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Faculty of Community and Health Sciences

Mini Thesis

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Submitted in partial fulfilment of the requirements for the degree MPsych at the University of the Western Cape.

I, Zandile Batweni hereby declare that this whole thesis is my own work, which is to *Examine factors associated with substance use during pregnancy in a sample of women from low SES communities in the Western Cape*. This work has not been submitted for any other degree, examination or professional qualification. I, therefore, confirm that this research is my own composition except for the work that was sourced from other researchers and authors as indicated by the *APA (American Psychological Association) style referencing.*

ABSTRACT

Substance use in South Africa, specifically in the Western Cape remains a huge social problem for the entire population generally and pregnant women in particular given their unique vulnerabilities. There are many factors associated with substance use during pregnancy, such as race, age, unemployment, and stress. The study aimed to examine factors associated with substance use during pregnancy using a quantitative methodology and a bio-ecological theoretical framework to explore the associated factors. Participants were selected using purposive sampling. The larger study within which this study is located is a cross sectional study conducted across a range of low-income communities in the Cape Metropole. A correlational design was employed to examine the patterns and correlates of maternal substance use during pregnancy. This is a secondary research study and that all permissions were obtained. Participants were accessed through Primary Health Care Clinics within the Cape Metropole. The study adhered to the following ethical guidelines: informed consent, voluntary participation, privacy and anonymity and referral of participants where necessary. In exploring the results obtained by the various measures, it was evident that the findings support the literature's claims that there is an association between race, education, marital status, and substance use during pregnancy. The findings of the study added valuable insights into the factors contributing to these behaviours. The study has the potential to influence improved well-being practices in primary clinics for pregnant women and thus assist with reducing negative impacts on infant development related to harmful substance use.

Keywords: maternal substance use, antenatal care, bio-ecological systems theoretical framework, maternal lifestyle, socio-demographic factors, psycho-social factors, low SES communities.

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DEFINITION OF CONCEPTS

1. **Bio-ecological theory**

Bio-ecological systems theory suggests that the environment has an influence on individuals development within the context of the complex system and the relationships that individuals and structures form (Ceci et al., 1997).

2. **Socio-demographic factors**

Socio-demographic statuses refer to the sociological and demographic attributes acquired **by an** individual in a population that determine his or her socio-demographic position, demographic roles, and the correlating socio-demographic advantages he or she attains and succeeds in achieving. It informs us about the socio-demographic profile (Abdullahi, 2019).

3. **Psychosocial factors**

Psychosocial factors can be defined as **social, cultural, and environmental influences that affect an individual's or group's mental health and behavior**. These may include social situations, relationships, health care, and resources, and others (Upton, 2013).

4. **Substance use**

Harmful Substance use refers to the consumption of substances such as alcohol, drugs, etc. which are harmful to human health. (Card, Armstrong, Carter, ZCui, Wang, Zhu, Lachowsky, Moore, Hogg, & Roth, 2018).

5. **Pregnancy**

Pregnancy refers to a period where the offspring or the foetus develops inside a woman (Hasan, Rahman, Locks, Rahman, Hore, Saqeeb, Khan, & Ahmed, 2018).

6. Maternal Lifestyle

Maternal lifestyle refers to characteristics during and before pregnancy and perinatal factors such as physical activity, smoking, and alcohol consumption during and after pregnancy that play an important role in the health, development, and Body Mass Index status of the offspring in the future (Mourtakos, Tambalis, Panagiotakos, Antonogeorgos, Arnaoutis, Karteroliotis, & Sidossis, 2015).

CHAPTER 1

INTRODUCTION

1.1.Introduction

This chapter serves as an introduction and establishes the context for this study. It includes the historical and contextual background that guides the study. The study's justification and problem statement are also included. In addition, it includes the study's significance as well as its purpose, and objectives.

1.2.Background to the study

Internationally, many studies have been conducted regarding mental health in pregnant women (Meintjes, Field, Heyningen, & Honikman, 2015; Vismara et al., 2016). However, substance use during pregnancy is relatively less researched, even though it is a huge health concern among pregnant women (Forray, 2016). Substance use refers to the consumption of various substances such as caffeine, tobacco, cannabis, opioids, and hallucinogens, among others which are harmful to human health, as outlined in the DSM-V (2013). The most common substances of choice among pregnant women are nicotine, alcohol, and cannabis with cocaine being the least used compared to the others (Forray, 2016). Since alcohol, nicotine, and cannabis are dominantly used, most researchers tend to focus on these substances (Henkel, 2011). According to Forray (2016), in the United States, a survey conducted regarding substance use in pregnant women showed that 5.9% of these women used illicit drugs, 8.5% consumed alcohol, and 15.5% smoked cigarettes. Similarly, Jesse, Graham, and Swanson (2006) reported that in the United States, at least 11–20% of pregnant women smoke, 00.8–12.8% consume alcohol, and 5.5% use illicit drugs. In Canada, surveys showed that 14% of pregnant women reported using alcohol and 17% smoked during their

pregnancies (Jesse, Graham, & Swanson, 2006). In Sweden, Comasco et al. (2012) found that at least more than 10% of women consumed alcohol during pregnancy. According to Gray et al. (2010), cannabis is the most used drug of choice among women within the childbearing age in the United States of America. The use of this substance continues even during pregnancy, albeit with fewer women.

There are various reasons why people tend to use substances. According to Guardino and Dunkel Shchetter (2014), pregnant women in particular use substances to cope with the challenges of everyday life. Hence, for most women, it is difficult to stop using substances, even though they have negative implications for both their health and that of the fetus (Mpelo et al., 2018). Forray (2016) pointed out that there is little information regarding the use of substances besides tobacco in most low-income countries. In Tanzania, Mpelo et al. (2018) and Isaksen, et al. (2015) reported that alcohol is prevalent in pregnant women. However, the trend toward alcohol use has been diminishing since 2000. Additionally, women in some African countries, such as Chad, Namibia, Uganda, and Ethiopia, are the highest alcohol consumers (Addila et al., 2020). Nonetheless, this is not observed in pregnant women. The highest prevalence of alcohol consumption in pregnant women was found in Nigeria and the least in Ethiopia (Addila et al., 2020). It is therefore important to understand the factors leading to substance use during pregnancy, especially in developing countries.

In South Africa, the use of substances by pregnant women has become a serious epidemic (Russell, Eaton, & Petersen-Williams, 2013). This is seen by the high prevalence of Fetal Alcohol Syndrome Disorder (FASD) reported in the country (Eaton et al., 2012). Substance use in South Africa remains a huge social epidemic in the entire population generally and in pregnant women (SADHS, 2016). South Africa is one of the largest countries

in the world that has a high case volume of FAS, with the Western Cape being the leading province (Culley et al., 2013). According to the South African Demographic and Health Survey (SADHS, 2016), the Western Cape, followed by the Northern Cape, has the highest level of tobacco and illicit drug use among pregnant women. In KwaZulu Natal, Desmond et al. (2012) conducted a study that aimed to examine the alcohol consumption rate in pregnant women. The findings indicated that, out of 1201 women, at least 18% reported drinking during pregnancy. This is consistent with the reported high numbers of pregnant women in the Western Cape using substances generally and alcohol (Forray, 2016). In the Western Cape, the use of substances, especially alcohol, can be understood within a socio-historical context. According to Eaton et al. (2012), the prevalence of alcohol in low socioeconomic communities in the Western Cape can be attributed to the "dop" system. In the "dop" system, farm workers were rewarded with wine instead of remuneration. This resulted in high alcohol intake, particularly in Xhosa and Coloured communities. Thus, alcohol became the social norm, which was difficult to ignore even during pregnancy. Williams, et al. (2020) compared self-reporting through the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) and urine screening to examine substance use in pregnant women in Cape Metropole, South Africa. The sample consisted of 5231 pregnant women screened for alcohol and substance use in the preceding three months. This study showed that 36.9% of women reported using alcohol, and they underreported the use of illicit drugs by 3.6%. This study demonstrates that some women do not stop using substances after becoming pregnant. There is therefore a need to provide these women with intense psychosocial interventions to help alleviate the substance use epidemic during pregnancy. Desmond et al. (2012) highlights that in South Africa, the rate of alcohol consumption depends on various factors, such as women from high economic backgrounds (from urban and peri-urban areas) and greater social

engagements. Married women show lesser drinking habits and those with mental health difficulties and sexual risk-taking behaviours drink more. There is, however, a need to understand these factors in-depth on a global scale and in South Africa in particular. On this basis, this study aimed to examine factors associated with substance use during pregnancy.

1.3.Problem Statement

Substance use in South Africa and around the world is one of the major concerns, negatively contributing to the health of the mother and the foetus (Mpanza & Govender, 2017). According to Ellis (2012), the World Mental Health Survey which comprised the first nationally representative epidemiological figures on common mental disorders in Africa, reported that South Africa has been stated as one of the nations with the highest prevalence of substance use disorders throughout the world. Furthermore substance use is one of the biggest risk factors for burden of disease globally, accounting for 11% of total health burden (Degenhardt, 2107). Pelzer and Phaswana-Mafunya (2018) stated that the probable global occurrence of illicit drug use, including amphetamines, cannabis, cocaine, opioids, etc. is 5.3%. According to The South African Community Epidemiology Network on Drug Use (SACENDU) (2018), in the Western Cape, the most regularly used primary substances reported by the 35 specialist treatment centers were methamphetamine, cannabis, alcohol, and heroin. This shows the concerningly high numbers of substance use during pregnancy; nonetheless women do not necessarily seek or are provided with help. Everett-Murphy et al. (2010) indicates that there is less focus on maternal mental health during medical check-ups. This may also be contributed to the fact that substance use during pregnancy is less researched, with the Western Cape producing the most research compared to other provinces in South Africa. It is important to prioritise maternal mental health and substance use during

pregnancy, as they can have significant negative impacts on both the mother and child. Further research and resources should be allocated towards addressing these issues to improve overall maternal and child health outcomes.

1.4.Rationale of the study

There is sufficient historical data to demonstrate the severity of substance use among pregnant women in South Africa; however, the use of psychoactive substances and other drugs by women during pregnancy is still under-researched (Prinsloo & Ovens, 2015). Substance use during pregnancy appears to correlate with socio-demographic factors. Cunningham et al. (2014) highlight the primary factors that contribute to substance use among pregnant women, such as race, marital status, and unemployment. Most researchers, however, focus on the health effects of drug use during pregnancy, such as the clinical risk associated with poor birth outcomes and child survival, instead of understanding factors leading to substance use. There is little known about the mother's interactions with healthcare providers, social networks, and other social factors during pregnancy that may influence their health outcomes or on the health of the unborn child (Peltz & Anand, 2015). This study, therefore, examined the contributing socio-demographic and psycho-social factors associated with substance use during pregnancy using regression analysis. The findings of this study can inform healthcare providers and policymakers on the need for targeted interventions and support for pregnant women who may be at risk of substance use, as well as the importance of addressing social determinants of health in maternal and child health outcomes. Additionally, future research can explore the effectiveness of such interventions and policies in reducing substance use during pregnancy.

1.5.Aims and Objectives

The overall aim of the current study was to examine factors associated with substance use during pregnancy. The specific objectives were as follows:

1. To examine the association between socio-demographic factors and substance use amongst pregnant women.
2. To examine the association between psychosocial factors and substance use amongst pregnant women.

1.6.Study Hypotheses

Hypothesis 1: Socio-demographic factors such as age, race, education, employment, and marital status are associated with substance use during pregnancy in a sample of women from low SES communities in the Western Cape.

Hypothesis 2: Psychosocial factors such as stress, partner support, others support, and self-esteem are associated with substance use during pregnancy in a sample of women from low SES communities in the Western Cape.

1.7.Conclusion

This chapter introduced the study, which focused on the prevalence of substance use in pregnancy both internationally and in South Africa. This was followed by the problem statement and the rationale for the study. Furthermore, the study's aim, objectives and hypotheses were outlined.

1.8.Chapter Outline

In the following chapter (Chapter 2), the literature review and theoretical framework guiding this study will be discussed. Chapter 3 will outline the methodology adopted in this

study. This will be followed by the presentation of the study results in Chapter 4 and discussion of the results in Chapter 5. The last Chapter will be a summary of the study, limitations, recommendations, and conclusion.

CHAPTER 2

LITERATURE REVIEW

2.1.Introduction

This chapter will focus first on the international studies done regarding socio-demographic and psychosocial factors associated with substance use in pregnant women. This will be followed by an in-depth discussion about the association between substance use in pregnant women and factors such as age, race, socio-economic status, background, and marital status. Lastly, the literature review will focus on studies done in Africa and South Africa.

2.2. Sociodemographic and psychosocial factors associated with substance use during pregnancy

There are various socio-demographic and psychosocial factors that are associated with substance use in pregnant women. These factors have been found to be interrelated, so most researchers focus on them in a collective manner instead of in isolation. A review study by Skagerström et al. (2011), aimed to examine the association between alcohol use during pregnancy, which was done through the search of literature in several databases: namely PubMed, PsycINFO, Scopus, and Web of Science. The review focused on studies that were published between 1999 and 2009 in England. Furthermore, fourteen studies that were published between 2002 and 2009 in the USA (4), Europe (4) and Australia and New Zealand (3), Japan (2) and Uganda (1). The review indicated that unemployment, low education level, and social class were also found to be risk factors; however, this was not consistent across all studies. The review further found that perinatal alcohol use was persistent in women who had experienced abuse and violence. The above study illustrates those disadvantageous conditions

such as low socio-economic status, low levels of education, and abuse to name but a few, make pregnant women susceptible to substance use during pregnancy. This highlights the need for targeted interventions and support services to address the underlying factors that contribute to substance use among pregnant women, particularly those who have experienced abuse and violence. Additionally, healthcare providers should be trained to identify and address substance use disorders among pregnant women in a non-judgmental and supportive manner.

