the second study, a slightly lower rate (43%) of survivors returning for at least one follow-up appointment was shown in a retrospective chart review of 82 survivors of rape who were given HIV post exposure prophylaxis (PEP) (Linden et al., 2004). This study reported on survivors in a similar age group as the previous study; however, this study's main focus was on adherence to HIV PEP treatment. The study also reported that only 18% of these survivors completed the HIV PEP medication (Linden et al., 2004). The researchers found that non-attendance was attributed to survivors being either underinsured or having no insurance to access the expensive post-rape care treatment (Linden et al., 2004). In their prospective study in Canada which analysed data from an HIV PEP project of adolescents aged 12-19 years, Du Mont and colleagues (2008) showed that 76.3% of survivors attended at least one follow-up appointment. The same study also reported that the survivors were asked to return for follow-up at two days, four days, and weeks two, three, and four (Du Mont et al., 2008). In comparison to the two previous studies, this study recorded a high percentage of survivors returning for at least one follow-up visit. This was attributed to the centre having trained nurses who tracked survivors telephonically and provided emotional and physical support (Du Mont et al., 2008). The authors suggested that if there was no support from the trained nurses, very few survivors would have returned for at least one follow-up appointment.

In their United States-based study, Girardet and colleagues (2009) defined follow-up attendance differently. Complete follow-up attendance was defined as attending a total of three clinic visits at two, eight and 24 weeks after the initial visit regardless of whether the participants were given PEP or not (Girardet et al., 2009). This large study (n=4234) was conducted retrospectively on PEP treatment in children and adolescent rape survivors aged 0-19 years at an academic referral clinic. Of the 303 children eligible for HIV PEP, only 5.3% (n=16) were offered PEP, 93.7% (n=15) accepted the medication, and only one returned for the three recommended follow-up visits (Girardet et al., 2009). It is not known why only 303 children out of a total of 4234 were offered HIV PEP. The study further shows that two children returned twice and six returned for one follow-up visit (Girardet et al., 2009). Although this post–rape health facility provided free medical services for those who could not afford to pay and a social worker for emotional support for all children to comply with their follow-up appointments, it was not enough to ensure follow-up adherence. The researchers reported that not completing follow-up at this centre may have been a result of survivors attending follow-up at their primary health care facilities, however no further information was given on who accessed these services (Girardet et al., 2009).

Another USA-based retrospective study of adolescents and adult survivors of rape showed very low follow-up rates of 31% despite support and encouragement given to the survivors by service providers to return for their appointments (Holmes, Resnick, & Framptom, 1998). The kind of support the survivors received from the services providers and how they were supported was not described. The average age of the survivors was 24.3 years and the total number of survivors (n=389) consisted of 43% African American and 55% White. The race of the other 2% of the survivors is not known. Missed appointments were also rescheduled in an effort to increase the number of survivors attending follow-up care (Holmes et al., 1998).

Unlike these North American studies, in the few existing studies from middle and low income countries follow-up attendance was reported at specific time lines after the rape had occurred. Post-rape care follow-up attendance was defined as returning for at least one follow-up appointment in high, middle and low-income countries and middle and low income countries specified follow-up appointments timelines as: two

weeks, six weeks, three months and six months. In Brazil a prospective study of male and female survivors of all ages reported follow-up attendance at six months only and showed that slightly more than half (51.9%) of the sample attended the six month follow-up visit (Garcia et al., 2005). The study does not report on whether these survivors attended previous post-rape care follow-up visits. A prospective study of female survivors of rape conducted at a state hospital in Uganda reported a very poor follow-up attendance rate of 6.6% at the three month follow-up visit (Ononge et al., 2005).

In South Africa, four studies have reported on post-rape follow-up attendance rates. Attendance rates as low as 10% were reported at three month and six month follow up appointments in a prospective study on 120 child survivors of rape who received PEP at a state hospital in one of South Africa's major cities (Collings et al., 2008). The child survivors who returned for follow-up also had adhered to their full course of PEP medication (Collings et al., 2008). This may suggest that those who completed their PEP medication could have been more concerned about their health and attended their follow-up appointments.

In the same study, children who had been sexually assaulted and who did not qualify for PEP medication mostly as a result of delayed reporting (32%), were given follow-up appointments for HIV test results at two weeks and HIV testing at three and six months (Collings et al., 2008). A steep decrease of follow-up attendance was reported where 32.2% survivors returned for their two week appointment, 12.5% returned for their six week appointment and 3.1% attended their three month appointment (Collings et al., 2008). The authors suggested that the high attrition rates may have been a result of delayed reporting where the survivors' families were not ready to disclose the rape incident and attending follow-up at a rape centre would expose them as rape victims (Collings et al., 2008).

Another prospective study conducted at a hospital-based rape centre in a rural province of eastern South Africa reported a very low attendance rate (2.2%) at the three month follow up visit (Meel, 2003). Unlike most rape centres in South Africa, which are open 24 hours a day, this particular centre was only open in the day time Monday to Friday. The opening hours of the centre may have hindered employed

survivors who could only access services after working hours, on weekends or on public holidays. Furthermore, accessing this service may have been a challenge for those who stayed far away and could not financially afford to travel to the centre (Abrahams & Jewkes, 2010).

A retrospective study conducted in an urban hospital-based sexual assault service centre in the Western Province of South Africa reported follow-up attendance at three months only and showed a very low post-rape follow-up attendance rate of 3.4% (Killian et al., 2007) despite the fact that this centre provided 24 hour post-rape care services to all survivors of sexual assault. On the other hand, a prospective study conducted at the same sexual assault centre showed a very high percentage of 81.7% post-rape follow-up attendance (Bello & Pather, 2008). The study did not specify at which timeline the survivors attended follow-up visits, however the high attendance was attributed to survivors being followed up by the study staff for a minimum period of one year for the purposes of the study (Bello & Pather, 2008). The study staff focused only on the survivors who were taking part in the study and were different from the clinic staff who attended to all survivors who presented at the centre (Bello & Pather, 2008). A health promoter was employed to assist with tracking of survivors at the health facilities and their homes (Bello & Pather, 2008). The survivors were also phoned and encouraged to return for their follow-up visits (Bello & Pather, 2008). On the other hand, another study conducted in both rural and urban settings in South Africa which looked at the impact of telephonic psycho-social support on PEP adherence showed that phone calls did not increase attendance to follow-up appointments (Abrahams et al., 2010).

2.4 Factors associated with post-rape care follow-up attendance

The literature search identified only four studies which reported on factors associated with post-rape follow-up attendance. Three of these studies were conducted in North America and one in Brazil. The studies identified some demographic and sexual assault history characteristics, and specific medication treatments, that were associated with follow-up attendance.

2.4.1 Demographic characteristics associated with follow-up attendance

In a retrospective study of medical records of female survivors aged 15 years and above, younger survivors of sexual assault had better follow-up rates than older survivors (Ackerman et al., 2006). This study was conducted at an urban sexual assault centre in the United States. Follow-up attendance was seen to decrease as the age of the survivors increased (Ackerman et al., 2006). Younger children 15 to 19 years had 42% follow-up rates compared with 21% amongst adults 50 to 90 years (Ackerman et al., 2006). In most cases rape in younger children may be their first sexual assault experience and will be perceived as especially harmful and this may warrant urgency from the guardian or parent to seek help for the child (Ackerman et al., 2006).

In one study in Brazil, the survivor's level of education was also associated with follow-up attendance. Those who had higher education attainment had better follow-up rates than those who had lower education (Garcia et al., 2005).

2.4.2 Sexual assault characteristics associated with follow-up attendance

The location of the sexual assault has been found to be associated with follow-up attendance. After conducting a multivariate analysis Ackerman and colleague's (2006) study showed that survivors of rape who reported being raped in their homes were 2.5 times more likely to return for their follow-up appointments than those who were raped at someone else's home or a public setting (Ackerman et al., 2006). However, the study did not elaborate on who the perpetrators were. The same finding was reported in a similar study which sampled female survivors of rape from the age of 12 years and above (Holmes et al., 1998). Ackerman and colleagues (2006) suggested that violation of one's safe space may play a role in motivating the survivor to attend follow-up in search of some form of justice.

Ackerman and colleagues (2006) found that the relationship between the survivor and the perpetrator was associated with follow-up attendance. According to this study, those sexually assaulted by an acquaintance (39%) and a stranger (35%) were significantly more likely to attend follow-up than those assaulted by a partner (23%) (Ackerman et al., 2006). Those assaulted by strangers and acquaintances might seek post-rape services due to fear of acquiring HIV or becoming pregnant and would be

more likely than those raped by a partner to want the perpetrators to be prosecuted (Ackerman et al., 2006). However, this challenges their finding that survivors assaulted in their homes, where their partners are likely to live or visit frequently, were more likely to attend follow-up than those who were raped at someone else's home or public setting where acquaintances and strangers are mostly likely to be found.

Several studies in South Africa have reported that some survivors will be under the influence of alcohol at the time of being raped (Killian et al., 2007; Lammers et al., 2010). In the United States, Ackerman and colleagues (2006) found that survivors of rape who were under the influence of alcohol during the rape were significantly more likely to attend follow-up. Contrastingly, Holmes and colleagues (1998) reported that being under the influence of drugs during the rape was not associated with follow-up attendance (Ackerman et al., 2006). Drugs are illegal and therefore survivors may not attend follow-up visits for fear of exposing themselves, may not remember details of the rape or may have more self-blame (Ackerman et al.,2006). On the other hand those whose memory was impaired because they were under the influence of alcohol might attend follow-up to find out the extent of injuries from the rape incident (Ackerman et al., 2006).

Acquiring injuries during the rape incident may also be associated with follow-up attendance. According to Ackerman and colleagues (2006) survivors of rape who had genital injuries were more likely to return for follow-up than those who had other bodily injuries. Acquiring genital injuries would require immediate medical attention and follow-up assessments (Ackerman et al., 2006) because of the high risk of contracting HIV brought about by the injuries. Although other physical injuries may require immediate medical attention, the authors specifically considered genital injuries so no conclusions can be drawn about other injuries.