2.2.1. Age

In pregnant women, age can also be associated with substance use. Furthermore, women of different age groups prefer using different substances. The U.S. Department of Health and Human Services, Office of Applied Studies indicated that the use of illicit drugs is dominant in younger pregnant women compared to older ones; 16.2% among pregnant women aged 15 to 17, 7.4% among pregnant women aged 18 to 25, and 1.9% among pregnant women aged 26 to 44 (Substance Abuse and Mental Health Services Administration, 2016). The use of illicit drugs amongst younger women can be attributed to the young crowd they socialise with, where cannabis and other illicit drugs are dominantly used (Fedorova et al., 2019). Furthermore, Forray (2016) asserts that young women are prone to substance use during pregnancy because they are mostly unmarried and have not yet acquired effective skills to deal with life's challenges. Skagerström et al. (2011), on the other hand, indicated that older pregnant women tend to use alcohol more compared to other substances. This may be due to long-term habitual drinking in older women. According to Skagerström et al. (2011) the habit of drinking prior to being pregnant appears to be stronger in women who tend to drink even during pregnancy. These women also happen to have a high frequency of alcohol

intake pre-pregnancy. Habitual drinking, especially during weekdays, is also associated with drinking behaviour during pregnancy (Kitsantas et al., 2014). The inability to stop alcohol consumption during pregnancy can be due to women experiencing withdrawal symptoms, which make it difficult to stop alcohol use (Mpelo et al., 2018).

2.2.2. Race

Racial class is another factor that was found to be associated with substance use in pregnant women. According to Hunt (as cited in Petersen, 2011), ethnic minorities in the USA show a high prevalence of smoking behaviours. On the contrary Jesse et al. (2006) noted that pregnant African American women tend to smoke fewer cigarettes compared to their white counterparts. However, older black women consume alcohol more than older white women. In younger women, it was found that white women consume more alcohol compared to their black peers (Onah et al., 2016). Perreira and Cortes (2006) noted that there is a difference in gender-related cultural roles, expectations, support systems, and experiences with discrimination; these can contribute to the difference in protective and risk factors across different races. In light of this, racial differences may be significant in dealing with the inequities that exist in healthcare systems (Schiff et al., 2020). Therefore, understanding racial differences can assist in developing better preventative and treatment programmes that are consistent with racial dynamics (Perreira & Cortes, 2006). Additionally, acknowledging and addressing racial disparities in healthcare can lead to improved health outcomes for marginalised communities.

2.2.3. Socioeconomic status or employment status

According to Skagerström et al. (2011), people from a high socio-economic background are likely to consume alcohol due to their predominant light social drinking. On

the contrary, Onah et al. (2016) noted that in high-income countries, substance use is mostly observed in communities with low socioeconomic status. There appears to be a direct correlation between substance use and socioeconomic status. In support of this view, Muckle et al. (2011) state that in both developing and developed countries, pregnant women of low-income status are likely to engage in substance use behaviours. Additionally, Ojo et al. (2010) highlighted that woman of childbearing age living in rural areas are more likely to engage in substance use compared to those living in urban areas. Women who face more hardships in life are likely to engage in substance use to cope with the everyday stressors experienced by pregnant women in low-income and impoverished communities (Onah et al., 2016). Furthermore, lack of access to healthcare and mental health services in rural areas can also contribute to higher rates of substance use. This highlights the need for increased resources and support for individuals living in rural communities.

2.2.4. Level of education

Pregnant women with low education have a high tendency to smoke and use other substances (Muckle et al., 2011). However, Mpelo et al. (2018) noted that in countries such as Spain, women who are of high educational status tend to stop drinking during pregnancy. Levels of education also inform the substance of choice for pregnant women. A cross-sectional survey by Liao et al. (2015), conducted in Chengdu, China, aimed to identify women who are vulnerable to substance use and self-medication during pregnancy based on their socio-demographic information. The sample was 460 pregnant women, and a questionnaire that included the participants' socio-demographic information was utilised to collect data. The findings showed that a low educational level was a risk factor for cigarette smoking. By contrast, a high level of education was a risk factor for alcohol use. Likewise, (Ishitsuka, et

al., 2020) noted that higher education levels in pregnant women were consistent with higher alcohol consumption during pregnancy.

2.2.5. Marital status or relationship status

The relationship status of women can be a factor associated with substance use during pregnancy. Women who are cohabiting or married tend to engage less in alcohol consumption compared to women who are single (Skagerström et al., 2013). According to Yen et al. (2012) being divorced or single is also associated with alcohol use, even after acknowledging that one is pregnant. This is so because being single or divorced may lead to reduced partner support and social isolation, which may cause drinking as a way of coping with stress in pregnant women. Furthermore, pregnant women who are unmarried tend to use alcohol and other illicit substances (Ondersma et al., 2019). This can be because unmarried women are prone to challenging circumstances like financial insecurities and material difficulties, which might have negative implications for their overall well-being (de Santis et al., 2011). It was noted by Sperlich et al. (2013) that single women who smoke are usually isolated and experience loneliness. In addition, the tendency to engage in substance use during pregnancy is more prevalent in young single women (Petersen, 2011). These behaviors can have detrimental effects on both the mother and the developing fetus. Studies have shown that substance use during pregnancy can lead to a range of negative outcomes, including low birth weight, developmental delays, and behavioral problems in children (Guille & Aujla, 2019).

2.2.6. Marital or relationship difficulties

According to Hellmuth et al. (2013), women who experience violence from their partners are more likely to develop substance use during pregnancy. Intimate partner violence

is also recognised as a risk factor for substance use during pregnancy due to the stress that women experience (Yen et al., 2012; Onah et al., 2016). In a study conducted by Martin et al. (2004) in North Carolina, USA, aimed to examine the rate of violence (including psychological aggression, physical abuse, and sexual coercion) experienced by pregnant women in proportion to their substance use. Initially, 3143 were sampled, but only 2092 provided all the required information for the study. The Conflict Tactics Scale 2 was used to assess the women's experiences of intimate partner violence. Furthermore, the Michigan Alcohol Screening Test and Drug Abuse Screening Test were used to assess possible symptoms for alcohol use and illicit drug use, respectively. The study findings indicate that, compared to women who did not experience partner violence, those who experienced partner abuse pre-pregnancy were more likely to use substances during pregnancy. Furthermore, amongst the substance-using group those who were physically and psychologically abused showed high levels of substance-use symptoms during pregnancy. Continued use of substances is dangerous because it leads to relationship conflicts when people are intoxicated, which further maintains the cycle of using substances as a stress reliever. It is therefore imperative that the use of substance by pregnant women be understood in the context of their intimate relationships and abuse.

2.2.7. Lack of social or emotional support

Skagerström et al. (2011) assert that pregnant women experiencing a lack of social support are likely to use substances. Shmulewitz and Hasin (2019) also noted that substance use during pregnancy is significantly higher in women who are unmarried and thus experiencing loneliness. Women who experience a lack of support and are withdrawn from society tend to show a high prevalence of substance use as a method of passing time

(Elsenbruch et al., 2007). These women are also reluctant to report drug use during pregnancy due to the negative stigma and thus lack of support they experience regarding their substance use (Rose, n.d.). It is therefore imperative that social and legislative support be put in place to help pregnant women who struggle with substance use. According to Rose (n.d.) the current laws appear to be punitive towards women who struggle with substance use during pregnancy. For instance, in the USA, there are penalties such as incarceration or taking away custody of the children if one is using substances while pregnant. This has led to pregnant women not disclosing their substance use to the health care workers, or they will minimise their substance use (Crawford et al., n.d.). Considering this, there need to be proper support systems implemented to assist these women with substance use issues.

2.2.8. Familial or social environment

Substances are also used to facilitate socialising for most people. According to Yen et al. (2012), the use of alcohol and tobacco is further maintained when people are in social or familial environments where drinking or smoking is deemed the norm. Therefore, continued use of substances during pregnancy may be due to being around substance users. This is so because, substance users may induce cravings and are unlikely to motivate substance cessation behaviour (Chamberlain et al., 2013). Mpelo et al. (2018) indicate that women with family members who consume alcohol reported to tend to use alcohol during pregnancy. Furthermore, women tend to drink for social reasons and have incorporated drinking into their social identities (Meurk et al., 2014).

2.2.9. History of psychological issues

Individuals who have a history of mental illness are prone to engaging in substance use behaviour. Wendell (2013) indicates that women with a history of psychological illnesses

are likely to use illicit substances during pregnancy. In pregnant women, anxiety and depression are the most researched psychological problems (Joelsson et al., 2017). There is a high correlation between substance use and depressive symptoms during pregnancy (Jesse et al., 2006). The most common substance used is tobacco because it is reported to alleviate stress and anxiety (Kur et al., 2009). According to Yen et al. (2012), pregnant women who smoke during pregnancy are also likely to engage in alcohol consumption behaviour. Therefore, there is an interdependent relationship between smoking and alcohol consumption. On the other hand, de Santis et al. (2011) highlighted that cannabis use also correlates with the use of other illicit drugs. It is worth noting that substance use is a form of mental illness; therefore, it is unsurprising that it is co-morbid with other psychological issues such as anxiety, stress, depression, and trauma (Muckle et al., 2011). Furthermore, events that are traumatising, stressful, and anxiety-inducing, such as sexual abuse, contribute to women being prone to developing substance use throughout their pregnancy pregnancy (Martin et al., 2004; Matseke et al., 2012; Peltzer & Pengpid). Thus, there is a correlation between women reporting a history of abuse and substance use during pregnancy. Furthermore, a history of miscarriages or difficult experiences with previous pregnancies may also result in women using alcohol while pregnant to deal with their anxiety and fear regarding the outcome of the pregnancy (Sperlich et al., 2013).

2.3.Factors associated with substance abuse during pregnancy in Africa and South Africa

2.3.1. Research conducted in Africa

Africa is plagued with many social and economic issues that have a negative impact on people's daily lives and psychological well-being. It is therefore imaginable that substance

use in pregnant women is compounded by the aforementioned issues. According to Addila et al. (2020), in the African context, substance use in pregnant women is associated with psychological and social issues, as well as a lack of knowledge regarding the effects of alcohol use, amongst other factors. To illustrate this, a cross-sectional study was conducted by Mekuriaw et al. (2019) in Gedeo zone rural health centres in southern Ethiopia to assess the prevalence and associated factors of alcohol use among pregnant women. A sample of 718 pregnant women was randomly selected. The data collection method was a questionnaire that included components such as sociodemographic factors, obstetric and gynaecological factors, substance-related variables, the Oslo-3 Social Support Scale, the Self-Reporting Questionnaire (SRQ-20), and the Alcohol Use Disorder Identification Test-C (AUDIT-C). The findings indicate that factors such as unplanned pregnancy, history of abortion, pre-pregnancy alcohol use, and mental distress are correlated with alcohol use during pregnancy. Similarly, a survey conducted by Da Pilma Lekettey et al. (2017) in an urban community in Ghana aimed to examine factors that facilitate prenatal alcohol consumption and knowledge regarding the negative outcomes of prenatal alcohol exposure and alcohol expenditure among pregnant women. The sample consisted of 250 pregnant women; the data was collected through face-to-face interviews, and descriptive statistics analysis was conducted. Additionally, the Pearson chi-square was used to determine associations between variables where necessary. The results showed that 48% of the participants reported taking alcohol during pregnancy, with the majority who currently consume alcoholic beverages getting it from friends, and their main reason for prenatal alcohol consumption was socialization (39%). Furthermore, socialization, managing life stressors, and dealing with unemployment were reported to be contributing factors to alcohol use. The results from these studies show that alcohol use in pregnant women is an interpersonal and intrapersonal issue. Therefore, to

understand and deal with this issue, interventions have to aim at both the personal and social levels. Personal interventions can include counselling and therapy to address underlying mental health issues, while social interventions can involve community support programs and education campaigns to raise awareness about the dangers of alcohol use during pregnancy. By addressing both personal and social factors, we can work towards reducing alcohol use in pregnant women and promoting healthier outcomes for both mother and child.

Other studies in the African context focused solely on sociodemographic factors such as employment, level of education, economic status, marital status, etc. A survey by Anteab, Demtsu and Megra (2014), conducted at Bahir-Dar, Northwest Ethiopia, aimed to assess the prevalence and associated factors of alcohol use during pregnancy. A sample of 810 pregnant women was selected; additionally, data was collected through face-to-face interviews using a structured and pre-tested questionnaire first prepared in English and translated into a local language. The study findings indicate that 34% of respondents consumed alcohol during pregnancy at least once per week. Furthermore, having an alcohol-consuming partner, unemployment, unplanned pregnancy, and being married were significantly associated with alcohol consumption. It appeared marital status is significant in examining substance use in pregnant women since having a partner also impacts economic issues, relationship difficulties, social support, and one's ability to cease substance use during pregnancy. Women reported having challenges with stopping alcohol use because their partners were not supportive of the idea of substance cessation; furthermore, seeing their partners drinking also induced cravings (Crawford et al., 2015). This was illustrated in a cross-sectional study by Tesfaye et al. (2020) between May 7 and June 6, 2019, in Addis Ababa, Ethiopia. The authors

aimed to assess factors associated with alcohol use among pregnant women. A sample of 585 pregnant women was systematically selected randomly for the study. AUDIT was utilised to measure the frequency of alcohol consumption. The study findings showed that alcohol use was prevalent among pregnant women (37.1%) in the sample. Factors such as pre-pregnancy alcohol use, partner alcohol use, and poor social support were statistically associated with alcohol use in pregnant women.

Substances are also used for economic gain, and people usually engage in substance use because of the pressure from their environment. A cross-sectional study was conducted by Mpelo et al. (2018) in Dodoma Region, Tanzania, to determine the prevalence and associated factors of alcohol use during pregnancy among women. In the study, 365 women were randomly selected, and structured questionnaires were used to assess sociodemographic characteristics and alcohol use. The study findings indicated that alcohol use during pregnancy was associated with pre-pregnancy alcohol use and having relatives who use alcohol. Furthermore, those who produced alcohol for business purposes reported using alcohol. The above findings show that alcohol use is impacted by factors that are both financial and social. Therefore, proper interventions aimed at effectively addressing substance use in pregnant women must be sensitive and respond to their economic and social challenges.

2.3.2. Research conducted in South Africa

In South Africa, there were various studies done on psychosocial and socio-demographic factors in relation to substance use in pregnant women (Bernstein et al., 2016; Ona et al., 2016; Schneider et al., 2018). These studies were prompted by the high number of

cases of FASD reported. By analysing the results of children with FASD, these children's mothers were older, of a low socio-economic status, had low educational levels, were married, and smoked more (O'Connor et al., 2011). This indicates that in the South African context, there is a direct correlation between socio-demographic and psychosocial factors and substance use during pregnancy. To illustrate this, O'Connor et al. (2011) conducted a study in 24 neighbourhoods in the Cape Flats outside Cape Town, South Africa, that aimed to find possible risk factors associated with alcohol use prior to pregnancy recognition. A sample of 619 pregnant black and African women between the ages of 18 and 41 was assessed. Through forced logistic regression analyses, it was found that drinking prior to pregnancy recognition was associated with being younger, single, having better living conditions, smoking, having a longer gestation prior to pregnancy recognition, having a greater number of sexual partners, and having a higher incidence of intimate partner violence. Likewise, a cross-sectional study by Shasana et al., (2014) aimed to examine the prevalence of maternal alcohol use during pregnancy and it's socio-demographic and health correlates in the South African population. The study sample was 5089 women between the ages of 15 and 55, and the data was taken from the South African National Health and Nutrition Examination Survey (SANHANES-1, 2013) which was conducted in 2011–2012 (Pelzer and Penpid, 2019). The findings indicated that mixed race, unemployment, poor self-rated health, a history of TB diagnosis, and partial post-traumatic stress disorder was associated with alcohol use in pregnant women. Notably, these studies show contrasting findings. This may be due to the fact that these studies reported on different races: blacks and mixed-race people, respectively. This implies that research that aims to understand substance use in pregnant women should be aware of and sensitive to race and race-associated issues.

Furthermore, some studies in South Africa have focused solely on psychosocial

factors associated with substance use in pregnant women. A study by Onah et al. (2016) was conducted at Hanover Park, Cape Town. The study aimed to determine the association between risk factors and alcohol and drug use among pregnant women. The study consisted of 376 women, and a multi-tool questionnaire was administered that also noted the participants' demographics and socioeconomic and life events data. In addition, the Expanded Mini International Neuropsychiatric Interview Version 5.0.0 was used to assess alcohol abuse and other drug use, depression, anxiety, and suicidal ideation. The findings indicated that the participants were mainly experiencing a major depressive episode, 19 % had a current anxiety diagnosis, and 22 % expressed suicidal ideation. Another study conducted by Vythilingum et al. (2012) in the East Metropole district of Cape Town aimed to study the prevalence of substance use in pregnant women and it correlates with sociodemographic factors, depression, and perceived stress.

A prospective self-report study on pregnant women attending their first antenatal care sessions. The sample consisted of 323 women, and the Alcohol Use Disorders Identification Test (AUDIT), Drug Use Disorders Identification Test (DUDIT), Edinburgh Depression Scale (EDS), and Perceived Stress Scale (PSS) were utilised for data collection. The findings indicated high rates of both alcohol abuse and antenatal depression and a significant association between depression, substance use, and alcohol abuse. Both studies show a high correlation between anxiety, depression, and substance use in pregnant women. This implies that pregnant women likely use substances for self-medication to deal with psychological symptoms they experience.

2.4.Recommended psychosocial interventions

There is a paucity of evidence-based psychosocial interventions for substance use in

pregnant women. According to Louw (2018), interventions for substance use in pregnant women should cater to the needs of that individual. Terplan et al. (2015) assert that the efficacy of an intervention largely depends on factors such as the women's ethnicity, socioeconomic status, and motivation to partake in the treatment process. Pregnant women who use substances are most likely from low economic status, disadvantaged backgrounds, low education, and previously marginalised groups. Thus, these women appear to be less motivated to seek help regarding substance use. This is because these pregnant women experience a lot of barriers that hinder their capacity to seek help regarding their substance use (Crawford et al., 2015.). Barriers such as long periods in between treatment follow-ups, financial difficulties, and health insurance issues, among others, are common ((Johnstone, et al., 2023). Furthermore, having a partner who uses substances is also a barrier for pregnant women to seeking treatment. Partners who use substances serve as enablers, and they tend to affect the capacity of the pregnant women to follow up for substance use treatment (Crawford et al., 2015). According to Crawford et al. (2015), health care professionals should be aware of all these barriers including the stressful nature of pregnancy. Considering this, Breen et al. (2016) assert that substance use in pregnant women should be treated using appropriate, comprehensive methods that include the biopsychosocial approach.

Likewise, Breen et al. (2014) recommend a framework for dealing with alcohol use in pregnant women. This framework includes routine screening in conjunction with brief interventions. If there is an indication of alcohol use, the individual should be treated accordingly, including rehab and hospitalisation if necessary. Furthermore, women with substance use problems during pregnancy should be hospitalised after giving birth and provided with multidisciplinary treatment including mental health care. According to Wright et al. (2016), the Screening Brief Intervention and Referral to Treatment (SBIRT) is a primary

healthcare model that is cost effective. This model involves the perinatal health care provider screening for substance use and referring for an intervention accordingly. Screening and intervention usually incorporate the 5A approach; Ask, Assess, Advise, Assist, and Arrange (Everett-Murphy et al., 2010). The 5A approach basically requires the health care provider to extensively inquire (using evidence-based tools) about substance use, refer, and promote health behaviour (Everett-Murphy et al., 2010).

According to the World Health Organization Management of Substance Abuse Team (n.d.), brief intervention has been found to reduce the frequency of drinking and heavy drinking. Pregnant women who use alcohol can benefit from a brief intervention that incorporates their partners. Brief interventions such as psychoeducation, counselling, and motivational interviewing techniques are relevant for substance use in pregnant women (Louw, 2018). Terplan et al. (2015) indicate that Contingency management and Motivational interviewing are the most widely used techniques to treat substance use in pregnant women. A randomised trial by O'Connor and Whaley (2007), in the USA investigated the efficacy of brief intervention with low-income women in order to assist with alcohol abstinence during pregnancy. The brief intervention was a 10 to 15-minute session that included techniques such as psychoeducation, feedback, cognitive-behavioural methods, goal setting, and contracting. The findings indicate that women who received the intervention were likely to abstain from alcohol use during pregnancy. Furthermore, the findings showed that brief intervention was more effective compared to only assessing women for alcohol use. The World Health Organization Management of Substance Abuse Team (n.d.) recommends that the brief intervention be person-centered and include feedback and advice regarding reducing substance consumption. Furthermore, a follow-up session should be agreed upon in order to provide further care if the individual still struggles with substances.

There have been outlines of the methods and contents of brief interventions, but there is less research regarding the ideal design of the interventions (Breen et al., 2016). However, motivational interviewing has been the most used brief intervention. Motivational interviewing combines the use of open-ended questions, affirmations, summarising, active listening, and eliciting discussions about plans for behavioural change (Breen et al., 2016). The process of motivational interviewing is patient-centered and involves exploring the patient's ambivalence regarding behaviour change, in a holding, accepting, and warm space (Handmaker & Wilbourne, 2001). In a study conducted by Rendall-Mkosi et al. (2008) in Cape Town, South Africa, aimed to assess the effectiveness of motivational interviewing in reducing alcohol exposure during pregnancy. A total of 165 women aged 18–44 years were randomly selected from six primary care clinics in Bergrivier Municipality. The study found that five sessions of motivational interviewing were effective and necessary in the overall treatment of women who used alcohol during pregnancy. Motivational interviewing is direct; however, direct coercion and persuasion are avoided. The goal of motivational interviewing is to enhance the difference between the reasons for changing and maintaining the same behaviour (Handmaker & Wilbourne, 2001). Even though there are pregnant women who struggle with substances, the use of interventions seems to be necessary and recommended in order to safeguard the health of the mother and the child. Research has shown that interventions such as motivational interviewing and contingency management have been effective in reducing substance use among pregnant women. These interventions can also address underlying issues such as mental health disorders and social support, which may contribute to substance use during pregnancy.

2.5.Conclusion

The literature review focused on the socio-demographic and psychosocial factors associated with substance use in pregnant women. On an international level, the socio-demographic factors that are associated with the prevalence of alcohol use were discussed. These socio-demographic factors are age, race, marital status, employment status and level of education. There was a consistency between social marginalisation and underprivileged i.e., young age, people of colour, unemployment, low education, and high prevalence of substance use. Furthermore, psychosocial factors such as mental illness, adverse life events, marital difficulties, a lack of social or emotional support and a familial or social environment were also discussed in relation to the prevalence of substance use in pregnant women. This demonstrates that, in most countries, substance use in pregnant women is a concern not only for the individual but also for society and the health care system. This is particularly relevant in South Africa, as healthcare has minimal resources in terms of personnel and facilities. The review revealed the high prevalence of FASD; however, it was noted that few studies were done on this subject both in Africa and South Africa. Incidentally, this also demonstrates that the problem of substance use in pregnant women receives minimal attention. Therefore, there needs to be more research done in order to combat this issue. Lastly, the review focused on evidence-based interventions that can be used to combat substance use in pregnant women. It was shown that there are relevant short-term interventions that can be used, but there are not many.

CHAPTER 3

THEORETICAL FRAMEWORK

3.1.Introduction

This chapter looks at the theoretical framework that underpins this study. It explains the theory in detail, as well as its application and relevance to the study. The chapter also examines the existing literature and research related to the theory, highlighting the gaps and limitations that this study aimed to address.

3.2.Bronfenbrenner's Bio-Ecological Theory

This study was informed by the Bronfenbrenner's bio-ecological theory. The theory suggests that human development is a process involving a dynamic relationship between the individual and a given environment or ecology (Petit, Julien, & Chamberland, 2017). The bio-ecological theory by Bronfenbrenner emerged because he believed that the use of laboratory tests was unidirectional in understanding the development of a child i.e., by focusing on the relationship between a child and a mother or another person (Guy-Evans, 2020). Ecology (in Greek *oikos*- house, environment, and *logos*- study of) refers to the study of the environment. The bio-ecological theory places emphasis on the quality and context of the child's environment (Härkönen 2007). This theory focuses on gaining insight into human development by identifying the circumstances and considering the environmental influences in which a child is raised, not just the genetic components. Bronfenbrenner recognised that development is due to a constant interaction between an individual and their context (Rosa & Tudge, 2013). Considering the above view, social and environmental factors such as family, peers, cultural values, and society's perception regarding substances can influence pregnant women to engage in substance use. Bronfenbrenner's theory is therefore both a

developmental and social theory, in that it provides context for children's development as well as understanding behavior as influenced by people's surroundings (Härkönen 2007). The systems where the individual functions are also interdependent, and based on this, it can therefore be argued that there is a co-dependency in socio-demographic and psychosocial factors that lead to substance use during pregnancy. Therefore, the individual's substance use should be understood within the context of their functioning and the factors that influence this context. Thus, the bio-ecological theory recognises that there are various factors that influence the overall development of a child (Guy-Evans, 2020). These factors exist in the person's external environment; they are the micro-, meso-, exo-, macro-, and chronosystem.

3.2.1.1.Microsystem

The microsystem is a pattern of interactions and relations that a child/person experiences face-to-face in a particular context with other people (Soyer, 2019). The microsystem consists of all the factors that have a direct impact on the developing child, such as parents, siblings, peers, and teachers. At the microsystem level, relationships are mutual, meaning that the child can impact people and, in turn, be influenced by those people. This makes the relationships in the microsystem critical in the context of development and socialization for the person (Guy-Evans, 2020). Anteab et al. (2014) and Crawford et al. (2015) note that pregnant women who have spouses, family members, and friends who use substances are also likely to engage in substance use behavior during their pregnancy. Since women would likely not get support from their significant others, they would continue with substance use (Crawford et al., 2015).

3.2.1.2.Mesosystem

The mesosystem is a system that consists of microsystems (Rus et al., 2020). According to Guy-Evans (2020), the mesosystem consists of the interaction between the parents and teachers of a child. This means that in the mesosystem, the child's microsystems impact each other. Therefore, in each mesosystem, the individual experiences new norms and social structures that inform development (Rus et al., 2020). The mesosystem is the consistency between two settings that influence a child in the microsystem (Grace, Hayes, & Wise, 2017). If a child's parents and teachers get along, this will have a positive influence on the child's development (Guy-Evans, 2020). Therefore, children can be influenced by the similarities regarding beliefs, rules and expectations between two different systems and how they perceive these similarities (Grace, Hayes, & Wise, 2017).

In the context of substance use during pregnancy, social support, meaning the support of everyone who has a direct impact on the individual, has been found to be lacking in women who use substances during pregnancy (Skagerström, 2015). Women from communities where substance use was common reported continuing with substances even after learning about their pregnancy (Da Pilma Lekettey et al., 2017). This behavior was also promoted by family members and the general community. This is also linked to the availability of substances in a particular society (Du Rose, 2015). In addition, lack of access to appropriate healthcare and support services may contribute to the persistence of substance use during pregnancy, particularly in low-income communities (Da Pilma Lekettey et al., 2017). It is important for healthcare providers and community members to work together to address these factors and provide comprehensive care for pregnant women struggling with substance use.

3.2.1.3.Exosystem

Exosystems do not necessarily interact with the individual daily, but they involve events that occur within the systems that influence the individual (Soyer, 2019). The exosystem is composed of formal and informal structures in which the child is not involved but has an indirect impact on the child. For instance, the child's community, the parent's workplace etc. Social norms are one of indirect structure that have an impact on prenatal substance use. Different societies have different views of substance use; with other societies alcoholic beverages are only acceptable during special occasions whereas some societies have strict restrictions on alcohol use, especially among women (Aliiaskarov & Bakiev, 2014). Furthermore being surrounded by people, such as pregnant women who use substances freely can make other pregnant women think that using substances during pregnancy is acceptable conversely. (Brook et al., 2006).

3.2.1.4.Macrosystem

The macrosystem is a social blueprint for a particular culture and impacts the micro, meso, and exosystems (Härkönen, 2007). The family is significant at the macrosystem level because the behavior of all family members influences everyone involved (Rosa & Tudge, 2013). Also, the macrosystem consists of cultural and societal factors such as socioeconomic status, poverty, and race. This is so because a child's culture may impact their beliefs and perceptions about life experiences (Guy-Evans, 2020). The macrosystem, therefore, connects all the systems surrounding an individual (Soyer, 2019). Furthermore, factors that are linked with culture, such as law, ethics, beliefs, and rules, are part of the macrosystem (Vélez-Agosto et al., 2017). Substance use can also be understood in the context of components of the microsystem such as socio-economic status and race. Women who are of low socio-economic

status and of non-white backgrounds indicate high levels of substance use (Schiff et al., 2020). Furthermore, Du Rose (2015) and Bishop et al. (2017) pointed out that the laws, policies, and ethics of a society can be used to contribute to or combat the epidemic of substance use in pregnant women. Based on this, Crawford et al. (2015) argue for the construction of better policies to assist women who struggle with substance use during pregnancy. They suggest that these policies should prioritise providing access to comprehensive and compassionate healthcare services, including substance abuse treatment and mental health support. Additionally, Crawford et al. (2015) emphasise the importance of addressing the root causes of substance use in pregnant women, such as poverty and trauma, through social and economic interventions.