2.4.3 Association between type of medical treatment and follow-up attendance

Receiving medication after sexual assault is important in the prevention of unwanted pregnancy, sexually transmitted infections and HIV, and those receiving one or all of these treatments would need to attend follow-up for further medical assessments (Ackerman et al., 2006). After conducting a multivariate analysis, Garcia and

colleagues (2005) reported that survivors receiving specific medication such as PEP for HIV, which is taken for a period of 28 days, were 1.9 times more likely to return for their follow-up visits. The same study found that survivors who know their perpetrator's HIV status are more likely to comply with all medical appointments and treatments for fear of being infected with the virus (Garcia et al., 2005).

2.5 Barriers to follow-up attendance

Five studies reported on barriers to accessing post-rape care services. Two studies were from the United States and three from South Africa. From the five studies, two from the United States and two from South Africa reported that survivors indicated that they did not have time to access services (Abrahams & Jewkes, 2010; Lane et al., 2002; Putz et al., 1996; Roland et al., 2011). Accessing post-rape care services becomes a challenge for survivors who may find it difficult to find time from their busy work or school schedules to attend follow-up appointments at sexual assault centres (Abrahams & Jewkes, 2010; Lane et al., 2002; Putz et al., 1996; Roland et al., 2012).

Accessing post-rape services in most cases comes with financial sacrifices even though the services are free. In South Africa, many rape survivors seeking services from public health centres come from low socioeconomic backgrounds and cannot afford to attend follow-up appointments because of the cost of transport, and/or potential lost income from missing work (Abraham & Jewkes, 2010; Roland et al., 2012). In rural settings where there are limited post-rape care centres servicing a large population spread across a vast area, some of the survivors have to travel long distances to access this service (Abraham & Jewkes, 2010). Some survivors of rape may be coping with multiple social problems which deter them from fully utilising post-rape follow-up services. This is prevalent in South Africa where barriers such as family problems, having to attend family funerals, child care problems and having relocated to a safe community are cited as reasons for not attending follow-up appointments (Abraham, & Jewkes, 2010; Roland et al ., 2012).

The psychological wellbeing of the survivor can also be a barrier to accessing post-rape care services. Two South African studies reported that some survivors of rape experienced fear as a barrier to accessing care (Abraham & Jewkes; 2010; Vetten &

Haffejee, 2008). A qualitative study which used interviews with female survivors of rape 16 years and older reported that survivors feared being blamed for the rape (Abraham & Jewkes, 2010). Vetten and Haffejee (2008) in their qualitative study reported that survivors feared leaving their homes to access post-rape care services for fear of being re-victimised especially if they knew that the perpetrator was still in the community. South African studies have shown that safety plays a very important part in survivors accessing post-rape services (Abraham & Jewkes, 2010; Roland et al., 2011). Survivors reported having relocated to other communities (Roland et al., 2011) because they did not feel safe after sexual assault. Most survivors will not disclose the rape incident to anyone (Abraham & Jewkes, 2010) because they want to eliminate anything that associates them with the incident and want to start their lives afresh in a new and safe environment.

Some survivors of rape sometimes forget to attend follow-up appointments (Abraham & Jewkes, 2010). In one South African study, survivors reported forgetting that they had to return for follow-up at the sexual assault centre (Abraham & Jewkes, 2010). Putz et al. (1996) in their United States study also showed that not remembering post-rape follow-up appointment dates was prevalent among survivors. Possible reasons may be the high levels of daily stressors and avoidance behaviour associated with typical trauma symptoms that the survivors may experience after the rape. In addition, survivors may not be able to remember the large amount of information including details of follow up appointments that they receive at the post-rape care centres in a short space of time (Abraham & Jewkes, 2010).

2.6 Conclusion

The literature review indicates that post- rape follow-up attendance rates are very low across countries, yet very few studies have reported on characteristics associated with post-rape follow-up attendance. To date, only studies conducted in the United States have reported on characteristics associated with post-rape follow-up attendance, while similar data from low and middle income countries, including South Africa, are limited. Such information is important in assisting post-rape care service providers in attempt to address this gap in the knowledge base in the context of South Africa to improve post-rape care follow-up attendance in South Africa.

It is also apparent from the literature review that the studies which have reported on post-rape follow-up attendance have utilised different definitions of follow-up attendance. Some studies only reported on survivors attending at least one follow-up visit while others reported on survivors attending a two day, four day, two week, six week, eight week, 24 week, three month and six month follow-up appointments. This limits comparisons between studies.

The aim of the current study is to identify characteristics of rape survivors who attended post-rape care at a service centre in a peri-urban community of Cape Town. It is envisaged that the findings of this research will contribute to efforts focusing on improving follow-up attendance at post-rape care centres in South Africa.

CHAPTER 3
METHODOLOGY

This chapter describes the methodology used to conduct this study. Firstly a detailed description of the study design is given followed by the study setting. The sample and sampling procedure follow and are discussed in the same section. The section on the data collection method and management used and the data description will be discussed after. Lastly, the data analysis followed by ethical consideration will conclude this chapter.

3.1 Objectives of the current study

The objectives of the study are to establish patterns of follow up attendance at a rape counselling centre. In particular, the study aims:

- To identify characteristics of rape survivors presenting at a post-rape care centre in Cape Town.
- To determine if characteristics of the rape survivors and of the rape incident are significantly associated with adherence or non-adherence to scheduled post-rape care appointments.

3.2 Study Design

This study was a retrospective record review of data extracted from clinic files of rape survivors assisted at a post-rape care centre from the 1st of September 2010 to the 31st of August 2011. Recent data for 2012, 2013, 2014 and 2015 was not used for this study because data collection was conducted in 2012 when this data was not available. A retrospective record review also known as a retrospective chart review or medical record review is a type of study design which uses recorded patient data to answer a research question or questions (Gearing, Mian, Barber, & Ickowicz 2006; Vassar & Holzman, 2013; Worster & Haines, 2004). Data for this type of research design are mainly extracted from health professionals' notes and other service providers who contribute to the mental and physical wellbeing of a patient (Vassar & Holzman, 2013).

3.3 Study site

This study focused on follow-up attendance at a post-rape care centre which is situated in a township in Cape Town, South Africa. The centre provided post-rape care services to survivors of rape from 2005 to 2012. These services were transferred to the Thuthuzela Care Centre based at a government hospital in the same community in 2012. Thuthuzela Care Centres are government initiated one-stop post-rape care facilities based in health centres in South Africa (Thuthuzela Care Centre-South African National Prosecuting Authority, 2002).

In addition to rape, the post-rape care centre focused on offering counselling and referrals for the following range of problems: domestic violence, needle stick injuries, condom bursts/slips, unprotected sex, physical and emotional abuse, neglected and abandoned children, child maintenance, DNA testing, and HIV counselling and testing (HCT). These services were offered 24 hours, 7 days a week, at no cost to the attendees.

A post-rape care package was offered to all rape survivors presenting at the centre and comprised of the following: medical services rendered by medical professionals who were based at the centre; counselling by lay counsellors also based at the centre; child protection services by social workers who were based outside of the centre and were phoned in to the centre if there were cases that involved children, and the Family Violence, Child Protection and Sexual Offences Unit (FCS) who were also based outside the centre and were phoned in to the centre to take the client's statement and open a case against the perpetrator. Afterwards the FCS will start the process of investigating the case outside the post-rape care centre.

The post-rape care centre where this study was conducted was the only facility which provided acute post-rape care services to survivors of rape in the township. This peri-urban area is located in the south-eastern part of Cape Town Metropolitan area, with an estimated population of 391 749 (City of Cape Town Census, 2011). The majority of the people in this community are unemployed migrants from the Eastern Cape, and mainly black Africans who are Xhosa speaking. The community also houses immigrants from different nationalities. High unemployment rates and poor

infrastructure have greatly contributed to the high levels of crime in the community of which sexual assault ranks high on the list (Poswa & Levy, 2006).

3.4 Study Sample and Sampling Procedure

The sampling frame for the study was all files were extracted from the centre registry for the one year period mentioned above. During the sampling procedure, the following inclusion and exclusion criteria was used:

Inclusion criteria:

- Male or female rape survivors of all age groups.
- Initial post-rape care visits to the post-rape care centre between the 1st of September 2010 and the 31st of August 2011.
- Survivors given post-rape care follow-up appointments.

Exclusion criteria:

- Initial post-rape care visits to the post-rape care centre which occurred before the 1st of September 2010 or after the 31st of August 2011.
- Initial post-rape care visits which were not at the post-rape care centre.
- Rape cases with no follow-up appointments at the post-rape care centre.
- Cases that were not rape.

The inclusion and exclusion criteria are used to make sure that all the relevant files for the study are included (Vassar & Holtzman, 2013).

A total of 1128 files were taken out of the registry for the one year period under study. From these files, those that were not written rape, suspected rape and attempted rape on the cover were excluded (356). Files that remained were 772. Suspected rape, attempted rape and sexual assault files, were included in these remaining files because some of them were confirmed rape cases by the health care workers. Rape case files were further reviewed and those that did not have follow-up appointments at the post-rape care centre were excluded. Suspected rape, attempted rapeand sexual assault files were also further reviewed and from these, those which the health care worker confirmed to be rape cases and met the other inclusion criteria were included in the study. Five hundred and eighteen (518) files were excluded from the study and a total of 254 files met the inclusion criteria and these made up the study sample.

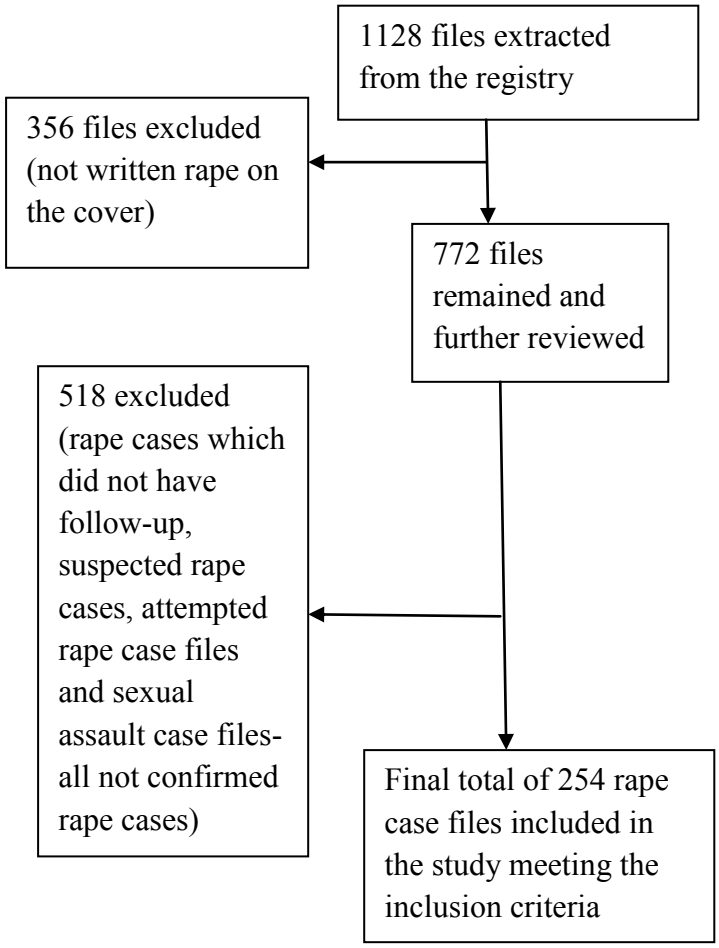


Figure 2. Sampling process flow chart

3.5 Types of follow-up appointments given to survivors of rape

At the post-rape care centre, survivors of rape were given follow-up appointments at one week, six weeks and three months after their initial visit. Not all the cases reviewed in this study were allocated all three appointments and this was because some of the survivors requested to come at a later date due to different commitments they had.

3.6 Data Collection

The current study was conducted in 2012. The data were collected by the primary researcher with assistance from the supervisors of the study over a period of four months from May to August 2012. A data collection form was used to collect information from the 254 files.

3.6.1 Data collection form

A data collection form was developed to systematically extract routine information recorded in the survivors' files. A data collection form is an instrument used to collect information from medical reports (Banks, 1998). Questions on the data collection form should be presented in the manner in which they appear on the data source, grouped according to the data source or theme they fall under (Banks, 1998). The data collection form used for this study grouped questions under the following themes: the survivor's demographic background, employment or educational status, rape history, medical information, mental health information and support services.All variables on the form were assigned numeric codes to facilitate analysis of the data using SPSS statistical programme. Banks (1998) states that a well formatted data collection form will tremendously improve efficiency and accuracy in data entry. Number codes were preferred to any other coding method because they are easy to use and made data entry fast and more efficient (Banks, 1998).

3.6.2 Information extracted and description of variables

The survivors' files generally consist of different forms completed by the different staff that renders direct post-rape services to survivors of rape at the post-rape care centre. Described in Table 3 below is information on the names of the forms, people responsible for completing them and variables extracted for the study.

Table 3.

Data sources for this study

Name of form	**Completed by**	**Information extracted for the study**
Counselling notes form	Lay counselor	**Survivor's demographic information**: age, gender, community the survivor lives in and educational and employment status. **Rape incident information**: date and time of initial visit to the centre, duration of counselling session, date of rape incident, location of the rape incident, community where the rape occurred, if the survivor was under the influence of alcohol and the number of perpetrators of rape. **Perpetrator(s) information**: perpetrator's relationship with the survivor, age, if the perpetrator was a member of a gang, if weapons were used during the rape incident, if the perpetrator threatened the survivor before and or after the sexual assault incident, and if the perpetrators(s) was under the influence of alcohol. **Referral**: If the survivor was referred for other counselling services. **Counselling summary notes**: survivor's emotional status on the initial visit, one week, six weeks and three months follow-up appointments and survivor's follow-up attendance.

Medical Rape Protocol form	Doctor or Sexual Assault Nurse Examiner (SANE)	**Medical information**: if the survivor was conscious during the rape, if the survivor was abducted during the rape incident, survivor's previous rape history, survivor's emotional status, injuries, HIV and STIs treatment information, HIV PEP administration information, types of follow-up appointments given, if the survivor attended follow-up appointments as scheduled, PEP adherence information, HIV tests and results on the survivor's initial visit, six week and three month follow-up appointments, if forensic examination was done on the initial visit to the centre, survivor's emotional status at one week, six week and three month follow-up appointments and referral for further medical care.
HIV consent form	Lay counsellor/Doctor/SANE	HIV tests done on the initial visit, six week and three month follow-up appointments.
J88	Doctor/SANE	Survivor's emotional status on the initial visit to the centre.
Police's statement	Investigating officer	Survivors' emotional status.

3.6.3 Pilot study

A data collection form was piloted on thirty files. According to Banks (1998), pilot testing the data collection forms confirms the reliability and validity of the instrument and it ensures that the questions on the form accommodate all the information needed for the study. During the piloting phase, changes were made to the form to adequately capture information for the study. Changes made to the form included the addition of 'unsure' as one of the options to questions where the service provider was not sure of the survivor's information, addition of 'not recorded in the file' as one of the options for information that was not recorded in the file and the addition of 'specify' as one of the options for those questions where a specific answer was needed.

All forms in the file with overlapping information such as the name of the survivor, age, gender, rape history, medical and follow-up information were checked against each form to make sure that accurate information was captured. On seven forms, the age of the survivor recorded in the counselling notes form differed from that recorded on the Medical Rape Protocol form. In this case the age of the survivor was calculated using the date of birth recorded on the forms. Worster and Haines (2004) acknowledge that conflicting data is a common issue in record reviews and should be resolved for example by an agreement made by the researchers or by the first recorded response from the medical records.

3.7 Data Management

All the completed data collection forms were stored in a lockable cabinet and used files were returned to the facility registry. Only the primary researcher and research supervisors had access to the data collection forms. All the data collected were entered into SPSS statistical programme. To ensure that data were entered correctly, frequencies were run on all the variables. Variables which were miscoded or missing were identified and corrected through consulting the original data collection form. The research supervisors and consultant statistician also checked for errors in data entry.

3.8 Data Analysis

All the data recorded on the data collection forms were entered and analysed using SPSS version 21. Descriptive statistics were generated on the survivors' demographic information, rape history, medical information, mental health information, and support system. In the case of continuous variables, such as the survivors' and perpetrators' age, histograms were used to assess normality. If the histogram was normal, the mean and standard deviation were used to describe the data and if it was skewed, the median and the interquartile range were used.

Cross tabulations were used to look for association between variables. The Chi square test was used to determine associations between categorical variables and follow-up attendance outcome and Fisher's exact was used where individual cells in the contingency tables were less than 5.

3.9 Ethical Considerations

Ethical approval was obtained from the University of Cape Town (UCT) Health Sciences Research Ethics Committee. Permission to conduct research was granted by the director of Mosaic Training Service and Healing Centre for Women where the researcher was employed at the post-rape care centre. Permission was also given by the Head of Research in the Department of Health to use the rape survivors' medical records for the study.

To protect the survivors' identity, survivors' names and file numbers were not recorded in the dataset for this study. As the study involved no contact with human subjects there was minimal risk involved. All the data collection was conducted at the post-rape care centre and no case files were taken away from the premises. Data collected were accessed through use of a password and only the primary researcher, research supervisors and the statistician had access. Future survivors of rape may benefit from improved services based on information gleaned from this study.

CHAPTER 4

RESULTS

This chapter is presented in three sections which are: 1) the description of the study sample, 2) description of follow-up attendance rates and 3) associations between demographic variables and follow-up attendance.

4.1 Description of the study sample

There were 254 files that made up the study sample. The sample was made up of 92.1% females and 7.9% males.The median and interquartile range (IQR) which is the tendency of the data set to cluster around the mean was calculated for the survivors' age because the distribution was skewed. As shown in Figure 2, most survivors (n=73) were between the ages of 15 to 20 years and as the age increased the number of the survivors decreased. As reflected in Table 4, the median age of the sample was 17 years, and the IQR was 10-23 years, and there was a wide age range of between 2 and 80 years.

*Figure 3.*Survivors' age

Table 4.

Demographic characteristics of the sample (continuous variables)

Variable	Median	Range	Interquartile range
Survivors' age	17	2 - 80	10 – 23

The categorical demographic variables of the sample are summarised in Table 5 which shows frequencies for gender, employment or educational status and the community in which the survivors resided. The demographic data show that the majority of the survivors were females (92.1%). More than half of the survivors (52%) were studying at the time of presentation and this category included those in primary, high school or pursuing tertiary level studies. Children at crèche constituted 2.4% of the rape survivors. Of the cases for which information was available, there were 13.4% survivors who were employed and 20.5% unemployed. The majority of the total sample resided in Khayelitsha (93.3%), where the study site is situated, while only a few survivors (6.7%) stayed in communities outside of Khayelitsha.

Table 5.

Summary of the demographic information of the sample

Variable	Categories	n	Percentage
Demographic information			
Sex	Male	20	7.9
	Female	234	92.1
Employment or educational status	Employed	34	13.4
	Unemployed	52	20.5
	Studying	132	52.0
	Crèche	6	2.4
	Missing information	30	11.8
Community where the survivor	Nearby vicinity	51	20.1

lives	(Khayelitsha)		
	Broader Khayelitsha	186	73.2
	Outside Khayelitsha	17	6.7

4.2 Time of presentation to the post-rape care centre

As shown in Table 6, the majority of the survivors in this study (81.9%) presented at the post-rape care centre within 72 hours after the rape while 15.4% presented after 72 hours. The number of presentations within 72 hours was high, and this was influenced by the inclusion criteria. That is, data were only collected from files where survivors had their first visits at the centre and from these visits most of the rape cases would have occurred within 72 hours of presentation to the post-rape care centre.There was a relatively equal distribution of presentations at the post-rape care centre over the day and night with slightly more survivors presenting in the morning (39.0%) than in the afternoon (29.9%) and at night (29.5%). Of the total sample, fewer rapes occurred during the day (36.2%) between 5:00am and 6:59pm and the majority occurred at night (54.3%) between 7:00pm and 4.59am.

Table 6.