3.2.1.5.Chronosystem

The chronosystem consists of life-changing events that occur throughout a person's lifetime and have an impact on a person's development in general (Guy-Evans, 2020). Thus, the chronosystem refers to environmental or individual gradual changes or consistencies that occur with time (Vélez-Agosto et al., 2017). According to Grace, Hayes, and Wise (2017), it is important to emphasise developmental and historical alterations when trying to understand people and their context. This change can be seen in the change in parenting style as the child grows up into an adult. Considering this, substance abuse during pregnancy was noted in single, young pregnant women who lived alone (Forray, 2016). This is so because these young women experience less support from family, and their desire to exercise their independence may lead them to engage in risky behaviors such as substance abuse. As the child grows up, it is important for parents to adjust their parenting style to meet the changing needs of their child, including setting appropriate boundaries and providing guidance on

making healthy choices. For instance, a permissive parenting style may lead to a lack of boundaries and discipline, which can increase the likelihood of substance abuse.

3.3.Process-Person-Context-Time (PCCT) Model

Bronfenbrenner improved the theory by incorporating the Process-Person-Context-Time model (PPCT) (Bronfenbrenner & Morris, 2006). This model aims to properly understand the individual's environment in accordance with other factors that affect how this environment is shaped. Rosa and Tudge (2013) also provides an overview of the evolution of Bronfenbrenner's theory, particularly of interest in this study is the final phase, which outlines the proximal processes as fundamental in the bio-ecological theory. During this stage, Bronfenbrenner introduced the Process-Person-Context-Time (PPCT). According to the Process-Person-Context-Time (PPCT) model, it is important in any social research that uses Bronfenbrenner's bio-ecological theory to consider the interplay between the individual's characteristics, the immediate environment, and the larger social context over time. This model emphasises that human development is a dynamic process that occurs through ongoing interactions between individuals and their environment.

The PCCT model highlights that in research, one should endeavor to also study the environment in which one's development is taking place. This will also include the interaction with others and personality traits of the individual, which gradually develop over time, and the aim should also be on the historical time where the individual's life experiences take shape and the mechanism that fosters proximal processes (Rosa & Tudge, 2013). It is therefore important to focus on the symbiotic influence on the proximal process of personal traits, context, and historical time (Rosa & Tudge, 2013). Proximal processes extend to multi-layered relationships and the relation between a person's individual and interpersonal

processes, including with other people and symbols (Bronfenbrenner & Morris, 2006; Smit, Preston, & Hay, 2020). For objects and symbols to be effective in one's development, they must be open for exploration, attention, imagination, and elaboration (Bronfenbrenner & Morris, 2006). This process will also be informed by individual characteristics or personal traits. These personal internal qualities interact with one another and thus impact directly on the proximal process to either halt or enhance development (Smit, Preston, & Hay, 2020). This process of taking courses takes place within a particular context and time. It is on this basis that Bronfenbrenner & Morris (2006) highlight the importance of the context-proximal process, whereby a certain behavior takes place in a particular context and whether that context allows or disrupts that behavior. Furthermore, subsequent personality development in proximal processes depends on the rate at which certain behaviors are allowed in the different contexts in which the child develops.

3.4.Conclusion

In this chapter, the theoretical framework that guided this study is discussed. Accordingly, the bio-ecological theory by Bronfenbrenner was deemed appropriate and consistent with this study, since it describes human behavior in its environmental context. The Process-Person-Context-Time (PPCT) model was also discussed and incorporated to accentuate and make the theory more relevant to the present. This was followed by systemic factors that ground the theory: microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

CHAPTER 4

RESEARCH METHODOLOGY

4.1.Introduction

This chapter provides thorough information about the research study's methodology, which aimed to examine factors associated with substance use during pregnancy. This chapter discusses the research approach and design, it includes a description of the research techniques and instruments for data collection, sampling, and strategies for data analysis.

4.2.Recapitulating the Research Objectives

1. To examine the association between socio-demographic factors and substance use amongst pregnant women.
2. To examine the association between psychosocial factors and substance use amongst pregnant women.

4.3.Research Approach and Design

4.3.1. Quantitative Approach

This study adopted a quantitative methodology, which entails the systematic empirical investigation of observable phenomena by gathering quantifiable data and performing statistical analysis techniques (Gelo, Braakmann, & Benetka, 2008). It is therefore applied in instances where phenomena can be expressed quantitatively (Kothari, 2004). The study forms part of a larger study. The larger study within which this study is located is a cross sectional study that collected data in low-income communities.

4.3.2. Cross-sectional Research Design

A cross-sectional study is an observational research design that gathers data from a sample of individuals or entities from different subgroups within the population of interest to assess the prevalence of certain characteristics or outcomes and investigate potential associations between variables (Kesmodel, 2018). A cross-sectional design was employed to examine the patterns and correlates of maternal substance use during pregnancy. This study utilised quantitative questionnaires (Appendix C) collected from a previous, more extensive study. On this basis, a cross-sectional study design was adopted. A cross-sectional study entails the process of observing a sample of a population or phenomenon at a particular point in time (Babbie, 2014). The current study aimed to examine factors that are associated with substance use, specifically during pregnancy in low-income communities in the Cape Metropole.

4.4. Participants and Sampling Method

In the larger study, purposive sampling was used to select participants. Purposive sampling is a technique that entails the deliberate selection of individuals from a population who will thus represent the entire population (Kothari, 2004). Subsequently, 214 participants were purposively sampled. This involved identifying and selecting individuals or groups of individuals that were especially knowledgeable about or had experienced the phenomenon of interest (Cresswell & Plano Clark, 2011).

According to Delice (2010), if parametric tests are to be employed, 30-500 individuals would be a necessary sample size. This study used non-parametric tests to analyse the data, however a general power analysis package (G*Power) was used to establish what the

minimum sample size would be. Based on the analysis and given the design of the study, a sample of approximately 200 was deemed sufficient for the analysis and thus represented the population. The context in which this research was conducted was in low-income communities within the Cape Metropole, more specifically the urban areas. Participants were accessed through Primary Health Care Clinics within the urban areas of the Cape Metro women who accessed these clinics for antenatal care were approached to participate in the study. The individual clinics manage approximately 30 bookings a month for antenatal care. Five clinics treat an average of 1800 pregnant women per year, based on the 30 that are seen per month, and this includes repeat visits. According to Smith (2018), research indicates that quantitative studies offer reliable results from a representative sample of participants, and these results can then be applied to a wider population; that is, they are generalizable. Based on this, purposive sampling was found to be appropriate for this study. Low socioeconomic communities were identified by the presence of Primary Health Care Clinics in communities characterised by low income housing and close to informal settlements servicing a population who generally do not have access to health insurance and therefore use public services. The following inclusion criteria were applied: whether the participants were pregnant and at least 18 years of age. The sample included pregnant women who use substances, from low socio-economic status. This implies that pregnant women with a disadvantaged social history, as well as any type of pregnant woman, participated in this study. In terms of exclusion criteria, women under the age of 18 who presented at Primary Health Care Clinics for antenatal care were excluded from this study. This is so because they were unable to provide legal consent to participate in the study. The data collected by the larger project from some of the urban facilities was analysed for the current study. These include Community Health Clinics in Crossroads, Gugulethu, Mitchells Plain, Hanover Park,

and Delft. These communities are considered low income as they are characterized by poverty, lack of access to basic services such as housing, electricity, water and sanitation and so forth.

The American Psychological Association (2022) defines socio-economic status as the standing or class of an individual or group. Examinations of socio-economic status often reveal inequities in access to resources, and issues related to privilege, power and control and decade's later South Africa still battles with poverty and inequality issues.

4.5.Data Collection Methods

The following instruments were used to collect data from the study, which was then later analysed.

4.5.1. Participant's demographic information

This section gives a description of the participants who took part in the study. Two hundred and fourteen pregnant women were purposively selected to form part of the study. Their age ranged from 20 to 40 years. The mean score and standard deviation for age was 2.70. The study included predominantly Coloured (52.7%), and African women (45.9%). Most women in the sample were unemployed (65%), compared to the employed (31.2%). Majority of the women's highest education level was Matric (55%), followed by 15.1% with Primary school level education only and 13.5% with undergraduate level education.

4.5.2. Substance Use Measure

The participant's demographic information and the extent of their substance use were collected. This included a substance use measure (Appendix C) that was designed specifically for the study. The instrument was developed to assess the use of substances that are

commonly used by adolescents in the Western Cape, e.g Methamphetamine, Methaqualone, Heroin, and Ecstasy.

4.5.3. Prenatal Psychosocial Profile Scale (PPP)

In order to measure the psychosocial wellbeing of the participants, the Prenatal Psychosocial Profile Scale (PPP) was administered (attached as Appendix E). The PPP yields a composite score for four aspects of psychosocial wellbeing during pregnancy (Curry et al., 1994). The four sub-scales include stress, support from a partner, support from others, and self-esteem. Each of these sub-scales consists of 11 items that are measured on a Likert-type response scale. The instrument and its subscales have sound psychometric properties. In a study by Curry et al., (1998), validity and reliability were reported for a sample of 3444 culturally diverse rural and urban pregnant women. The study reports test-retest reliability of 0.84, and average internal consistency of 0.92. Furthermore, the instrument has demonstrated reliability and validity with several samples of pregnant women in terms of test-retest reliability, internal consistency, and convergent validity using depressive symptoms (Rohmah, 2017; Yu et al., 2011).

4.6. Research Procedure

This study was part of a larger study that was also conducted using the same sample group. The ethics clearance was obtained from the university's Biomedical Research Ethics Committee (BMREC) [BM20/5/18]. An online application was also submitted to the Department of Health of the Western Cape Government and the Department of Health Impact of Assessment Sub-directorate to obtain ethics clearance and permission to conduct the study in the clinics. Following the granting of permission from relevant authorities, the clinics (Crossroads CDS, Guguletu CHC, Mitchells Plain CHC, Hanover Park CHC and Delft) were

contacted to set up meetings to obtain their permission and to discuss the arrangements for data collection. The participants were approached before their consultation with the clinic staff. The study was explained to them, and they were issued with an information sheet (attached as Appendix C) and consent forms (attached as Appendix D).

4.7.Data Analysis

In this study, secondary data analysis was conducted on some of the data collected for the larger project. Secondary data analysis refers to the analysis of data that was collected by someone and has thus undergone a statistical process (Kothari, 2014). The data collected through the above-mentioned measures was analyzed using SPSS version 27, (SPSS Inc., 2022). Chi-square analyses were employed to assess the association between the socio-demographic factors and both alcohol and cannabis use. Furthermore, general linear modelling using partial eta squared was used to assess the associations between the psycho-social factors (subscales of the PPP) and both alcohol and cannabis use.

4.8.Reliability and Validity

Reliability and validity are two important aspects of research, and the integrity of the researcher as well as the testability of the study depend immensely on these two facets. By ensuring that each procedure was followed correctly during each phase of the research, the researcher guaranteed the reliability and validity of this study. There were various procedures set in place, and it was imperative that these procedures were followed correctly. This also implies that participants were recruited and participated only once they had given their consent to do so. The researcher made use of the previously stated instruments. The results of each of these measures were verified according to stipulated methods, which have proven to be reliable and valid. Furthermore, reliability is guaranteed through the standardisation of

these questionnaires and information sheets. Thus, all participants received equal information and the opportunity to participate in this study. By determining the sample size strength using the statistical analysis of G*Power (Faul, Erdfelder, & Lang, 2009), the generalizability of the sample was ensured. Overall, the use of quantitative methods afforded the researcher greater accuracy and validity of scores.

4.9.Ethical Considerations

Ethical Clearance: Ethics clearance was obtained from the Biomedical Research Ethics Committee [BM20/5/18] for the larger study and for the current study. Permission was obtained from the Department of Health of the Western Cape Government and the Department of Health Impact of Assessment Sub-directorate (attached as Appendix B), and the clinics selected.

Privacy and Anonymity: Data was stored electronically in password protected files, which only the principal investigators have access to and will be destroyed after five years. A code was assigned to each participant for identification purposes.

Informed consent and voluntary participation: Throughout the data collection procedure, participants were informed of their rights not to participate and to withdraw from the process at any stage without any consequences.

Referrals: Furthermore, during the data collection process, if participants communicated that they wished to stop using substances, they were referred to relevant organizations for treatment after giving their consent for the referral to be made. Sharing secondary data can pose potential ethical issues such as data protection, anonymisation and issues with consent. Researchers have a responsibility to ensure that participants are protected, including following the principles for respect of persons, justice, and beneficence.

4.10. Conclusion

This chapter provided the step-by-step methodology regarding how the study was carried out. The study approach and design were discussed in relation to the study topic. This was followed by a description of the sampling and data collection methods. The validity and reliability of the study was also outlined. Since this study used secondary data; it was relevant to also discuss the process of obtaining the secondary data. Lastly, this was followed by discussion of the data analysis method and ethical considerations guiding this study.

CHAPTER 5

RESULTS

5.1. Introduction

This chapter is divided into two sections: the first section will address the descriptive results, and the second will address the findings as they relate to the objectives of the study. Before commencing with data analysis, the two assumptions of measurement at the ordinal or nominal level and two variables consisting of two or more categorical, independent groups were confirmed.

5.2.Chi-Square Results

Hypothesis one (H1): socio-demographic factors such as age, race, education, employment, and marital status, are associated with substance use during pregnancy in a sample of women from low SES communities in the Western Cape.

This section focuses on the association between socio-demographic factors and alcohol use. Table 5.4 below reports Linear by Linear Association since education is an ordinal variable and alcohol is a nominal variable

5.3.Association between Socio-Demographic Factors and Alcohol Use

5.3.1. Age and Alcohol

Table 5.1. presents data on the association between Age categories and Alcohol use.

Table 5.1:
Crosstabs of the associations between age and alcohol use.

AGE * ALCOHOL USE Crosstabulation							
		ALCOHOL USE				Total	
		No		Yes			
		N	%	N	%	N	%
AGE	16-20	26		5	14.3%	31	16.6%
	21-25	51	33.6%	9	25.7%	60	32.1%
	26-30	36	23.7%	9	25.7%	45	24.1%
	31-35	29	19.1%	8	22.9%	37	19.8%
	36-40	10	6.6%	4	11.4%	14	7.5%
Total		152	100.0%	35	100.0%	187	100.0%

Table 5.1 presents data on the association between Age and Alcohol use. A total number 35 women reported using alcohol during pregnancy. Women between the ages of 21-25 and 26-30 years reported similar alcohol usage at 25.7% and closely followed by women in the 31-35 category (22.9%). This indicates that of the women in the sample who were pregnant and alcohol users, were mostly between the ages on 21-35 years.

Table 5.2:
Chi-Square *of the associations between age and alcohol use.*

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.829[a]	4	.767
Likelihood Ratio	1.762	4	.779
Linear-by-Linear Association	1.481	1	.224
N of Valid Cases	187		

Table 5.2 shows that the chi-square test is not statistically significant. χ^2 (4, N = 187) = 1.83, p = .767. This tells us that there is no statistically significant association between age and alcohol use, that is, both 21-25 and 26-30 age categories use alcohol equally (25.7% for both categories).

5.3.2. Race and Alcohol Use

Table 5.3. presents data on the association between Race and Alcohol use.

Table 5.3:
Crosstabs of the associations between race and alcohol use

RACE * ALCOHOL USE Crosstabulation							
		ALCOHOL USE				Total	
		No		Yes			
		N	%	N	%	N	%
RACE	African	84	50.6%	10	25.6%	94	45.9%
	Coloured	79	47.6%	29	74.4%	108	52.7%
	White	1	0.6%	0	0.0%	1	0.5%
	Other	2	1.2%	0	0.0%	2	1.0%
Total		166	100.0%	39	100.0%	205	100.0%

Table 5.3 presents data on the association between Race and Alcohol use. According to the report majority of women who used alcohol during pregnancy were coloured (74.4%) with only 25.6% African. White and Other reported 0 % and this is because the sample is predominantly Black and Coloured since they are from low income communities and access nonpaying clinics.

Table 5.4:
Chi-Square *of the associations between race and alcohol use*

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.291[a]	3	.026
Likelihood Ratio	10.121	3	.018
Linear-by-Linear Association	3.270	1	.071
N of Valid Cases	205		

Table 5.4 because race is a nominal variable, I will interpret the Pearson Chi squared statistics. The table shows that the chi-square test is statistically significant. χ^2 (3, N = 205) = 9.29, p = .026. This tells us that there is a statistically significant association between race and alcohol use.

5.3.3. Education and Alcohol Use

Table 5.5. presents data on the association between Education and Alcohol use.

Table 5.5:
Crosstabs of the associations between education and alcohol use

EDUCATION * ALCOHOL USE Crosstabulation							
		ALCOHOL USE				Total	
		No		Yes			
		N	%	N	%	N	%
EDUCATION	Primary school only	19	12.7%	9	25.7%	28	15.1%
	Matric	90	60.0%	12	34.3%	102	55.1%
	Undergraduate	22	14.7%	3	8.6%	25	13.5%
	Post-graduate	3	2.0%	0	0.0%	3	1.6%
	Other	16	10.7%	11	31.4%	27	14.6%
Total		150	100.0%	35	100.0%	185	100.0%

Table 5.5 presented data that looked at association between Education and Alcohol use. Majority of users were woman in the category of Matric (34.3%) followed by Others with 31.4% and users in the category of Primary school only with 25.7%.

Table 5.6:

Chi-Square *of the associations between education and alcohol use*

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.457[a]	4	.002
Likelihood Ratio	15.566	4	.004
Linear-by-Linear Association	2.965	1	.085
N of Valid Cases	185		

Table 5.6. Shows that the chi-square test is statistically significant. χ^2 (4, N = 185) = 16.46, p = 0.85. This tells us that there is a statistically significant association between education and alcohol use.

5.3.4. Employment and Alcohol Use

Table 5.7 presents data on the association between Employment and Alcohol use.

Table 5.7:
Crosstabs of the associations between employment and alcohol use

EMPLOYMENT * ALCOHOL USE Crosstabulation							
		ALCOHOL USE				Total	
		No		Yes			
		N	%	N	%	N	%
EMPLOYMENT	Employed	49	30.4 %	13	34.2%	62	31.2%
	Unemployed	106	65.8 %	24	63.2%	130	65.3%
	Self-employed	6	3.7%	1	2.6%	7	3.5%
Total		161	100.0 %	38	100.0%	199	100.0%

Table 5.7 reported that 63.2% of women who used alcohol during pregnancy were unemployed. This was followed by 34.2 % who were employed.

Table 5.8:
Chi-Square of the associations between employment and alcohol use

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.279[a]	2	.870
Likelihood Ratio	.284	2	.868
Linear-by-Linear Association	.268	1	.604
N of Valid Cases	199		

Table 5.8. shows that the chi-square test is not statistically significant. χ^2 (3, N = 199) = .28, p = .870. This tells us that there is no statistically significant association between employment

and alcohol use.

5.3.5. Marital Status and Alcohol Use

Table 5.9 presents data on the association between Marital status and Alcohol use.

Table 5.9:
Crosstabs of the associations between marital status and alcohol use.

MARITAL STATUS * ALCOHOL USE Crosstabulation							
		ALCOHOL USE				Total	
		No		Yes			
		N	%	N	%	N	%
MARITAL STATUS	Single	116	69.5%	21	55.3%	137	66.8%
	Married	46	27.5%	7	18.4%	53	25.9%
	Separated/Divorced	1	0.6%	2	5.3%	3	1.5%
	Widowed/Widower	0	0.0%	2	5.3%	2	1.0%
	Living together	4	2.4%	6	15.8%	10	4.9%
Total		167	100.0%	38	100.0%	205	100.0%

Table 5.9 reported that Majority of women who use alcohol during pregnancy are single (55.3%). This was followed by married people (18.4) and 15.8% for those living together.

Table 5.10:
Chi-square of the associations between marital status and alcohol use

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.707[a]	4	<,001
Likelihood Ratio	20.543	4	<,001
Linear-by-Linear Association	16.154	1	<,001
N of Valid Cases	205		

Table 5.10 shows that the chi-square test is statistically significant. χ^2 (4, N = 205) = 26.71, p < .001. This tells us that there is a statistically significant association between marital status and alcohol use.

5.4.Association between Socio-Demographic Factors and Cannabis Use

This section focuses on the association between socio-demographic factors and cannabis use. Table 5.11 below reports Linear by Linear Association since education is an ordinal variable and alcohol is a nominal variable.

5.3.6. Age and Cannabis Use

Table 5.11 presents data on the association between Age and Cannabis use.

Table 5.11:

Crosstabs of the associations between age and cannabis use

AGE * CANNABIS USE Crosstabulation							
		CANNABIS USE				Total	
		No		Yes			
		N	%	N	%	N	%
AGE	16-20	27	15.9%	4	23.5%	31	16.6%
	21-25	55	32.4%	5	29.4%	60	32.1%
	26-30	42	24.7%	3	17.6%	45	24.1%
	31-35	33	19.4%	4	23.5%	37	19.8%
	36-40	13	7.6%	1	5.9%	14	7.5%
Total		170	100.0%	17	100.0%	187	100.0%

Table 5.11 reported that women who use cannabis during pregnancy were almost equal in all categories. In the 16-20 age category 23.5% were users. In the 21-25 age category 29.4% were

users and in the 21-25 age category 23.5%. It is noteworthy that in the 36-40 category 5.9% were users.

Table 5.12:
Chi-square of the associations between age and cannabis use

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.104[a]	4	.894
Likelihood Ratio	1.075	4	.898
Linear-by-Linear Association	.153	1	.695
N of Valid Cases	187		

Table 5.12 shows that the chi-square test is not statistically significant. χ^2 (4, N = 187) = 1.10, p = .695. This tells us that there is no statistically significant association between employment and cannabis use.

5.3.7. Race and Cannabis Use

Table 5.13 presents data on the association between Race and Cannabis use.

Table 5.13:
Crosstabs of the associations between race and cannabis use

RACE * CANNABIS USE Crosstabulation							
		CANNABIS USE				Total	
		No		Yes			
		N	%	N	%	N	%
RACE	African	90	47.9%	4	23.5%	94	45.9%
	Coloured	95	50.5%	13	76.5%	108	52.7%
	White	1	0.5%	0	0.0%	1	0.5%
	Other	2	1.1%	0	0.0%	2	1.0%
Total		188	100.0%	17	100.0%	205	100.0%

According to Table 5.13 majority of women who use cannabis during pregnancy are Coloured 76%, followed by African 23%. As mentioned previously the sample is predominantly Black and Coloured since they are from low income communities and access nonpaying clinics and this could be the reason White and Other reported 0 %.

Table 5.14:

Chi-square of the associations between race and cannabis use

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.277[a]	3	.233
Likelihood Ratio	4.704	3	.195
Linear-by-Linear Association	1.606	1	.205
N of Valid Cases	205		

Table 5.14 shows that the chi-square test is not statistically significant χ^2 (3, N = 205) = 4.28, p = .233. This tells us that there is no statistically significant association between race and cannabis use.

5.3.8. Education and Cannabis Use

Table 5.15 presents data on the association between Education and Cannabis use

Table 5.15:
Crosstabs of the associations between education and cannabis use

EDUCATION * CANNABIS USE Crosstabulation							
		CANNABIS USE				Total	
		No		Yes			
		N	%	N	%	N	%
EDUCATION	Primary school only	27	15.9%	1	6.7%	28	15.1%
	Matric	96	56.5%	6	40.0%	102	55.1%
	Undergraduate	24	41.1%	1	6.7%	25	13.5%
	Post-graduate	3	1.8%	0	0.0%	3	1.6%
	Other	20	11.8%	7	46.7%	27	14.6%
Total		170	100.0 %	15	100.0 %	185	100.0%

Table 5.15 reported that majority of women who use cannabis during pregnancy were others with 46.7%, closely followed by the Matric category with 40%. Primary school only category and post-graduate category were both equal with 6.7%.

Table 5.16:
Chi-square of the associations between education and cannabis use

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	13.787[a]	4	.008
Likelihood Ratio	10.552	4	.032
Linear-by-Linear Association	9.959	1	.002
N of Valid Cases	185		

Table 5.16 shows that the chi-square test is statistically significant. χ^2 (4, N = 185) = 13.79, p < .002. This tells us that there is a statistically significant association between education and cannabis use.

5.3.9. Employment and Cannabis Use

Table 5.17 presents data on the association between Employment status and Cannabis use.

Table 5.17:

Crosstabs of the associations between employment and cannabis use

EMPLOYMENT * CANNABIS USE Crosstabulation							
		CANNABIS USE				Total	
		No		Yes			
		N	%	N	%	N	%
EMPLOYMENT	Employed	59	32.4%	3	17.6%	62	31.2%
	Unemployed	116	63.7%	14	82.4%	130	65.3%
	Self-employed	7	3.8%	0	0.0%	7	3.5%
Total		182	100.0%	17	100.0%	199	100.0%

Table 5.17 looked at the association between Employment and Cannabis use. It reported that majority of pregnant women who use cannabis during pregnancy were unemployed (82.4%). This was followed by unemployed use with (17.6%).

Table 5.18:

Chi-square *of the associations between employment and cannabis use*

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.567[a]	2	.277
Likelihood Ratio	3.292	2	.193
Linear-by-Linear Association	.683	1	.409
N of Valid Cases	199		

Table 5.18 shows that the chi-square test is statistically not significant. χ^2 (2, N = 199) = 2.57, p < .277. This tells us that there is no statistically significant association between employment and cannabis use.

5.3.10. Marital Status and Cannabis Use

Table 5.20 presents data on the association between Marital status and Cannabis use.

Table 5.19:

Crosstabs of the associations between marital status and cannabis use

MARITAL STATUS * CANNABIS USE Crosstabulation							
		CANNABIS USE				Total	
		No		Yes			
		N	%	N	%	N	%
MARITAL STATUS	Single	124	66.0%	13	76.5%	137	66.8%
	Married	52	27.7%	1	5.9%	53	25.9%
	Separated/Divorced	3	1.6%	0	0.0%	3	1.5%
	Widowed/Widower	2	1.1%	0	0.0%	2	1.0%
	Living together	7	3.7%	3	17.6%	10	4.9%
Total		188	100.0 %	17	100.0 %	205	100.0%

Table 5.19 reported that Majority of the women who use cannabis during pregnancy were single (76.5%) with only 5.9% users being married.

Table 5.20:

Chi-square *of the associations between marital status and cannabis use*

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.766[a]	4	.045
Likelihood Ratio	9.108	4	.058
Linear-by-Linear Association	1.274	1	.259
N of Valid Cases	205		

Table 5.20 shows that the chi-square test is statistically significant. χ^2 (4, N = 205) = 9.77, p < .045. This tells us that there is a statistically significant association between marital status and cannabis use.

5.5. Associations between Psychosocial Factors (Stress, Partner Support, Other Support, And Self Esteem) and Alcohol Use

For hypothesis two (H2), psycho-socio factors such as stress, social support and self-esteem are associated with substance use during pregnancy in a sample of women from low SES communities in the Cape Metro. In this section general linear modelling was employed using partial eta squared to assess the associations between the subscales of the PPP and alcohol.

Table 5.11 presents data on the association between the subscales of PPP and Alcohol Use.

Tests of Between-Subjects Effects

Dependent Variable: ALCOHOL USE

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	30.889[a]	201	.154	1.291	.391	.974
Intercept	7.671	1	7.671	64.436	<,001	.902
STRESS	1.082	8	.135	1.136	.440	.565
PARSUP	.000	1	.000	.000	1.000	.000
OTHERSUP	.500	2	.250	2.100	.193	.375
SELFEST_TOT	.500	6	.083	.700	.660	.375
Error	.833	7	.119			
Total	39.000	209				
Corrected Total	31.722	208				

a. R Squared = .974 (Adjusted R Squared = .219)

Table 5.11 presents data on the association between the subscales of PPP and Alcohol use. There were no significant associations between alcohol and the scales of the PPP. This may be because women did not want to disclose their personal difficulties. This could also indicate a need for more research in this area.

5.6.Associations between Psychosocial Factors (Stress, Partner Support, Other Support, and Self Esteem) and Cannabis Use

Table 5.12 presents data on association between the subscales of PPP and Cannabis

Tests of Between-Subjects Effects

Dependent Variable: CANNABIS USE

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	32.957[a]	201	.164	4.918	.000	1.000
Intercept	8.884	1	8.884	2.665	.000	1.000
STRESS	.000	8	.000	.000	1.000	.000
PARSUP	.500	1	.500	1.500	.000	1.000
OTHERSUP	.500	2	.250	7.499	.000	1.000
SELFEST_TOT	.000	6	.000	.000	1.000	.000
Error	2.334	7	1.325			
Total	41.000	209				
Corrected Total	32.957	208				

a. R Squared = 1.000 (Adjusted R Squared = 1.000)

Table 5.12 presents data on the association between the subscales of PPP and cannabis use. There is a significant association between two of the PPP subscales which are other support and self-esteem with cannabis use. There was no significant association between stress and partner-support and cannabis use.