Time of presentation to the post-rape care centre

Variable	**Categories**	**n**	**Percentage**
Survivors presenting to the rape centre within 72 hours	Yes	208	81.9
	No	39	15.4
	Missing information	7	2.8
Time of initial visit to the centre	Morning (5.00am-11.59am)	99	39.0
	Afternoon (12.00pm-6.59pm)	76	29.9
	Night (7.00pm-4.59am)	75	29.5
	Missing	4	1.6

	information		
Approximate time of rape incident	Morning (5.00am-11.59am)	27	10.6
	Afternoon (12.00pm-6.59pm)	65	25.6
	Night (7.00pm-4.59am)	138	54.3
	Missing information	24	9.4

4.3 Rape incident characteristics

Table 7 shows the rape incident characteristics as reported in the survivors' files. Among the rape cases in this study, the majority (81.5%) occurred in Khayelitsha. The rape incidents were perpetrated in various places in the communities. Results indicate that of the total sample, 72.0% survivors reported that they were raped indoors versus those who reported being raped outdoors (24.8%) and other places (1.6%). Rape perpetrated indoors included rape committed in the perpetrator's home (39.0%), survivor's home (21.2%) and someone else's home (11.8%). Rape perpetrated in other places included inside a toilet and inside a car.

According to the data extracted from the records, of the total sample, most survivors (84.6%) reported being raped by one person. There were 15.3% survivors who reported being gang raped. There were more survivors who were raped by people they knew (59.0%) than survivors who were raped by strangers (40.6%). Of those survivors who knew their perpetrators, most of them (35.8%) reported being raped by a community member, 11% reported that they were raped by a family member, 6.7% by a partner and 5.5% reported being raped by a friend.

Of the total sample, most of the survivors reported that they were threatened either before (53.1%) or after (36.2%) the rape incident. Of the total sample, 37.4% indicated that a weapon was used to threaten the survivor during the rape incident. However, on

1.2% records, the counsellors recorded being unsure about whether a weapon was used during the rape incident. Different types of weapons used to threaten the survivors during the rape incident were identified and these included a knife (50.5%), a gun (30.5%), and other weapons (18.9%).

The majority of the survivors were conscious during the rape incident (91.7%). However, 6.7% were unconscious during the time of rape. Half of the survivors in the sample reported that they were not abducted by the perpetrator during the time of rape (50.8%), while a substantial number of survivors reported that they were abducted (43.3%) and taken to another place during the rape incident. According to data extracted from the files, 29.5% of survivors were under the influence of alcohol during the time of rape.

Regarding injuries, 27.2% survivors indicated that they incurred physical injuries during the rape incident. Notably a significant number of files (71.3%) had missing information on whether they had a previous rape history. Only 9.8% reported that they were raped before and 18.9% reported that they had not been raped before.

Table 7.

Rape Incident Characteristics

Variable	**Categories**	**n**	**Percentage**
Community the rape incident took place	Near vicinity (Khayelitsha)	41	16.1
	Broader Khayelitsha	166	65.4
	Outside Khayelitsha	16	6.8
	Missing information	31	12.2
Where did the rape incident take place?	Perpetrator's home	99	39.0

	Outdoors	56	22.0
	Survivor's home	54	21.2
	Someone else's home	30	11.8
	Immediately outside buildings	7	2.8
	Other	4	1.6
	Missing information	4	1.6
Is the perpetrator known to the survivor?	Yes	150	59.1
	No	103	40.6
	Missing information	1	0.4
Perpetrator's relationship to the survivor	Family	28	11.0
	Friend	14	5.5
	Partner	17	6.7
	Stranger	103	40.6
	Community member	91	35.8
	Missing information	1	0.4
Number of rape perpetrators	One	215	84.6
	Gang rape	39	15.3
Survivor under the influence of alcohol at the time of the rape incident	Yes	75	29.5
	No	161	63.4
	Missing information	18	7.1
Threats before the rape incident	Yes	135	53.1
	No	101	39.8
	Unsure	1	0.4
	Missing information	17	6.7
Threats after the rape incident	Yes	92	36.2
	No	130	51.2
	Unsure	2	0.8

	Missing information	30	11.8
Weapons used to threaten the survivor	Yes	95	37.4
	No	141	55.5
	Unsure	3	1.2
	Missing information	15	5.9
If yes, description	Knife	48	50.5
	Gun	29	30.5
	Other	16	16.8
	Missing information	2	2.1
Was the survivor conscious during the rape incident?	Yes	233	91.7
	No	17	6.7
	Missing information	4	1.6
Was the survivor abducted?	Yes	110	43.3
	No	129	50.8
	Missing information	15	5.9
Did the survivor incur any injuries?	Yes	69	27.2
	No	166	65.4
	Missing information	19	7.5
Does the survivor have a previous rape history?	Yes	25	9.8
	No	48	18.9
	Missing information	181	71.3

4.4 Survivors' medical information and interventions

Table 8 below shows details of survivors' medical information and interventions at the centre. The majority of the survivors received medication (94.9%) and, of those, 96.6%

received sexually transmitted infection treatment, 57.6% pregnancy prevention medication and 78.8% were given HIV PEP medication. The data show that 94.5% of survivors had a forensic examination done.

Most of the survivors (54.7%) reported having been tested for HIV before the rape incident and 35.8% reported not having had any HIV test in their lives. Out of those survivors who had records of having tested for HIV before the rape incident, 59.7% had tested in the past year, 39.4% in the past two or more years. Survivors who were put in the 'other' category (9.3%) were tested more than five years before presenting to the post-rape care centre. At the initial post-rape care visit, records show that 87.8% of the survivors in the sample tested HIV negative, 5.9% tested HIV positive and 3.1% were not tested for HIV on their initial visit to the post-rape care centre. At the six weeks follow-up appointment, 91.3% of the survivors who returned (n=92) tested HIV negative, 7.6% (n=7) were not tested and no survivors tested HIV positive. At the three months follow-up appointment, 96.2% of the survivors who attended (n=53) tested negative, 1.9% (n=1) was not tested and none of the survivors tested HIV positive.

Table 8.

Survivors' medical information and interventions

Variable	**Categories**	**n**	**Percentage**
Was STIs medication given? (Calculated out of 241 survivors offered STIs medication)	Yes	233	96.6
	No	8	3.3
Was an emergency contraceptive given? (Calculated out of 241 survivors offered an emergency contraceptive)	Yes	139	57.6
	No	102	42.3

Was HIV PEP medication given? (Calculated out of 241 survivors offered HIV PEP medication)	Yes	190	78.8
	No	51	21.1
Was forensic examination done on the initial visit to post-rape care centre? (Calculated out of 254)	Yes	240	94.5
	No	8	3.1
	Missing information	6	2.4

Survivors' HIV test information

Was the survivor tested for HIV before the rape incident?(Calculated out of 254)	Yes	139	54.7
	No	91	35.8
	Missing information	24	9.4
If yes indicate when (n=139)	In the past year	83	59.7
	In the past 2 years	32	23
	In the past 5 years	10	7.1
	Other	13	9.4
	Missing	1	0.7
HIV test result if the survivor was tested on the initial visit to the centre (N=254)	Positive	15	5.9
	Negative	223	87.8
	Not tested	13	5.1
	Missing information	3	1.2
HIV test result if the survivor was tested at six weeks visit to the centre (n= 92 survivors attending six week follow-up)	Negative	84	91.3
	Positive	0	0
	Not tested	7	7.6

	Missing information	1	1.1
HIV test result if the survivor was tested at three month visit to the centre (n= 53 survivors attending three month follow-up)	Negative	51	96.2
	Positive	0	0
	Not tested	1	1.9
	Missing information	1	1.9

4.5 Counselling information

Table 9 shows that the median time per counselling session was 56 minutes which is very close to the one hour allocated per survivor. Although the counselling sessions were allocated one hour each, some sessions could be longer or shorter depending on the different needs of the survivors and the discretion of the counsellor. Session length varied widely between 29 and 139 minutes.

Table 9.

Time taken during counselling session (continuous variables)

Variable	**Median**	**Range**
Time taken in a counselling session	56 mins	26-139 mins

Data on counselling are summarised in Table 10. Almost all of the survivors in the total sample (98.8%) received counselling on their initial visit at the post-rape care centre. No reasons were recorded why 0.8% (n=2) did not receive this counselling.

Similarly, the majority (92.7%) of those survivors who returned for one week follow-up appointments received counseling, only 0.6% did not receive counseling and again no reasons were recorded for why they did not receive counselling. Of the survivors who

returned for six week follow-up appointments, 89.1% received counselling and out of those survivors who returned for three months follow-ups, 64.2 % received counselling.

Table 10.

Summary of counselling received by the survivor

Variable	Categories	Frequency	Percentage
Counselling received on the initial visit to the centre (N=254)	Yes	251	98.8
	No	2	0.8
	Missing information	1	0.4
Counselling received at one week follow-up visit (n=164 survivors who attended one week follow-up)	Yes	152	92.7
	No	1	0.6
	Missing information	11	6.7
Counselling received at six weeks follow-up visit (n=92 survivors who attended six weeks follow-up)	Yes	82	89.1
	No	0	0
	Missing information	10	10.9
Counselling received at three months follow-up visit (n=53 survivors who attended three months follow-up)	Yes	34	64.2
	No	0	0
	Missing information	19	35.8

4.6 Follow-up appointments

Table 11 below shows that out of the total sample, 90.2% of rape survivors were given one week follow-up appointments and 9.8% were not. At the post-rape care centre under

study, not all survivors will be given a one week follow-up appointment. This was because some of the survivors had commitments and therefore would request to attend the six week follow-up appointment. From the 229 survivors who were given the week appointment, 77.7% (n=178) were given the six week appointment and at three month appointment, of the 178 survivors given the six week appointment, only 47.6% (n=85) were given the three month follow-up appointment.

Table 11.