CHAPTER 6

DISCUSSION

6.1. Introduction

This chapter discusses the results of the data analysed for the purpose of satisfying the objectives of this study. The discussion of the findings was based on two objectives: (i) to examine the association between socio-demographic factors and substance use among pregnant women; and (ii) to examine the association between psychosocial factors and substance use among pregnant women. The title speaks to factors associated with substance use but the study specifically focused on alcohol and cannabis use since this is all the women reported, either because these are the only substances used by this sample or because they did not feel comfortable reporting the use of illicit substances during their pregnancies. This objective led to the formulation of Hypothesis 1 (H1): socio-demographic factors such as age, race, education, employment, and marital status, are associated with alcohol and cannabis use during pregnancy in a sample of women from low SES communities in the Western Cape. Hypothesis 2 (H2): psychosocial factors such as stress, partner support, other support, and self-esteem are associated with alcohol and cannabis use during pregnancy in a sample of women from low SES communities in the Western Cape.

6.2. Examining the association between socio-demographic factors and substance use amongst pregnant women

6.2.1. Alcohol Use

The first research objective aimed to examine the association between socio-demographic factors and substance use among pregnant women. Heil et al. (2011) state that substance use during pregnancy is often influenced by different factors, including socioeconomic status, poor nutrition, family instability, relational violence, lack of support,

and psychological problems. Women who come from low socio-economic communities are more at risk of abusing alcohol and other substances during pregnancy due to their living environments (Onah, Field, van Heyningen, & Honikman, 2016). In line with this, one of the significant findings of the current study is that there is an association between sociodemographic factors such as age, race, education, employment, marital status, and alcohol use during pregnancy. In the current study, several variables were found to have a statistically significant association with alcohol use. As mentioned previously, South Africa has one of the highest rates of prenatal alcohol use, and despite the fatal effects of alcohol use on the unborn baby and the mother, it continues to be used. It is reported that women use alcohol as their coping mechanism to try and escape from their realities of poverty, unemployment, physical abuse, and lack of support (Skagerstro, Chang, & Nilsen, 2011). The evidence further shows that a study done between 2010 and 2011 in South Africa using urine analysis, found the prevalence of substances and alcohol use among pregnant women attending antenatal clinics in Cape Town to be 8.8 and 19.6 % respectively, and this was twice the global average (Petersen et al., 2014).

The results of this study illustrated a significant correlation between race and alcohol (see Table 5.3 above). These results support previous literature. Race is a risk factor for prenatal alcohol use. The majority of women who use alcohol during pregnancy come from poor areas and are most likely to be coloured or black and the sample used in this study is predominantly Black and Coloured since they are from low income communities and access nonpaying community clinics.

A similar study was done on the "dop" system reported that most people who were affected by the "dop" system came from rural areas, and were mostly coloured or and black,

and this resulted in long-term social consequences of alcohol use that led to unhealthy lifestyles such as prenatal alcohol use (May et al., 2019). The "dop" system was abolished decades ago but left a pattern of heavy drinking among men and women in South Africa that we still see today.

Findings reported in Table 5.4 indicate a significant correlation between education and alcohol. This is also consistent with the literature discussed previously. The South African Millennium Development Goals Report of 2010 showed that in 2001 there were 369 mortality deaths; in 2010, this had increased to 627, with some deaths caused by prenatal substance exposure, which clearly indicates a rapid increase in mortality across the years (Statistics South Africa, 2010). Women with low literacy levels were found to be prominent in these mortality figures (Nababan et al., 2018). It has been proven that education is one of the most important tools in trying to fight substance use during pregnancy (Wright, Biya, and Chokwe, 2014).

Marital relationships have been reported to have an association with substance use during pregnancy (Bauer et al., 2002). This is in line with the findings of this study. A significant correlation was found between marital status and alcohol use (see Table 5.6). A percentage of participants (55.3%) reported using alcohol during pregnancy, and the majority of the users were single. Studies indicate that single women tend to use substances more during pregnancy compared to those who are married (Grant et al., 2018). Furthermore, the lack of a satisfying romantic relationship during pregnancy is one of the principal causes of substance use.

However, the results showed a strong correlation but also revealed a weak correlation between two variables that were mentioned in this hypothesis. The first variable was indicated

in Table 5.2; it showed no significant correlation between age and alcohol, and this finding contradicted results from other studies mentioned in Section 2.2. Evidence shows that despite possible harmful outcomes such as being physically harmed, dying, and being assaulted, alcohol consumption, and excessive alcohol consumption are common among young adults (De Genna, et al., 2017). Furthermore, younger mothers are more likely to engage in risky drinking early in the pregnancy. Even though the findings showed no correlation, it is interesting to note that a significant number of participants in the age categories of 21-25 and 26-30 (25.7% for both categories) reported using alcohol during pregnancy, which is in line with the literature.

The second variable indicated in Table 5.3, showing no significant correlation, was employment and alcohol use. Yet again, the findings were contradictory to the reviewed literature. Unemployment in South Africa remains one of the biggest challenges among youth and can lead to psychiatric problems such as substance use (Lee et al., 2015). Research indicates that substance use is associated with poverty, unemployment, depression, relational conflict, and suicidality among pregnant women (Ona et al., 2016). A study done in South Africa pointed out that the SES of mothers of children who are exposed to alcohol during pregnancy is commonly low. Furthermore, the highest rates of FASD in South Africa are found among women living in low-income communities where living conditions are bad, weekend binge drinking is common, women have lower levels of education, and more frequently are unemployed or underemployed (May & Gossage, 2022).

6.2.2. Cannabis Use

Throughout the world, cannabis is reported to be one of the most used illicit drugs. According to the 2015 National Survey on Drug Use and Health, 22.2 million Americans

currently use cannabis, and in the past twelve months, 2.6 million individuals aged 12 and older were first time users (Grant et al., 2018). It is reported that 20% of women in their early 20s are most likely to test positive for cannabis use during pregnancy (Martin et al., 2015). There is limited data for Africa on prenatal substance use, but the available data from South Africa indicates that between 3.6% and 8.8% of pregnant women use illicit substances, and 19.6% use alcohol (Forray, 2016). Furthermore, the most used illicit substances in the Western Cape by pregnant women are methamphetamine and cannabis. (Jones et al., 2011; Forray, 2016).

The findings in Section 5.4 "Association between Socio-Demographic Factors and Alcohol Use", indicated a strong correlation with some of the variables that were tested. Only two variables showed a significant association between sociodemographic factors and cannabis use among pregnant women. They are education and marital status (see Table 5.9 and Table 5.11). A cross-sectional study that focused on prenatal cannabis use reported that among pregnant women admitted to substance use treatment for the first time, 40.6% reported any level of cannabis use and 40% reported cannabis as their primary drug of choice (Washio, Mark, and Terplan, 2018). Furthermore, a similar study done by Ko et al. (2015), Mark, Desai, and Terplan (2016) reported that prenatal patients with positive cannabis screenings were associated with a higher level of education, employment, marital status, substance use, depressive symptoms, and a history of abuse. These previous studies are in line with the findings of the current study.

6.3. The association between psycho-social factors and substance use amongst pregnant women

The second research objective aimed to examine the association between psycho-social factors and substance use among pregnant women. It also specifically focused on alcohol and cannabis use during pregnancy since this is all the women reported either because these are the only substances used by this sample or they did not feel comfortable reporting the use of illicit substances during their pregnancies. Prenatal alcohol use is commonly associated with psychosocial factors such as anxiety, depression, domestic violence, and alcohol intake behaviors of partners and family. (Ward et al., 2021); (Skagerstro, Chang, & Nilsen, 2011). Furthermore, if alcohol use is continued during pregnancy, it is strongly associated with high ratings of depression symptoms (Harrison et al., 2014). Findings in section 4.1.3 under the subheading of "association between psycho-social factors and alcohol use" showed no correlation between alcohol and all the subscales of PPP (Stress, Partner, Support, Other support, and Self Esteem). In Section 5.5, "Association between Psycho-Social Factors and Cannabis Use" a significant correlation was found between two of the PPP subscales which other support and Self-esteem with cannabis use. There was no significant association between Stress and Partner-Support significant association between two of the PPP subscales which are other support and Self-esteem with cannabis use. There was no significant association between Stress and Partner-Support.

Looking at these findings, they suggest a need for further research in this area. Various studies have acknowledged a noteworthy relationship between psychosocial factors and substance use (including alcohol and cannabis). Maternal lifestyle remains a concrete issue regarding pregnancy and substance use; however, it does not only end with maternal lifestyle

since other close relationships play a protective and supportive role during this period (Corneau, 2018). Marital relationships can also influence substance use during pregnancy. The support and love that pregnant women receive from their spouses play a significant role in refraining from engaging in unhealthy coping mechanisms during pregnancy (Duncan, Wilkerson, and England, 2006; Heaman & Chalmers, 2005). Pregnant women who have supportive and loving partners are less likely to use substances during pregnancy. Similarly, Hamad, Fernald, Karlan, and Zinman (2008) identified the critical role of supportive partners during pregnancy, indicating that pregnant women, who have supportive partners, have a lower chance of engaging in substance use during pregnancy. Overall, the findings of this study illustrated above are in line with the previous research discussed in the literature chapter two and cross-referenced in the various sections cited above.

CHAPTER 7

CONCLUSION, LIMITATIONS, AND RECOMMENDATIONS

7.1. Conclusion

This study aimed to examine factors associated with substance use during pregnancy. The specific objectives of this study included: examining the association between socio-demographic factors and substance use among pregnant women, and the association between psychosocial factors and substance use amongst pregnant women. The study specifically focused on alcohol and cannabis use during pregnancy. Bronfenbrenner's bio-ecological theory was employed as the basis for the conceptualised framework. Two research objectives, and two hypotheses were formulated. Primary data was collected from a total of 214 respondents using purposeful sampling.

In exploring the results obtained by the various measures, it was evident that the findings support the literature's claims that there is an association between race, education, marital status, and substance use during pregnancy. The study has collected evidence that shows that there are women who use dangerous substances during their pregnancies. This study has contributed to broadening knowledge about substance use during pregnancy. It has also created awareness of the dangers associated with substance use among women in general, as well as on factors that influence specifically pregnant women to take substances. The knowledge emanating from this study could educate the community about substance use during pregnancy, including its applicability to men. This could further enlighten the community on the influence of substance use and its resultant effects. The findings of the study can also be useful to various stakeholders across all systems, particularly the Department of Health, by providing further information regarding substance use among

pregnant women. The study could also help in refining the intervention strategies and in the planning of strategies to resolve substance use among pregnant women. The rehabilitation centers that deal with substance use treatment, in general, may benefit from this study too. The findings of this study provide in-depth information based on the influential factors of substance use that could be useful in rehabilitation centers.

7.2. Limitations of the Study

No research study can claim to be completely unlimited and unconstrained in its scope. By identifying the limitations of a study, its results can be appropriately contextualised, more effectively understood, and ultimately employed in the future. The limit of this study was applying it only to people living in the Western Cape, South Africa. These people include coloured, white, and African women who use substances during pregnancy. However, only two racial groups (African and Coloured) were covered. As mentioned in our literature this is because the majority of the people who were affected by the "dop" system came from poor non-urban areas and were mostly Black and or Coloured and this was also in line with our findings. The terms "White", "Black", and "Coloured" originate from the apartheid era, and refer to demographic markers, not inherent characteristics. They refer to people of European, African and mixed (African, European and/or Asian) ancestry, respectively. These two descriptions have historical significance, and their continuous use in South Africa is important for observing developments in health and socio-economic conditions, detecting vulnerable elements of the population, and planning effective prevention programs (Gossage, et al., 2014). A purposive sampling technique was used and combined with the limited sample size (due to time and access constraints), resulted in a sample that was not truly representative. Thus, the results may be sample-specific, and generalisations may not be made from these

results.

7.3.Recommendations

Various suggestions and recommendations were made from the literature review chapters, the findings, conclusions, and limitations discussed above. The following recommendations, based on the literature review and the empirical results achieved in this study, are put forward. As this study was only done in the Western Cape, it is recommended that further studies be undertaken in other large metropolitan areas of South Africa, in order to better generalise the findings nationally. Unhealthy lifestyles among pregnant women, were found to be one of the challenges among pregnant women and this includes substance use during pregnancy. Interventions need to focus on awareness-raising, education, and decision-making as well. Young people need to be made aware of how the decisions they make in their youth influence their futures and the futures of their potential offspring. Interventions to help women access support during pregnancy are also recommended. These interventions should be evaluated to inform further research. Further research should investigate why young women begin to use substances in these communities so that interventions can be developed to address these dynamics. Through these campaigns, women would be encouraged to be responsible for their own health and that of their children.

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Appendix A (Permission letter)

The Chair

BMREC

Dear Chairperson **21/10/2019**

Permission for Zandile Batweni

Zandile Batweni is a registered student in the MPsych programme in the Department of Psychology. She is in the process of submitting her proposal in fulfillment of the mini-thesis component of the degree. Her thesis forms part of a UWC registered project titled Prenatal methamphetamine exposure in the Western Cape, South Africa (BM17/6/8).

I, hereby grant permission for her to access the data already collected on the project and conduct secondary data analysis for the thesis component of her requirements for the degree. The findings of Ms Batweni's study will serve as a preliminary analysis of the data and will feed into the first wave of the larger study.

Ms Batweni's study will examine the demographic and some of the psycho-social factors associated with substance use during pregnancy. This data has been collected from women across several clinics in urban and rural districts of the Western Cape as part of a larger survey. The student will analyse only the part of the dataset that pertains to the objectives of her study for some of the clinics in the urban districts of the Western Cape. Her findings will inform decisions made for the rest of wave 1 of the larger study.

Sincerely,

Maria Florence

Principal Investigator

Prenatal methamphetamine exposure in the Western Cape, South Africa

Department of Psychology University of the Western Cape

Appendix B (Request for permission to collect data)

The Facility Manager

Crossroads CDC

To whom it may concern **21/10/2018**

Request for permission to collect data

I am from the Department of Psychology at the University of the Western Cape. We are conducting research on substance use during pregnancy. I would like to meet with you to discuss the possibility of including the women who access your clinic in this study. This project is registered at the University of the Western Cape – see ethics clearance certificate attached. Also find attached a permission letter from the Health Research Directorate of the Western Cape Department of Health.