Summary of follow-up appointments given

Variable	Categories	Frequency	Percentage
One week follow-up appointment given (N=254)	Yes	229	90.2
	No	25	9.8
Six week follow-up given (n=229)	Yes	178	77.7
	No	51	22.3
Three month follow-up given (n=178)	Yes	85	47.8
	No	93	52.2

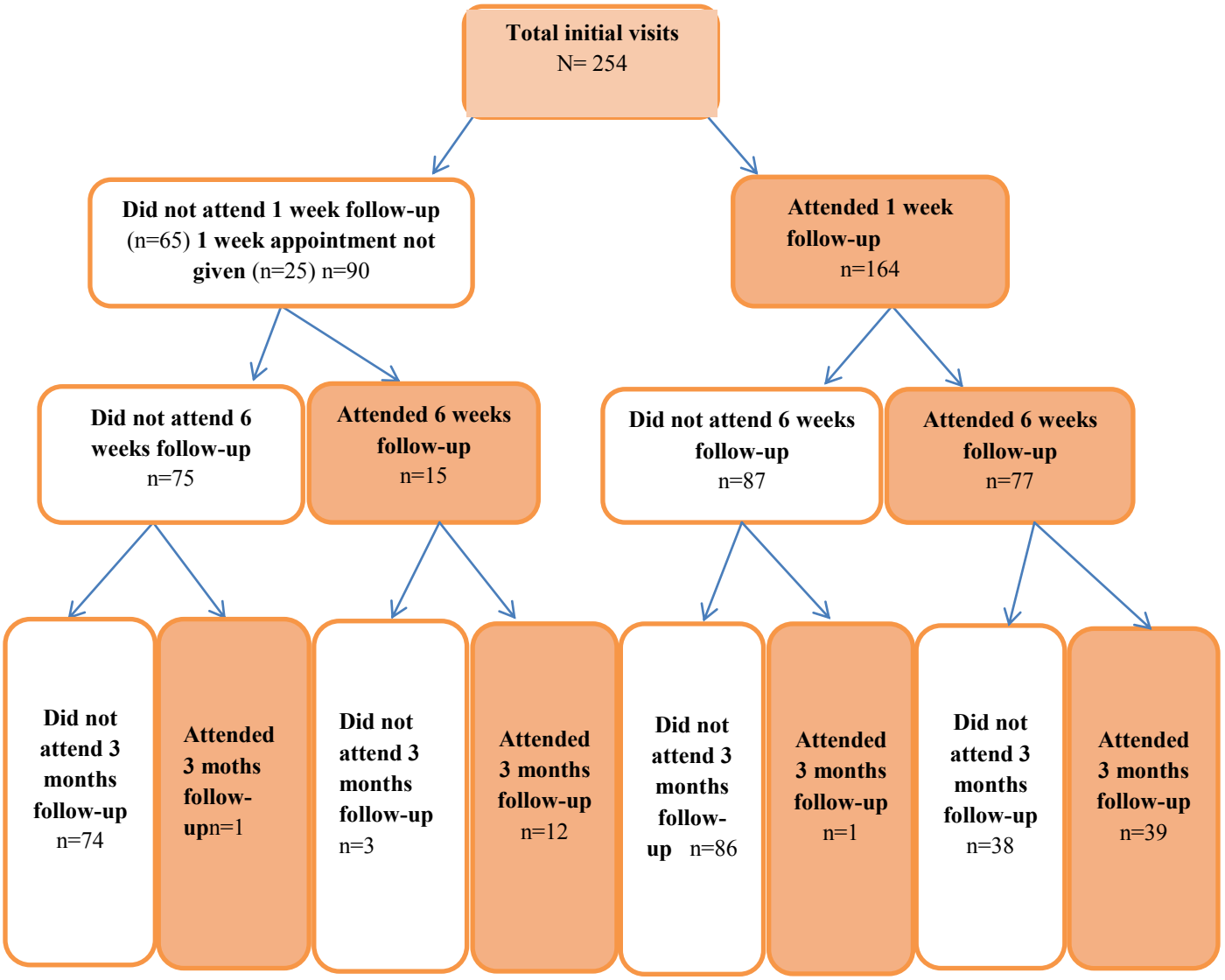
4.7 Follow-up attendance

Follow-up attendance was categorised into three groups: survivors who completed post-rape care follow-up appointments (that is, survivors who attended all three post-rape follow-up appointments), those who returned but did not complete follow-up appointments (that is, survivors who returned for at least one but not all post-rape follow-up appointments) and those who were lost to care (that is, survivors who did not return for any follow-up appointments).

As can be seen in Figure 3, 64.6% of the total sample (164 out of 254) attended their one week appointment. Therefore approximately one third of the sample (35.4%) failed to attend the first follow-up appointment. Out of those who attended their one week appointment, just under half (47%) attended the six week appointment.Out of those who attended their six week appointment, approximately half (51%) returned for the three month visit. Of those survivors who did not return for their one week appointment, 16.7% returned for their six week appointment.

Of the total sample (N=254), 15.4% (n=39) completed all three follow-up appointments at the post-rape care centre. More than half of the survivors (n=141, 55.5%) attended some but did not complete all follow-up appointments. Of the survivors who did not complete all their follow-up visits, 90 (35.4%) attended one follow-up appointment and 51 (20.1%) attended two follow-up appointments. Almost a third of the survivors (n=74, 29.1%) did not attend any of their follow-up appointments at the post-rape care centre. Most of the survivors were lost between the initial visit and the first follow-up appointment.

Information on why survivors did not return for their follow-up appointment on the prescribed date is very limited; only 14 files (5.5%) of the total sample contained explanations for non-attendance. Not having taxi money to travel to the post-rape care centre was a common reason for not attending follow-up after the appointment date. Other survivors reported having been unwell during the time of the appointment. Survivors under guardianship depended on how busy their guardians were on the date of the appointment and how much knowledge the guardian had on the importance of post-rape care follow-up. File notes showed such reasons as “mother had other commitments” on the day of the appointment or “mother misplaced card, did not know why she needed to attend”.



Key

	Survivors who attended their follow-up appointments
	Survivors who returned but did not attend their follow-up appointments

Figure 3. Flowchart showing follow-up attendance at a rape care centre

4.8 The survivors' support system after rape

Survivors who presented at the post-rape care centre received support from various people after the rape incident. According to Table 12, survivors reported that they received support from family members (65.7%), friends (3.9%), partner (4.3%) and other people (43.3%). There was no information given on other people who provided support to the survivor.

Table 12.

Survivors' support system after rape

Variable	Categories	Frequency	Percentage
Did the survivor receive support from family?	Yes	167	65.7
	No	33	13
	Not applicable	2	0.8
	Missing information	52	20.5
Did the survivor receive support from friends?	Yes	10	3.9
	No	192	75.6
	Missing information	52	20.5
Did the survivor receive support from partner?	Yes	11	4.3
	No	192	75.6
	Total	203	79.9
	Missing information	51	20.1
Did the survivor receive support from other people?	Yes	110	43.3
	No	93	36.6
	Missing	51	20.1

	information		
Was the survivor referred for other medical services?	Yes	3	1.2
	No	0	0
	Missing information	251	98.8

4.9 Associations between demographic factors and follow-up attendance

The associations between survivors' demographic factors and rates of follow up attendance were then examined in bivariate analyses, in order to identify which survivors may be at higher risk of attrition.Table 13 below shows the cross tabulations for categorical socio-demographic characteristics and survivors who completed follow-up, those who returned but did not complete follow-up and those who were lost to care. Table 14 shows associations between survivors who completed follow-up appointments vs those who returned but did not complete follow- up and Table 15 shows associations between survivors who were lost to follow-up care vs those who returned but did not complete follow- up.

The association between gender and follow-up rates was examined. There were 10.0% males who completed follow-up vs. 16.0% of females, 35.0% of males returned but did not complete follow-up visits vs. 57.0% of females, and 55.0% of males were lost to care vs. 27.0% of females. Using Fisher's exact test, for females relative to males, the relative risk for survivors who completed post-rape care visits relative to those who returned but did not complete was expected to increase by 1.723 (95% CI 0.314 - 9.438) showing a non-significant effect ($p = 0.531$). There was therefore no significant gender difference between those who completed all visits and those who returned but did not complete. For females relative to males, the relative risk for survivors who were lost to care relative to those who returned but did not complete their follow-up visits was expected to decrease by 0.147 (95% CI 0.42 – 0.515) showing a significant effect of $p = 0.003$. Male survivors were therefore significantly more likely to be lost to follow-up compared to female survivors.

The association between the perpetrators' relationship with the survivors and follow-up attendance was then looked at. There were more survivors who completed follow-up or attended but not complete follow-up if the perpetrator was a stranger (16.5% and 59.2%) or a community member (19.8% and 45.1%) than if the perpetrator was a partner (0% and 41.2%), friend (7.1% and 42.9%) or a family member (7.1% and 64.3%). Using the Fisher's exact test, for perpetrators who were strangers relative to known perpetrators, the relative risk for survivors who completed follow-up visits relative to those who returned but did not complete was expected to increase by 3.673 (95% CI 0.868 – 15.543) and there was a non-significant effect ($p = 0.077$). The relative risk for survivors lost to care relative to those who returned but did not complete follow-up was expected to decrease by 0.313 (95% CI 0.091 – 1.086) again showing a non- significant effect ($p = 0.067$). There was therefore no significant association between the survivors and perpetrators' relation and follow-up attendance.

The association between being under the influence of alcohol at the time of the rape and follow up attendance was examined next. Of those who were not under the influence of alcohol, 18.0% completed, 56.0% returned but did not complete follow-up, and 25.5% were lost to care. Of those that were under the influence of alcohol, 9.3% completed, 52.0% returned but did not complete, and 38.7% were lost to care. The Fisher's exact test showed that for survivors who were under the influence of alcohol relative to those who were not under the influence of alcohol, the relative risk for survivors who completed follow-up visits relative to those who returned but did not complete was expected to decrease by 0.490 (95% CI 0.146 – 1. 642) showing a non-significant effect ($p = 0.248$). The relative risk for survivors who were lost to care relative to those who retuned but did not complete follow-up was expected to also decrease by 0.782 (95% CI 0.237 – 1.534) with a non-significant effect ($p = 0.686$). There was therefore no significant association between alcohol use at the time of the rape incident and patterns of follow-up attendance.

The relationship between rape-related injury and follow-up attendance was then explored. Of those survivors that were injured, only 7.2% completed follow-up, vs. 19.9% of those that were not injured. Of those who were injured, 66.7% returned but did not complete follow-up compared with 51.2% of those who were not injured and for those survivors lost to care, 26.1% were injured and 28.9% were not injured during the rape incident. For survivors who were injured during the rape relative to those who were not injured, the relative risk for survivors who completed follow-up relative to those who returned but did not complete was expected to decrease by 0.278 (95% CI 0.823 – 0.889) showing a significant effect ($p = 0.031$). The relative risk for survivors who were lost to care relative to those who returned but did not complete follow-up was expected to also decrease by 0.685 (95% CI 0.249 – 1.886) with a non-significant effect of ($p = 0.465$). Survivors who were injured during the rape were significantly more likely to complete than have inconsistent attendance of follow-up appointments than those who were not injured.

There was a significant association between support received from family members and follow-up attendance ($\chi 2 = 15$, $p = 0.005$). Of the survivors who received support from family, 78.0% returned but did not complete follow up, whereas of those that did not receive support, only 51.6% returned but did not complete. Additionally, of those that received support from family, only 22.0% were lost to care, vs. 48.4% of those that did not receive support. For survivors who had family support relative to those who did not, the relative risk for those who completed follow-up visits relative to those who returned but did not complete was expected to increase by 2.344 (95% CI 0.467 – 11. 760) showing a non-significant effect of ($p = 0.301$). The relative risk for survivors who were lost to care relative to those who returned but did not complete follow-up was expected to decrease by 0.116 (95% CI 0.038 – 0.352) with a significant effect of ($p = 0.000$). Survivors who did not receive support from family were more likely to be lost to care than those who did.

Table 13.

Frequencies of demographic and rape incident characteristics amongst survivors who completed, returned but did not complete follow-up and those lost to care

Variable	Category	Completed n=39 (%)	Returned but did not complete n=141 (%)	Lost to care n=74 (%)	Total
Gender	Male	2 (10.0)	7(35.0)	11(55.0)	20
	Female	37(16.0)	134(57.0)	63(27.0)	234
Community the survivor lives	Near vicinity	9 (17.6)	28 (54.9)	14 (27.5)	51
	Broader Khayelitsha	28 (15.1)	104 (55.9)	54 (29.3)	186
	Outside Khayelitsha	2 (11.8)	9 (52.9)	6 (35.3)	17
Community where the rape incident happened	Near vicinity	5(12.1)	24(58.5)	12(29.3)	41
	Broader Khayelitsha	29(17.5)	88(53.0)	49(29.5)	166
	Outside Khayelitsha	1(6.3)	9(56.3)	6(37.5)	16
Rape incident place	Survivor's home	8 (14.8)	26 (48)	20 (37)	54
	Perpetrator's home	18 (18.2)	54 (54.4)	27 (27.3)	99
	Someone else's home	6 (20.0)	13 (43.3)	11 (36.7)	30
	Immediately behind buildings	0(0)	6 (85.7)	1 (14.3)	7
	Bush	6 (10.7)	39 (69.4)	11 (19.6)	56
	Other	0 (0)	2 (50.0)	2 (50.0)	4

Number of perpetrators of rape	One	34 (15.8)	117 (54.4)	64 (29.8)	215
	Two	2 (8.0)	16 (64.0)	7 (28.0)	25
	Three or more	3 (21.4)	8 (57.1)	3 (21.4)	14
Perpetrator's relationship with the survivor	Family	2 (7.1)	18 (64.3)	8 (28.6)	28
	Friend	1 (7.1)	6 (42.9)	7 (50.0)	14
	Partner	0 (0)	7 (41.2)	10 (58.2)	17
	Stranger	17 (16.5)	61 (59.2)	25 (24.3)	103
	Community Member	18 (19.8)	49 (45.1)	24 (26.4)	91
Survivor under the influence of alcohol during rape	Yes	7 (9.3)	39 (52.0)	29 (38.7)	75
	No	29 (18.0)	91 (56.5)	41 (25.5)	161
Threats before the rape incident	Yes	21 (15.6)	80 (59.3)	34 (25.2)	135
	No	14 (13.7)	54 (53.5)	33 (32.7)	101
Threats after the rape incident	Yes	15 (16.3)	57 (62.0)	20 (21.7)	92
	No	18 (13.8)	69 (53.1)	43 (33.1)	130
Weapons used to threaten the survivor	Yes	17 (17.9)	58 (61.1)	20 (21.1)	95
	No	18 (12.8)	76 (53.9)	47 (33.3)	141
	Unsure	0 (0)	1 (33.3)	2 (66.7)	3
Type of weapon used to threaten the survivor	Knife	7 (14.6)	31 (64.6)	10 (20.8)	48
	Gun	7 (24.1)	18 (62.1)	4 (13.8)	29
	Other	1 (6.3)	9 (56.3)	6 (37.5)	16
	Not applicable	18 (12.5)	77 (53.5)	49 (34)	144

Was the survivor conscious during the rape incident?	Yes	37 (15.9)	133 (57.1)	63 (27.0)	233
	No	1 (5.9)	7 (41.2)	9 (52.9)	17
Did the survivor incur any injuries during the rape incident?	Yes	5 (7.2)	46 (66.7)	18 (26.1)	69
	No	33 (19.9)	85 (51.2)	48 (28.9)	166
Was the survivor abducted	Yes	16 (14.5)	68 (61.8)	26 (23.6)	110
	No	20 (15.5)	65 (50.4)	44 (34.1)	129
Support received from family	Yes	0 (0)	103 (78.0)	29 (22.0)	132
	No	0 (0)	16 (51.6)	15 (48.4)	31
Support from friends	Yes	3 (30.0)	5 (5.0)	2 (20.0)	10
	No	34 (17.7)	115 (59.9)	43 (22.4)	192
Support from partner	Yes	1 (9.1)	6 (54.5)	4 (36.4)	11
	No	36 (18.8)	115 (59.9)	41 (21.4)	192

Table 14.

Associations between survivors who completed follow-up appointments vs those who returned but did not complete follow- up.

Variable(N=254)	Relative risk ratios (RRR)	*p*-value	95% CI
Gender			
Male	1		
Female	0.147	0.003	0.042 - 0.515
Survivor's relationship with the perpetrator			
Known perpetrator	1		
Community member	0.314	0.067	0.091 – 1.086
Stranger	0.302	0.050	0.911 – 1.001
Was the survivor under the influence of alcohol?			
Yes	1		
No	0.782	0.686	0.237 – 2.577
Did the survivor incur any injuries?			
Yes	1		
No	0.685	0.465	0.2489 – 1.886
Was the survivor abducted?			
Yes	1		
No	0.544	0.233	0.200 – 1.480
Did the survivor receive support from family?			
Yes	1		
No	0.116	0.00	0.038 – 0.352

Table 15.

Associations between survivors who were lost to care vs those who returned but did not complete follow- up.

Variable	Relative risk ratios (RRR)	*p*-value	95% CI
Gender			
Male	1		
Female	1.723	0.531	0.314 - 0.438
Survivor's relationship with the perpetrator			
Known perpetrator	1		
Community member	3.673	0.077	0.868 – 16.543
Stranger	3.977	0.054	0.977 – 16.179
Was the survivor under the influence of alcohol?			
Yes	1		
No	0.490	0.248	0.146 – 1.642
Did the survivor incur any injuries?			
Yes	1		
No	0.278	0.031	0.2489 – 1.889
Was the survivor abducted?			
Yes	1		
No	0.531	0.165	0.217 – 1.299
Did the survivor receive support from			

family?			
Yes	1		
No	2.344	0.301	0.467 – 11.760

Variables that were not significantly associated with follow-up included the number of perpetrators of rape, threats before and after the rape incident, weapons used to threaten the survivor during the rape incident, if the survivor was abducted during the rape, and support received from friends, partner and other people. There was not enough variability in the community the survivors lived in at the time of the rape incident, and the community and place where the rape happened, in order to test any differences for these variables, therefore no conclusions could be drawn.

4.10 Conclusion

The study findings indicate that survivors of rape were significantly more likely to attend follow-up appointments if they were female, incurred injuries during the time if rape, or received family support post-rape. The following chapter will discuss the findings of this study.

CHAPTER 5

DISCUSSION

This chapter will start by summarising the key findings of this study. Discussion of each key finding will follow, contextualizing them in light of previous research and making recommendations. This will be followed by a consideration of the limitations of the current study and recommendations for future research.

The current study found a significant association between gender and follow-up attendance. Male survivors of rape were more likely to be lost to care than female survivors. Similar findings have been reported in previous international and South African studies (Jewkes et al., 2011; Jewkes & Abrahams, 2002; Kapur & Windish, 2011; Lammers et al, 2010; Olshen, 2006). Men may find it difficult to attend their follow-up appointments because of the stigma attached to males being raped (Kalichman et al., 2005; Mugweni, Pearson, & Omar, 2012; Peterson, Voller, Polusny, & Murdoch, 2011). Studies further show that the prevalence of male rape is lower than that of female rape and some cultural and societal beliefs consider men to be strong and powerful so that they cannot be victims of rape (Kalichman et al., 2005). Consequently, men are likely to feel ashamed to report being raped or to access post-rape services for fear of being ridiculed by the service providers, family members and the society (Sable, Danis, Mauzy, & Gallagher, 2006; Weiss, 2010). This could explain why very few men seek post-rape care and why those who do are likely to be lost to care. There is a need to investigate and understand more about what would improve retention of men in care. There is also a need for service providers in the current system to be aware that male clients are particularly at risk for loss to care so there is need to develop strategies that continue to make the services safe and effective for women but also for men.

The study findings also showed that survivors who were injured were more likely to complete their follow-up appointments than those who were not. Injuries to the body, internal and external genitalia after rape have been documented and range from minor to severe (Cox et al. 2007; Jina et al., 2015; Killian et al., 2007; Lammers et al., 2010; Teerapong et al., 2009; Vetten et al., 2008). Returning for follow-up appointments for subsequent medical follow-up care is vital for the healing of these injuries. According to the researcher's experience, survivors of rape who were injured during the rape experience received specialized attention from service providers because of their injuries. Emphasis was put on their returning for follow-up appointments so that the health practitioners could assess the injuries for healing and if the survivor was on HIV PEP medication, s/he would also be assessed for side effects and adherence (WHO, 2003). From the researcher's experience, survivors would return for their follow-up appointments because they wanted to make sure that the injuries were completely healed and there were no complications.No South African studies reporting on injuries and the association to follow-up attendance were found, however, two United States studies found that being injured during the rape incident was not associated with follow-up attendance and these findings contradict with findings of the current study (Ackerman et al., 2006; Holmes et al., 1998). There is a need for service providers to develop strategies that would encourage both survivors of rape who were injured during the rape incident and those who were not to attend all their follow-up appointments.