The idea is to access the women while they wait to be seen by staff at the clinic. We will ensure that our data collection does not interfere with the day-to-day running of the clinic. We will also ensure that participation is voluntary and that the information shared by patients is kept confidential and handled sensitively.

Please let me know when you will be available to meet to discuss our request further.

Sincerely,

Maria Florence

Principal Investigator

Prenatal methamphetamine exposure in the Western Cape, South Africa

Department of Psychology University of the Western Cape

APPENDIX C:

UNIVERSITY OF THE WESTERN CAPE
DEPARTMENT OF PSYCHOLOGY
Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959 2825 Fax: 27 21-959 3515
E-mail: 3532384@myuwc.ac.za

INFORMATION SHEET

Project Title: Examining the factors associated with substance use during pregnancy in low SES communities in the Western Cape.

What is this study about?

This is a research project being conducted by Zandile Batweni at the University of the Western. You are invited to participate in this research project because you are receiving antenatal care at this facility and we are interested in whether you have used any drugs at any stage during your pregnancy. The purpose of this research project is to get a better sense of how many women struggle with drug use during pregnancy and what care needs to be put in place to ensure the safe delivery and healthy development of your baby.

What will I be asked to do if I agree to participate?

You will be asked to meet with Zandile Batweni directly after your consultation for 10 to 15 minutes. A space will be provided that will allow you the privacy to answer questions honestly. You will be asked to answer questions related to any drug use during your pregnancy as well

as some background information about yourself that will be explored to see whether these are putting you at higher risk for drug use.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity the surveys are anonymous and will not contain information that may personally identify you**. (1)** Your name will not be included on the survey; **(2)** a code will be placed on the survey; **(3)** through the use of an identification key, the researcher will be able to link your survey to your identity in order to follow-up once your child is born; and **(4)** only the researcher will have access to the identification key. To ensure your confidentiality all data will be filed in locked cabinets using identification codes only on data forms and using only password-protected computer files. If we write a report or article about this research project, your identity will be protected. In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities information that comes to our attention concerning child abuse or neglect or potential harm to you or others. In this event, we will inform you that we have to break confidentiality to fulfil our legal responsibility to report to the designated authorities.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator have a more complete understanding of the extent of and risk factors for maternal substance use. We hope that, in the future, other people might benefit from this study through improved understanding of the risk factors for maternal use. If you indicate that you wish to stop using substances, you will be to relevant organisations for treatment.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You might choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or stop participating at any time, you will not be penalized.

What if I have questions?

This research is being conducted by Zandile Batweni at the University of the Western Cape. If you have any questions about the research study itself, please contact Maria Florence at: The Department of Psychology, University of the Western Cape, Private Bag X17, Bellville 7535, Telephone: (021) 959-2283/2453, email address: mflorence@uwc.ac.za.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Zandile Batweni

Department: Psychology

University of the Western Cape

Private Bag X17

Bellville 7535

3570137@myuwc.ac.za

Dr. Maria Florence

Head of Department: Psychology

University of the Western Cape

Private Bag X17

Bellville 7535

mflorence@uwc.ac.za

Prof Anthea Rhoda

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

chs-deansoffice@uwc.ac.za

Patricia Josias

Research Ethics Committee Officer

University of the Western Cape

Private Bag X17

Bellville 7535

research-ethics@uwc.ac.za

021 959 4111

This research has been approved by the University of the Western Cape's Biomedical Research Ethics Committee (REFERENCE NUMBER:_____).

APPENDIX D:

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CONSENT FORM

Title of Research Project: Examining the factors associated with substance use during pregnancy in low SES communities in the Western Cape

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name……..

Participant's signature…….

Date……

APPENDIX E:

Demographic information

1. Age in years
2. Race/Ethnicity
3. Education level
4. Number of persons in household
5. Employment status
6. Marital status
7. Rating of general health status
8. Number of pregnancies
9. Number of biological children
10. Grant holder
11. How far along is this pregnancy
12. How many antenatal visits have you had for this pregnancy

The following questions are about whether you use alcohol and drugs or not.

It is important that you answer these questions honestly.

Remember that no one will know that this is your questionnaire.

T**ick (√)** by the option that applies to you **OR write your answer** in the space provided.

Alcohol		**Dagga** (Cannabis)		**Tik** (Methamphetamine)		**Buttons** (Mandrax)		**Unga** (Heroin)		**E** (Ecstasy)		**Other** Specify:	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

Answer the rest of the questions **ONLY** if you have answered **YES** to question **1)** for any of the drugs listed in question 1 above. If you've answered **NO** to question 1) above then proceed to the next page and answer the rest of the questionnaire.

Alcohol			**Dagga**			**Tik**			**Buttons**			**Unga**			**E**			**Other**		
Daily	Weekly	Seldom	Daily	Weekly	Seldom	Daily	Weekly	Seldom	Daily	Weekly	Seldom	Daily	Weekly	Seldom	Daily	Weekly	Seldom	Daily	Weekly	Seldom
Alcohol			**Dagga**			**Tik**			**Buttons**			**Unga**			**E**			**Other**		

Alcohol	Dagga	Tik	Buttons	Unga	E	Other
Alcohol	Dagga	Tik	Buttons	Unga	E	Other

The Prenatal Psychosocial Profile Scale

PPP-Stress

Rate the amount of stress you experience on the response scale provided in relation to the following 11 items

1. No stress
2. Little stress
3. Much stress
4. Severe stress

S1.Financial worries (e.g. food, shelter, health care, transportation)
S2. Other money worries (e.g. bills, etc.)
S3. Problems related to family (e.g. partner, children, etc.)
S4. Having to move, either recently or in the future
S5. Recent loss of loved one (e.g. death, divorce, long distance)
S6. Current pregnancy
S7. Current abuse (e.g. sexual, emotional or physical)
S8. Problems with alcohol and/or drugs
S9. Work problems (e.g. being laid off, etc.)
S10. Problems related to friends
S11. Feeling generally 'overloaded'

PPP-Support from partner

Rate you level of satisfaction on the response scale provided with the support you receive from your partner in relation to the following 11 items

1. Very dissatisfied
2. Dissatisfied
3. Somewhat dissatisfied
4. Somewhat satisfied
5. Satisfied
6. Very satisfied

P1. Shares similar experience with me
P2. Helps keep up my morale
P3. Helps me out when I'm in a pinch
P4. Shows interest in my daily activities and problems
P5. Goes out of the way to do special or thoughtful things for me
P6. Allows me to talk about things that are very personal and private
P7. Let's me know I am appreciated for the things I do for him
P8. Tolerates my ups and downs and unusual behaviours

P9. Takes me seriously when I have concerns
P10. Says things that make my situation clear and easier to understand
P11. Let's me know that he/she will be around if I need assistance

PPP-Support from others

Rate you level of satisfaction on the response scale provided with the support you receive from other close friends and/or family in relation to the following 11 items

1. Very dissatisfied
2. Dissatisfied
3. Somewhat dissatisfied
4. Somewhat satisfied
5. Satisfied
6. Very satisfied

O1. Shares similar experience with me
O2. Helps keep up my morale
O3. Helps me out when I'm in a pinch
O4. Shows interest in my daily activities and problems
O5. Goes out of the way to do special or thoughtful things for me
O6. Allows me to talk about things that are very personal and private
O7. Let's me know I am appreciated for the things I do for him
O8. Tolerates my ups and downs and unusual behaviors
O9. Takes me seriously when I have concerns
O10. Says things that make my situation clear and easier to understand
O11. Let's me know that he/she will be around if I need assistance

PPP-Self-esteem

Indicate to what extent you agree with the following 11 statement using the following response scale

1. Disagree
2. Somewhat disagree
3. Somewhat agree
4. Agree

E1. Feel that you're a person of worth, at least on an equal basis with others
E2. Feel that you have a number of good qualities
E3. All in all, feel that you are a failure
E4. Feel you are able to do things as well as most other people
E5. Feel you do not have much to be proud of
E6. Take a positive attitude towards yourself
E7. On the whole, feel satisfied with yourself
E8. Wish you could have more respect for yourself
E9. Feel useless at times

E10. At times, think you are no good at all

E11. Feel like you have c

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INLIGTINGSBLAD

Projek Titel: Die ondersoek van die faktore wat verband hou met substansgebruik tydens swangerskap in lae-en-gemeenskappe in die Wes-Kaap

Wat behels hierdie studie?

Dit is 'n navorsingprojek wat gelei word deur Zandile Batweni van die Universiteit van die Wes-Kaap. U word genooi om deel te neem in hierdie navorsingprojek omdat u voorgeboorte behandel ontvang by die fasiliteit en ons stel belang of u enige dwelms gedurende enige stadium van u swangerskap gebruik het. Die doel van hierdie navorsingsprojek is om 'n beter insig te ontvang van die hoeveelheid vroue wat sukkel met dwelm inname gedurende swangerskap en om uit te vind watter behandeling benodig word en op drewe te sit om te verseker vir 'n veilige geboorte en 'n gesonde ontwikkeling van u baba.

Wat sal van my verwag word as ek instem om deel te neem aan hierdie navorsingsprojek?

U sal gevra word om te ontmoet met een van ons veldwerkers direk na konsultasie vir 'n tydperk van 10 tot 15 minute. 'N kuberruimte sal voorsien word wat dit moontlik maak om in privaat die vrae te beantwoord op 'n eerlike wyse. U sal gevra word om vrae te beantwoord in verband met enige dwelm gebruik gedurende u swangerskap asook ietwat agtergrond informasie oor u self. Hierdie informasie sal dan geondersoek word om te sien of hierdie u op n hoër risiko plaas vir dwelm gebruik. Die veldwerker sal u help om die informasie in te vul of hy/sy sal dit self vir u invul.

Sal my deelname in hierdie navorsingsprojek vertroulik wees?

Die navorsers onderneem om u identiteit te beskerm asook die aard van u bydra. Om u anonimiteit te verseker sal die topografiese opname anoniem wees en dit sal nie informasie bevat wat u dalk persoonlik kan identifiseer daarmee nie. 1) U naam sal nie ingesluit word op die topografiese opname; 2) n kode sal geplaas word op die topografiese opname; 3) gedurende die gebruik van n identifikasie sleutel, sal die navorser in staat wees om jou topografiese opname te verbind met jou identiteit om te kan vervolg na die baba gebore is; en 4) net die navorser sal toegang het tot die identifikasie sleutel. Om vetroulikheid te verseker, sal al die data geliaseer word in 'n veilige kabinet met die gebruik van identifikasie kodes net op data vorms en daar word ook gebruik gemaak van 'n wagwoord-beskerming op die rekenaar. As daar 'n report of n artikel oor die navorsingsprojek geskryf word, sal U identiteit beskerm word.

In ooreenstemming met die wetlike vereistes en/of professionele standaarde, sal ons onthul na die toepaslike persone en/of owerhede wat tot ons aandag gebring word aangaande kindermishandeling of agterlosigheid of moontlike skade wat aangerig word aan u self of ander. In hierdie gebeurtenis sal ons u in kennis stel dat ons die vetroulikheid moet breuk om te vervul aan ons wetlike verantwoordelikheid deur te raporteer aan die geskikde gesag.

Wat is die risikos' van hierdie navorsing?

Alle menslike interaksie en gepraat oor die self en ander dra 'n sekere aantal risikos'. Ons sal nietemin suke risiko's minimaliseer en ontmiddelik reageer om behulp saam te wees aan u as u enige ongemaklikheid, sielkundig gesproke, of andersins gedurende die proses ervaar in hierdie studie. Waar nodig, n geskikde aanwysing sal gemaak word na 'n vantoepaslike professioneel vir verdere bystand of intervensie.

Wat is die voordele van hierdie navorsing?

Die navorsing is nie geformuleer om u op 'n persoonlike vlak te help nie, maar die resultate mag dalk die navorser help om n meer volledige begrip van die mate en risiko faktore van moederlike substansie te ontwikkel. Ons hoop dat in die toekoms ander individies mag voordeel ontvang van hierdie studie deur verbeterende begrip van die risiko faktore vir moederlike gebruik. As u 'n indikasie maak dat u wens om te stop met die gebruik van substansie, sal u verwys word na 'n Nagraadse Adviseer student in die Departement van Sielkunde by die Universiteit van die Wes-Kaap vir 'n aanvanklike intervensie. Daarna sal u verwys word na die toepaslike agentskap vir verdere behandeling.

Moet ek in hierdie navorsing deelneem en mag ek ophou met my deelname enige tyd?

U se deelname in hierdie navorsingsprojek is heeltemal vrywillig. As U besluit om deel te neem in hierdie navorsingsprojek, mag u enige tyd stop of onttrek met u deelname. As u besluit om nie deel the neem in die studie nie of stop met u deelname op enige gegewe oomblik sal u geen nagevolge dra nie.

Wat as ek vrae het oor hierdie navorsingsprojek?

Die navorsing is begelei deur Zandile Batweni by die Universiteit van die Wes-Kaap. Indien u enige vrae het oor die navorsing studie, kontak asseblief vir Maria Florence by: Die Departement van Sielkunde, Universiteit van Wes-Kaap, Privaat Sak X17, Bellville 7535, Telefoon: (021) 959-2283/2453, epos adres: mflorence@uwc.ac.za

Indien U enige vrae omtrent die studie en jou regte as 'n navorsingsdeelnemer het of as U indien wens om 'n probleem aan te meld wat jy ervaar het wat in verband met die studie, kontak asseblief:

Zandile Batweni

Department: Psychology

University of the Western Cape

Private Bag X17

Bellville 7535

3570137@myuwc.ac.za

Maria Florence

Hoof van Departement: Sielkunde

Universiteit van die Wes-Kaap

Privaat sak X17

Bellville 7535

mflorence@uwc.ac.za

Prof Anthea Rhoda

Dekaan van die Fakulteit van Gemeenskap and GesondheidsWetenskap

Universiteit van die Wes-Kaap

Privaat sak X17

Bellville 7535

chs-deansoffice@uwc.ac.za

Hierdie navorsing is goedgekeur deur die Universiteit van Wes-Kaap se Biochemiese Navorsing Etiek Kommitee (verwysingsnommer: sal ingevoeg word op ontvangs daarvan van BMREC).