Support from family members was shown by this study to be associated with enhanced utilisation of post-rape care services. Survivors of rape who received support from their families were more likely to attend but not complete their follow-up appointments than those who did not. Although emotional support is provided at the post-rape care centres, the support is only for the duration of the visits and the survivors of rape have to return to their homes. In most cases, survivors of rape stay with their families and they become the closest support system they have which may assist them in dealing with the traumatic experience of rape and support them throughout their follow-up appointments. South African studies that have reported on survivors receiving support from family

members have found that survivors receive family support for taking HIV-PEP medication which would also mean returning for follow-up appointments for more medication and HIV testing (Abrahams & Jewkes, 2010; Vetten & Haffejee, 2008). Abraham and Jewkes (2010) further explain that survivors often receive their families'financial support to return to the centre for follow-up. This shows that family support is very important since it is likely to be provided for longer periods and as frequently as needed without the need for making scheduled appointments. It is therefore important for service providers at the centre to involve family members and other support networks from the first visit so that they understand how they would need to support the survivor in attending their follow-up appointments as this is explained on the first visit.On the other hand, the number of children under the age of 18 are the majority in this study. The findings show that there was no significant effect between age and follow-up completion. One of the reasons might have been that children are lost to follow-up because they mostly rely on family support to return for their appointments at the post-rape care centre.The youngest child in this study is aged 2 years and children in this age range need to be escorted to the post-rape care centre for all follow-up appointments. Education and support from professionals at the post-rape care centres on the importance of children attending their appointments may play a crucial role in more child survivors returning for their appointments. In the event that the primary caregiver is committed, it may be important that arrangements are made for someone to escort the child to the post-rape care centre. This could be discussed during the initial visit where a plan on how the child will complete follow-up appointments is drawn by the caregiver and the healthcare professional.

At the post-rape care centre under study, survivors of rape are usually given a total of three follow-up appointments at one week, six weeks and three months after the initial visit to the centre. In South Africa, studies which reported on post-rape follow-up appointments show that the total number of follow-up appointments given to a survivor is not consistent throughout the rape centres across the country. Some studies report on 48 hours and or weekly visits in the first month after the survivor's initial visit followed by the six week, three month and six month visits (Bello & Pather, 2008; Collings et al., 2008; Killian et al., 2007; Meel, 2003; Vetten & Haffejee, 2008).Some of the reasons

why follow-up visits vary are that although post-rape care centres work under the same Thuthuzela Care Centre guidelines, some of the post-rape care centres have enough resources to monitor HIV PEP intake because of the side effects a survivors may have after taking the medication, therefore the health care worker would give more appointments. Other survivors are given more appointments because of the extent of the injuries they incurred during the rape incident. Other post-rape care centres only open during office hours (8am-4pm) because of staff shortages and this makes it a challenge to accommodate survivors who work during the day and can only attend their appointments after working hours. This may result in survivors being given fewer appointments where they can take time from work. In most communities there is only one post-rape care centre which provides services to a very big community and this becomes difficult for some of the survivors who cannot financially afford to travel by public transport to the post-rape care centre and the centre maybe too far to walk. At the post-rape care centre under study, survivors of rape who had challenges in attending all three appointments had fewer appointments. One of the most common reasons why some survivors were given less than three follow-up appointments was that they could not take time off work as the first follow-up appointment was only a week after their initial visit. This meant that the survivor would have to stay away from work again and some survivors work under employers who practice "no work no pay" system. The community in which the post-rape care centre is situated is a poor community so survivors would rather go to work as this is their only means of getting money for their upkeep. The survivors would request to miss the one week appointment and return for the six week and three month follow-up as this would give them time to negotiate time off with their employers. The variations of follow-up appointments for the survivors at the different post-rape care centres make it difficult to make comparisons.

5.1 Limitations of the current study

Several limitations were identified in this study. The study used convenience sampling and was limited to one post-rape care centre in Cape Town. The centre only received survivors of rape who were able to access it from the community. Survivors who came

from outside of the community where the centre was located were referred to their nearest health facilities for post-rape care follow-up. The sample size was limited to the records that were available at the centre. The information collected was also limited to what was available.The study only focused on data in the one year period mentioned and no recent data was used which could have enhanced the findings of this study. The above limitations limited the generalizability of the findings.

The study being a retrospective record review had limitations of files which had missing or incomplete survivors' information (Worster & Haines, 2004). Variables to consider were limited to those that are part of routine records so there may be other important factors associated with retention in this study that could not be considered.

Despite the limitations, the study remains valuable because it is one of the very few studies which looks at examining characteristics associated with post-rape care follow-up attendance at a post-rape care centre in South Africa. The results of the findings may contribute to further research that will look into improving follow-up attendance and influence policy and practice.

5.2 Recommendations for future research and practice

Through this research, post-rape care programmes can be enhanced by addressing individual needs of survivors of rape. The counselling programme can incorporate assessing the male survivors if they would be lost to care and developing plans on how they can be encouraged to attend all their post-rape care appointments.

Furthermore, post-rape family support programmes can also be developed and these would focus on ensuring that families continue to be supported through all their appointments. This support can be made part of the overall package of post-rape care in addressing rape.

Future research should consider a prospective survey study on characteristics associated with attendance of follow-up appointments at post-rape centres looking at a larger number of post-rape care centres across South Africa. Researching a large number of post-rape care centres will be more representative of the survivors of rape across the country and this will improve the chance of generalizing the findings across the country. A larger sample will also cater for the differences and uniqueness of the centres which may richly contribute to improving follow-up attendance. Future research should identify strategies that will encourage male survivors of rape to attend and complete their follow-up appointments at post-rape care centres.

Further research is needed to understand why survivors of rape who are injured during the rape incident attend their follow-up appointments and those who are not injured are lost to care. At post rape care centres, survivors of rape spend most of their time with the doctors, counsellors and or investigating officers and it is important for research to investigate the role each stakeholder plays in motivating survivors, both injured and uninjured, to attend and complete follow-up. This may assist in developing protocols and interventions for both injured and uninjured survivors and will guide the stakeholders in motivating survivors to attend and complete their follow-up appointments.

The findings of this study also showed that family support was linked to retention in care. Research should also investigate what kind of social support can be activated for those who do not have supportive family members.

5.3 Conclusion

The findings of this study indicate that female rape survivors who have experienced rape-related injuries, and who are receiving family support are more likely to attend post-rape care follow-up. The findings not only bring to light the characteristics associated with attending follow-up but also offer possible implications for post-rape care practices that can address attrition in post-rape care follow-up attendance in South Africa and internationally.

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DATA COLLECTION FORM

DEMOGRAPHIC BACKGROUND *(please tick or fill in were applicable)*

1.Age of survivor:

1	2	3	4	5	6
0-5yrs	6-11yrs	12-17yrs	18-24yrs	25-39yrs	40yrs+

2.Gender:

1	2
Male	Female

3. Community survivor lives in:

1	2	3	4	5	6	7	8	9
Site B	Site C	Harare	Monwabisi Park	Makhaza	Nkanini	Town 2	Other specify	Not recorded in the file

EMPLOYMENT OR EDUCATIONAL STATUS

4. Is the survivor employed?

0	1	2
No	Yes	Not recorded in the file

5. If the survivors is a scholar, indicate the level:

1	2	3	4	5	6
Creche	Primary school	High school	Tertiary	Not recorded in the file	Not applicable

RAPE HISTORY

6. Period of initial visit to Simelela

1	2	3	4
Sept-Nov 2010	Dec 2010-Feb 2011	Mar-May 2011	June-Aug 2011

7.Time of initial visit to Simelela

1	2	3	4	5
00.00am-5.00am	5.01am-11.59am	12.00pm-18.00pm	18.01pm-23.59pm	Not recorded in the file

8. Counselling session attended

0	1	2
No	Yes	Not recorded in the file

9. Period of rape incident

1	2	3	4	5	6
Sept-Nov 2010	Dec 2010-Feb 2011	Mar-May 2011	June-Aug 2011	Not recorded in the file	Unsure

10.Approximate time of rape incident:

1	2	3	4	5	6
00.00am-5.00am	5.01am-11.59am	12.00pm-18.00pm	18.01pm-23.59pm	Not recorded in the file	Unsure

11. Did survivor present to the Simelela centre within 72 hours of rape?

0	1	2
No	Yes	Not recorded in the file

12.Where did the rape incident take place?

1	2	3	4	5	6	7
Survivor's home	Perpetrator's home	Someone else's home	Taxi	Bush	Other, specify:	Not recorded in the file

					.....	

13.Name of community the rape incident took place:

1	2	3	4	5	6
Site B	Site C	Harare	Monwabisi Park	Other, specify:	Not recorded in the file

14.Was the survivor under the influence of drugs/alcohol at the time of the rape incident?

0	1	2
No	Yes	Not recorded in the file

15.Number of perpetrators of rape:

1	2	3	4
1	2-3	4+	Not recorded in the file

16.Is the perpetrator known to the survivor?

0	1	2
No	Yes	Not recorded in the file

17.Perpetrator's relationship with the survivor (Choose one only):

Family	1
Neighbour	2
Friend	3
Stranger	4
Ex-boyfriend	5
Boyfriend	6
Partner	7
Husband	8

Father	**9**
Brother	**10**
Cousin	**11**
Mother's boyfriend	**12**
Community member	**13**
Classmate	**14**
Uncle	**15**
Other specify	**16**
Not recorded in the file	**17**

18.Perpetrator(s) estimated age:

1	2	3	4	5	6
12 – 16 yrs	**17 –24 yrs**	**25 – 39 yrs**	**40 yrs+**	**Other, specify:.....**	**Not recorded in the file**

19.Threats by the perpetrator before the rape incident:

0	1	2
No	**Yes**	**Not recorded in the file**

20.Threats by the perpetrator after the incident:

0	1	2
No	**Yes**	**Not recorded in the file**

21.Weapons used to threaten the survivor:

0	1	2
No	**Yes**	**Not recorded in the file**

22.If yes description of weapon:

1	2	3	4	5	6	7	8
Knife	Gun	Sharp object	Stones	Multiple weapons	Other, specify:..... ..	Not applicable	Note recorded in the file

23.Was the survivor conscious during the rape incident?

0	1	2
No	Yes	Not recorded in the file

24.Was the survivor abducted?

0	1	2
No	Yes	Not recorded in the file

25.If yes, where was the survivor abducted to?

1	2	3	4	5	6	7	8
Someone else's house	Perpetrator's house	Bush	Beach	Open space	Other ,specify:	Not applicable	Not recorded in the file

MEDICAL INFORMATION

26. Time of medical examination:

1	2	3	4	5	6
00.00am-5.00am	5.01am-11.59am.	12.00pm-18.00pm	18.01pm-11.59pm	Not recorded in the file	Not applicable

27. Does survivor have a previous rape history?

0	1	2
No	Yes	Not recorded in the file

28. What is the nature of the rape history?

1	2	3	4	5
Raped by someone known	Raped by a stranger	Other, specify:.....	Not applicable	Not recorded in the file

29.Did the survivor incur any Injuries during the rape?

0	1	2
No	Yes	Not recorded in the file

30. Was medication given to the survivor on the first visit to the Simelela centre?

0	1	2	3
No	Yes	Not recorded in the file	Not applicable

31. If yes,was the survivor given STI prevention medication?

0	1	2	3
No	Yes	Not recorded in the file	Not applicable

32. If yes,was the survivor given pregnancy prevention medication?

0	1	2	3
No	Yes	Not recorded in the file	Not applicable

33. If yes,was the survivor given HIV post exposure prophylaxis medication?

0	1	2	3
No	Yes	Not recorded in the file	Not applicable

34. What is the name of PEP medication if given?

1	2	3	4	5	6	7
Lamzid	Duvior	Lamzid and Lamivudine	Other, specify:.....	Multiple medication	Not applicable	Not recorded in the file

35. Was the survivor given one week follow-up appointment?

0	1	2	3
No	Yes	Not recorded in the file	Not applicable

36. Was the survivor given six week follow-up appointment?

0	1	2	3
No	Yes	Not recorded in the file	Not applicable

37. Was the survivor given three months follow-up appointment?

0	1	2	3
No	Yes	Not recorded in the file	Not applicable

38.If the survivor was given follow-up appointment, what was the appointment for at one week?

PEP medication	1
RPR results	2
HIV test	3
CD4 count	4
Multiple reasons	5
Other, specify:.....	6
Not recorded in file	7
Not applicable	8

39. If the survivor was given follow-up appointment, what was the appointment for at six weeks?

PEP medication	**1**
RPR results	**2**
HIV test	**3**
CD4 count	**4**
Multiple reasons	**5**
Other, specify:.....	**6**
Not recorded in file	**7**
Not applicable	**8**

40. If the survivor was given follow-up appointment, what was the appointment for at three months?

PEP medication	**1**
RPR results	**2**
HIV test	**3**
CD4 count	**4**
Multiple reasons	**5**
Other, specify:	**6**
Not recorded in file	**7**
Not applicable	**8**

41. Did the survivor attend follow up appointment at one week?

Did not return at all	**1**
Returned on the scheduled follow up date	**2**
Returned on a different date from the	**3**

scheduled follow up date	
Not recorded in file	**4**
Not applicable	**5**

42. Did the survivor attend follow up appointment at six weeks?

Did not return at all	**1**
Returned on the scheduled follow up date	**2**
Returned on a different date from the scheduled follow up date	**3**
Not recorded in file	**4**
Not applicable	**5**

43. Did the survivor attend follow up appointment at three months?

Did not return at all	**1**
Returned on the scheduled follow up date	**2**
Returned on a different date from the scheduled follow up date	**3**
Not recorded in file	**4**
Not applicable	**5**

44.If the survivor did not return on the scheduled appointment date but returned on another date what were the reason(s) at one week follow-up?

Was at work	**1**
No taxi fare	**2**
Other, specify:.....	**3**
Not recorded in file	**4**
Not applicable	**5**

45. If the survivor did not return on the scheduled appointment date but returned on another date what were the reason(s) at six weeks follow-up?

Was at work	**1**
No taxi fare	**2**
Other, specify:.....	**3**
Not recorded in file	**4**
Not applicable	**5**

46. If the survivor did not return on the scheduled appointment date but returned on another date what were the reason(s) at three months follow-up?

Was at work	**1**
No taxi fare	**2**
Other, specify:.....	**3**
Not recorded in file	**4**
Not applicable	**5**

47.Describe PEP adherence at one week:

Good	**1**
Missed one dose of medication	**2**
Missed two or more doses	**3**
Other, specify:.....	**4**
Not recorded in file	**5**
Not applicable	**6**

48. Describe PEP adherence at six weeks:

Good	**1**
Missed one dose of medication	**2**
Missed two or more doses	**3**
Other, specify:.....	**4**
Not recorded in file	**5**
Not applicable	**6**

49. If the survivor did not adhere to PEP medication at one week what were the reasons?

1	**2**	**3**	**4**	**5**
Forgot to take medication	**Side effects**	**Other, specify:.....**	**Not applicable**	**Not recorded in the file**

50. If the survivor did not adhere to PEP medication at six weeks what were the reasons?

1	**2**	**3**	**4**	**5**
Forgot to take medication	**Side effects**	**Other, specify:.....**	**Not applicable**	**Not recorded in the file**

51.If PEP was not given to the survivor on the initial visit, give reasons:

HIV positive	**1**
Presented after 72 hours	**2**
Missed medication	**3**
Went to a funeral	**4**
Other, specify:.....	**5**
Not recorded in the file	**6**
Not applicable	**7**

52. If PEP was not given to the survivor at one week follow-up appointment, give reasons:

HIV positive	**1**
Presented after 72 hours	**2**
Missed medication	**3**
Went to a funeral	**4**
Other, specify:.....	**5**
Not recorded in the file	**6**
Not applicable	**7**

53. Was the survivor tested for HIV before the rape incident?

0	**1**	**2**
No	**Yes**	**Not recorded in the file**

54.If yes, indicate when:

1	**2**	**3**	**4**	**5**	**6**	**7**
In the past year	**In the past 2 years**	**In the past 5 years**	**Survivor not sure**	**Other, specify: .....**	**Not applicable**	**Not recorded in the file**

55. Indicate HIV test results if survivor was tested on the initial visit:

Test result	**Code**
Positive	**1**
Negative	**2**
Inconclusive	**3**
Not tested	**4**
Not recorded in file	**5**
Not applicable	**6**

56. Indicate HIV test results if survivor was tested on at six weeks visit:

Test result	Code
Positive	1
Negative	2
Inconclusive	3
Not tested	4
Not recorded in file	5
Not applicable	6

57. Indicate HIV test results if survivor was tested at three months:

Test result	Code
Positive	1
Negative	2
Inconclusive	3
Not tested	4
Not recorded in file	5
Not applicable	6

58.Was Forensic examination done on the initial visit to Simelela centre?

0	1	2
No	Yes	Not recorded in the file

59.If no forensic examination was done on the initial visit what were the reasons?

1	2	3	4
The survivors declined	Other, specify:.....	Not applicable	Not recorded in the file

MENTAL HEALTH INFORMATION

60.Describe the emotional state of the survivor as indicated in the counselling notes on the initial

visit

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Worried	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

61. Describe the emotional state of the survivor as indicated in the counselling notes at one week appointment:

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Worried	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

62. Describe the emotional state of the survivor as indicated in the counselling notes at six weeks appointment:

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Worried	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

63. Describe the emotional state of the survivor as indicated in the counselling notes at three months appointment:

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Worried	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

64.Describe the emotional state of the survivor as described in the medical records (J88 , and medical notes) on the initial visit:

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Stable	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

65. Describe the emotional state of the survivor as described in the medical records (J88 , and medical notes) at one week appointment:

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Stable	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

66. Describe the emotional state of the survivor as described in the medical records (J88 , and medical notes) on the six weeks appointment:

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Stable	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

67. Describe the emotional state of the survivor as described in the medical records (J88 , and medical notes) at three months appointment:

1	2	3	4	5	6	7	8	9
Crying	Angry	Blaming self	Stable	Fear	Multiple emotional status	Other, specify:	Not recorded in the file	Not applicable

68.Describe the emotional state of the survivor as stated in the medical Rape Protocol:

Withdrawn	**1**
Crying	**2**
Hysterical	**3**
Controlled	**4**
Cooperative	**5**
Tearful	**6**
Expressive	**7**
Quiet	**8**
Tense	**9**
Fearful	**10**
Listless	**11**
Staring	**12**
Trembling agitated	**13**
Angry	**14**
Not recorded in file	**15**
Multiple emotional status	**16**

SUPPORT SERVICES

69.Indicate if counselling was receivedon the initial visit:

No	**0**
Yes	**1**
Not recorded in file	**2**

70. Indicate if counselling was received at one week follow-up visit:

No	**0**

Yes	**1**
Not recorded in file	**2**
Not applicable	**3**

71. Indicate if counselling was received at six weeks follow-up visit:

No	**0**
Yes	**1**
Not recorded in file	**2**
Not applicable	**3**

72. Indicate if counselling was received at three months follow-up visit:

No	**0**
Yes	**1**
Not recorded in file	**2**
Not applicable	**3**

73. The survivor received support from

Family	**1**
Friends	**2**
Partner	**3**
Multiple support	**4**
Other, specify:	**5**
Not recorded in file	**6**

74.Was the survivor referred for further care and support for long-term counselling?

0	**1**	**2**
No	**Yes**	**Not applicable**

75. Was the survivor referred for further medical care and support?

0	1	2
No	Yes	Not applicable