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TOESTEMMINGSVORM

Projek Titel: Die ondersoek van die faktore wat verband hou met substansgebruik tydens swangerskap in lae-en-gemeenskappe in die Wes-Kaap

Die studie was vir my beskryf in 'n taal wat ek verstaan. My vrae oor die studie is beantwoord. Ek verstaan wat my deelname behels en ek stem saam om deel te neem uit my eie keuse en vryewil. Ek verstaan dat my identiteit nie aan enige iemand bekend gemaak sal word nie. Ek verstaan dat ek enige tyd myself kan onttrek sonder om 'n rede te verskaf en sonder vrees vir negatiewe gevolge of die verlies van voordele.

Deelnemer se naam…….

Deelnemer se handtekening.....

Datum…….

Demografiese Inligting

1. Ouderdom in jare
2. Ras/Etniese groep
3. Opvoedkundige vlak
4. Aantal mense in huishouding
5. Werkstatus
6. Huwelikstatus
7. Evalueer algemene gesondheidstatus
8. Aantal swangerskappe
9. Aantal biologiese kinders
10. Beurshouer
11. Hoe vêr is die swangerskap
12. Hoeveel voorgeboortesorg besoeke het jy gehad vir die swangerskap

Die volgende vrae handel oor of jy alkohol en dwelms gebruik of nie. Dit is belangrik dat jy die vrae eerlik sal beantwoord. Onthou niemand sal weet dat dit jou vraelys is nie. Merk **(√)** die opsie wat van toepassing tot jou is **OF skryf jou antwoord** neer in die spasie wat voorsien word.

Alkohol		**Dagga** (Cannabis)		**Tik** (Methampheta mine)		**Buttons** (Mandrax)		**Unga** (Heroien)		**E** (Ecstasy)		**Ander** Spesifiseer:	
Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee
Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee	Ja	Nee

Beantwoord die res van die vrae **NET** as jy **JA** geantwoord het by vraag **1)** vir enige van die dwelms wat bo gelys is in vraag 1. Indien jy bo **NEE** geantwoord het by vraag 1) dan gaan voort na die volgende bladsy en beantwoord die res van die vraelys.

Alkohol			**Dagga**			**Tik**			**Buttons**			**Unga**			**E**			**Ander**		
Daaglikks	Weeklikks	Selde	Daaglikks	Weeklikks	Selde	Daaglikks	Weeklikks	Selde	Daaglikks	Weeklikks	Selde	Daaglikks	Weeklikks	Selde	Daaglikks	Weeklikks	Selde	Daaglikks	Weeklikks	Selde
Alkohol			**Dagga**			**Tik**			**Buttons**			**Unga**			**E**			**Ander**		
Alkohol			**Dagga**			**Tik**			**Buttons**			**Unga**			**E**			**Ander**		
Alkohol			**Dagga**			**Tik**			**Buttons**			**Unga**			**E**			**Ander**		

Die "Prenatal Psychosocial" Profiel Skaal

PPP-Stres

Bereken die hoeveelheid stres wat jy ervaar op die terugvoeringskaal wat voorsien word in verhouding met die volgende 11 items.

1. Geen stres
2. Min stres
3. Baie stres
4. Ernstige stres

S1. Finansiele bekommernisse (bv. kos, skuiling, gesonheidsorg, vervoer)

S2. Ander geld bekommernisse (bv. rekeninge, ens.)

S3. Probleme met betrekking tot familie (bv. huweliksmaat, kinders, ens.)

S4. Moes onlangs trek of in die toekoms

S5. Onlangse verlies van 'n geliefde (bv. sterf, egskeiding, lang afstand)

S6. Huidige swangerskap

S7. Huidige mishandeling (bv. seksueel, emotioneel of fisies)

S8. Probleme met alkohol en/of dwelms

S9. Werksprobleme (bv. afdanking, ens.)

S10. Probleme met betrekking tot vriende

S11. Voel oor die algemeen 'oorlaai'

PPP-Ondersteuning van huweliksmaat

Bereken op die terugvoeringskaal wat voorsien word jou vlak van tevredenheid met die ondersteuning wat jy ontvang van jou huweliksmaat met betrekking tot die volgende 11 items

1. Baie ontevrede
2. Ontevrede
3. Gedeeltelik ontevrede
4. Gedeeltelik tevrede
5. Tevrede
6. Baie tevrede

P1. Deel soortgelyke ervarings met my

P2. Help om my moraal hoog te hou

P3. Help my uit wanneer ek in 'n penarie is

P4. Toon belangstelling in my daaglikse aktiwiteite en probleme

P5. Gaan uit die pad om spesiale of bedagsame dinge te doen vir my

P6. Laat my toe om oor dinge te praat wat baie persoonlik en privaat is

P7. Laat my weet dat ek waardeer word vir die dinge wat ek doen vir hom

P8. Verdra my voor-en teenspoed en ongewone gedrag

P9. Neem my ernstig op wanneer ek bekommernisse het

P10. Sê dinge wat my situasie duidelik en maklik maak om te verstaan

P11. Laat weet my dat hy/sy daar sal wees as ek hulp benodig

PPP-Ondersteuning van ander

Bereken op die terugvoeringskaal wat voorsien word jou vlak van tevredenheid met die ondersteuning wat jy ontvang van naaste vriende en/of familie met betrekking tot die volgende 11 items

1. Baie ontevrede
2. Ontevrede
3. Gedeeltelik ontevrede
4. Gedeeltelik tevrede
5. Tevrede
6. Baie tevrede

O1. Deel soortgelyke ervarings met my

O2. Help om my moraal hoog te hou

O3. Help my uit wanneer ek in 'n penarie is

O4. Toon belangstelling in my daaglikse aktiwiteite en probleme

O5. Gaan uit die pad om spesiale of bedagsame dinge te doen vir my

O6. Laat my toe om oor dinge te praat wat baie persoonlik en privaat is

O7. Laat my weet dat ek waardeer word vir die dinge wat ek doen vir hom

O8. Verdra my voor-en teenspoed en ongewone gedrag

O9. Neem my ernstig op wanneer ek bekommernisse het

O10. Sê dinge wat my situasie duidelik en maklik maak om te verstaan

O11. Laat weet my dat hy/sy daar sal wees as ek hulp benodig

PPP- Selfbeeld

Dui aan tot watter mate jy saamstem met die volgende 11 verklarings deur om die volgende terugvoeringskaal te gebruik

1. Stem nie saam nie
2. Stem gedeeltelik nie saam nie
3. Stem gedeeltelik saam
4. Stem saam

E1. Voel dat jy ’n persoon van waarde is, ten minste op gelyke basis met ander

E2. Voel dat jy ’n aantal goeie eienskappe het

E3. Alles in ag geneem, voel dat jy ’n mislukking is

E4. Voel dat jy in staat is om dinge te doen ook soos meeste ander mense

E5. Voel jy het nie baie om oor trots te wees nie

E6. Neem ’n positiewe houding teenoor jouself

E7. Oor die algemeen, voel tevrede met jouself

E8. Wens jy kon meer respek hê vir jouself

E9. Voel met tye nutteloos

E10. Met tye, dink jy is glad nie goed nie

E11. Voel jy het beheer oor jou lewe

UXWEBHU LOLWAZI

Project Title: Ukuvavanya izinto ezinxulumene nokusetyenziswa kweziyobisi ngexesha lokukhulelwa kwiindawo ezihlelelekileyo eNtshona Koloni

Lungantoni Oluphando?

Le yiprojekthi yophando elenziwa ngu Zandile Batweni kwiYunivesithi yaseNtshona. Uyamenywa ukuba uthathe inxaxheba kule projekthi yophando kuba uzofumana unonophelo lokubeleka kwesi sibonelelo kwaye sinomdla wokuba ingaba ukhe wasebenzisa naziphi na iziyobisi nangaliphi na ixesha ngethuba lokukhulelwa kwakho. Injongo yale projekthi yophando yeyokuqonda ngcono ukuba bangaphi na abafazi abafumana ubunzima bosebenzisa iziyobisi ngexa bakhulelweyo kwaye loluphi uhoyo ekufuneka lubekwe endaweni ukuqinisekisa ukunikezelwa ukhuselekho nophuhliso okunempilo kusana lwakho.

Ndiza kucelwa ukuba ndenzeni na xa ndivuma ukuthatha inxaxheba?

Uya kucelwa ukuba udhibane nomnye wabasebenzi bethu ngqo emvako thethwano lwakho, umghama wemizuzu eli-10(shumi) ukuya kwi-15(shumi elinesihlanu).Uzakunikwa isithuba esizakuvumela ukuphendula imibuzo ngokunyanisekileyo. Uya kucelwa ukuba uphendule imibuzo enxulumene nokusebenzisa naziphi na iziyobisi ngexesha lokukhulelwa ngokunjalo ucelwe unikise ulwazi ngemvelaphi yakho, imvelaphi leyo iyakuphononongwa ukuze kubonwe ukuba aziyikubeka ebungozini bokusebenzisa iziyobisi. Umsebenzi wethu wasefildini uya kukunceda ugcwalise iinkcukacha okanye zakho okanye akugcwaliselele.

Ingaba ukuba nenxaxheba kolu phando kuzogcinwa kuyimfihlo?

Abaphandi bazoqinisekisa ngokhuseleko lwesaziso sakho kunye nobudlelwana bakho. Ukuqinisekisa ukungaziwa kwakho iisaveyi azinokuqulatha inkcukaca ezinokwenza ukuba ubonakale/okanye uvele. (1) Amagama akho akazufakwa kwisaveyi; (2) kune khowudi ezobekwa koluphando; (3) ngokuthi kusetyenziswe isitshixo sochonga, umphandi uya kuba nakho ukunxulumanisa isaveyi yakho nhe sazisi sakho ukuze unxhumelwano lwenziwe xa umntwana wakho ezalwe; kunye (4) Ngumphandi kuphela ozakuba nho fikelelo kwiqhosha ngoPhawulo. Ukuqinisekisa ngofihlo lwakho zonke iinkcukacha ziyaku fayilishwa kwikhabhathi etshixiweyo kusetyenziswa iikhowudi ukuchongwa kuphela iifomu zeenkcukacha kusetyenziswa nhe khowudi kwi computer. Ukuba kubhalwe ingxelo okanye inqaku malunga nale projekthi yophando, isazisio sakho siya kukhuselwa. Ngokungqinelana neemfuno ezisemthethweni kunye / okanye imigangatho yobuchule, siya kuxela ebantwini abafanelekileyo /okanye amagunya olwazi olwaziwa yingqalelo yethu ngokuphathelele gadalala okanye ukungahoywa komntwana okanye umonakalo enokuba kuwe okanye abanye. Kulo msitho, siza kukwazisa ukuba ukwaphula imfihlo ukuzalisekisa uxanduva lwethu ngokusemthethweni ingxelo kwabasemagunyeni echongiweyo.

Zeziphi iingozi kolu phando?

Zonke iingxoxo zoluntu kunye nokuthetha ngesiqu sakho okanye ngabanye abantu zinayo iisixa sobungozi . kodwa sekunjalo sizonciphisa imingcipheko kwaye uncedakale ukuba ufunyanwa unakho uphazamiseka ngokwengqondo ngelixesha uthatha inxaxheba kwesi sifundo. Apho kuyimfuneko, uyakuthunyelwa kwindawo efanelekileyo apho unofumana uncedo khona, okanye kwenziwe ungelelelo.

Ziziphi iingenelo kolu phando?

Olu phando alenzelwanga ukunceda wena buqu, kodwa iziphumo zinokunceda umcuphi ukuba aqonde ngokupheleleyo ubungozi bokusebenzisa kweziyobisi ngomama ngexesha abasakhulelwe ngalo. Sinethemba lokuba, kwixesha elizayo, abanye abantu banokuzuza kolu phando ngokuphucula ulwazi lwengcipheko lokusebenzisa iziyobisi ngoomama abakhulelweyo. Ukuba ubonisa uba unqwenela uyeke ukusebenzisa iiziyobisi, uya kuthunyelwa kwindawo yokuthuthuzela kwiSebe lengqondo e-UWC ngenxa yokungenelela lokuqala, emva koko ziya kuthunyelwa kwi-arhente ezifanelekileyo ukuze ufumane unyango olungaphaya.

Ingaba kunyanzelekile ukuba ndithathe inxaxheba koluphando kwaye ndingayeka naliphi na ixesha koluphando?

ukuthatha kwakho inxaxheba kolu phando kukuzithandela ngokupheleleyo. Ungazikhethela ukuba ungathathi inxaxheba kuyo yonke. Ukuba ugqiba ukuba uzothatha inxaxheba kolu phando, ungamisa nanini na ixesha. inxaxheba nangaliphi na ixesha. Ukuba ugqiba ukuba uthatha inxaxheba kolu phando okanye uyeke uthatha inxaxheba koluphando, abasayi kohlwaywa.

Ndenze njani ukuba ndinemibuzo?

Olu phando luqhutywa nguZandile Batweni kwiYunivesithi yaseNtshona Koloni. Ukuba unayo nayiphi na imibuzo malunga noluphando buqu, nceda uqhagamshelane nho Maria Florence apha: kwiSebe Lwezengqondo, iYunivesithi yaseNtshona Koloni, Private Bag X17, Bellville 7535, Umnxeba: (021) 959-2283 / 2453, idilesi ye-imeyile: mflorence @ uwc.ac.za.

Ukuba unayo nayiphi na imibuzo ngokuphathelele nesi sifundo kwaye amalungelo akho nxaxheba koluphando, okanye ukuba ufuna ukuxela naziphi na iingxaki ozifumanileyo ezinxibelelene nesi sifundo, nceda uqhagamshelane:

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Olu phando luvunywe kwiYunivesithi Biomedical neKomiti yoPhando Lomntu eNtshona Koloni. (YEREFERENSI: elizakufakwa ekufunyanweni kwawo ukusuka BMREC)

5 July 2023

Att: Examinations Office

THESIS SUBMISSION: ZANDILE BATWENI (SN: 3570137)

This letter serves as proof that myself, Prof Maria Florence (main supervisor), have approved the final copy of Zandile Batweni's Masters thesis in the Department of Psychology. The thesis titled "Examining the factors associated with substance use during pregnancy in low Socio-Economic Status communities in the Western Cape Province, South Africa" has been thoroughly reviewed by myself and has been fully revised by Ms Batweni. It is now ready for submission to the appointed examiners.

Please contact me should you require any further information.

Sincerely,

Maria Florence

Supervisor: Department of Psychology