SEXUAL BEHAVIOURS AMONG YOUTH WITH DISABILITIES IN SOUTH AFRICA (2017): A CROSS-SECTIONAL ANALYSIS OF LEVELS, AND THE DEMOGRAPHIC AND SOCIOECONOMIC ASSOCIATED FACTORS.

BY

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A RESEARCH REPORT SUBMITTED TO THE SCHOOLS OF PUBLIC HEALTH AND SOCIAL SCIENCES, UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN HEALTH DEMOGRAPHY

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DECLARATION

I, **Sinenhlanhla Jessica Nkwanyana**, declare that this research report is my own work. All the secondary material have been acknowledged and referenced according to the American Psychological Association (APA) referencing style. This research paper is being submitted to the faculty of Humanities for a degree of Master of Arts in Demography and Population Studies at the University of the Witwatersrand, Johannesburg. To the best of my knowledge, it has not been submitted before in part or in full for any degree or examination at this or any other University.

[Signature of candidate]

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ABSTRACT

1. Background

Globally, in public health, there is much attention given to sexual and reproductive health (SRH) for people with disabilities. Sexual risk behaviours play an important role in SRH. They are major indicators of sexually transmitted infections such as Human immunodeficiency virus, among other negative sexual health outcomes. South Africa is no exception to this reality, the country accounts for the highest portion of the global HIV/AIDS epidemic, including individuals with HIV/AIDS and a high incidence of infection rates. Due to the high prevalence of HIV/AIDS, research has identified disabled persons to be at risk for HIV/AIDS. However, the sexual behaviours of disabled youths in South Africa remain a neglected area. Youths are recognised as the core of sustainable development, with great potential to eradicate poverty, and encourage good health and wellbeing, attain good quality education, and contribute positively to the economy.

2. Objective

The two set objectives of this study were; firstly, to examine levels of sexual behaviours by type of disability among disabled youth. Secondly, to identify the demographic and socioeconomic characteristics associated with sexual behaviours among youth with disabilities in South Africa in the year 2017.

3. Methodology:

This study utilized data from the fifth South African National HIV, Behaviour and Health Survey of 2017 – this was the latest survey available. The sample for the study was people with disabilities who were sexually active and aged 15-34 years. The selection of a sample of those aged 15-34 years was due to the availability of complete sexual history. It was also helpful for categorisation purposes. The weighted sample of 88.019 was selected for the study which comprised people with disabilities who are sexually active and aged 15-34 years. Descriptive and analytical analyses were conducted, including cross-tabulations and binary logistic regression model. These were used to examine the demographic and socio-economic associated factors and sexual behaviours between the most recent sexual partners of the sample. The survey asked the participants about their sexual history, including if they had ever had sex,

sexual activity in the past 12 months, age at first sex, condom use, and multiple sexual partnerships in the 12 months preceding the survey.

4. Results

The majority of the study sample had a physical disability (54%) and the least were those with a speech disability (2%). The rates of being sexually active in the past 12 months were lowest among those who were aged 15-19 (61 per 1000 disabled youth) and highest among 30-34 years old youth (354 per 1000 disabled youth). Having sexual intercourse below, the legal South African consent age was highest among aged 30-34 years (207 per 1000 disabled youth). Using a condom at last sex was highest among youth aged 25-29 years (175 per 1000 disabled youth) while having two or more sexual partners was highest among those who were aged 30-34 years (88 per 1000 disabled youth) and lowest among disabled youth aged 15-34 (0 per 1000 disabled youth). Youth with a mental disabilities had lesser odds of using a condom at last sex and having multiple sexual partners having multiple sexual partners. Disabled men had increased odds of using a condom at last sex and having two or more sexual partners, whilst disabled females were less likely to use a condom at last sex and were less likely to engage in multiple sexual partnerships in the past 12 months.

5. Conclusion

The hypothesis for this research was that there is no association between demographic and socio-economic factors and sexual behaviours among disabled youth in South Africa. The binary logistic regression indicated significant results. Therefore, the null hypothesis can be rejected and the alternative hypothesis that a possible relationship exists between demographic and socio-economic factors and sexual behaviours among youth with disabilities in South Africa can be accepted. Engaging in sexual intercourse is most likely among disabled youth with incorrect HIV knowledge. To ensure disability inclusiveness the disabled person's organizations need to ensure that youth's sexual behaviours are catered for in sexual health services, also in alignment with the National Strategic Plan 2017-2022 that aims for equal rights of a disabled person in sexual and reproductive health.

Keywords: Disability, youth, sexual behaviours, sexually transmitted infections, human immunodeficiency virus, and South Africa.

ACRONYMS AND ABBREVIATIONS

SSA	Sub-Saharan Africa
Stats SA	Statistics South Africa
HIV	Human Immunodeficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
WHO	World Health Organization
TPB	Theory of Planned Behaviour
SANAC	South African National AIDS Council
NYP	National Youth Policy
SDGs	Sustainable Development Goals
MDGs	Millennium Development Goals
CRPD	Convention on the Rights of Persons with Disabilities
UNCRPD	United Nations Conventions on the Rights of Persons living with disabilities
SABSSM	South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey
DHAT	Disability and HIV and AIDs Trust
HSRC	Human Sciences Research Council
WHO	World Health Organisation
NSP	The National Strategic Plan
SALs	Small area layers
SRH	Sexual and reproductive health

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CHAPTER 1: INTRODUCTION

1.1. Background

Youth is defined using their age, and the definition varies in different contexts and policies. According to the United Nations (2018), youth are people aged 15-24 years. The African Union classify young people aged 15-35 years form as part of the youth population, similar to African nations classification of the youth (African Union, 2006). The South African National Youth Policy (NYP) classifies adolescents and young people as every person aged 14-35 years (Presidency, 2015). According to the World Health Organization (2011), disabled persons account for almost 15% in respect to the total world population. In South Africa, there are 1,567,833 that is 19.6% disabled persons in the 15-34 age category of the total population (Statistics South Africa, 2016).

Globally, research demonstrates that since recent decades risky sexual behaviors have been a prominent public health issue and concern(Ferguson, 2017). In the Sub-Saharan Africa region (SSA), sexual and reproductive health concerns have been driven by ongoing incidences of sexually transmitted infections (STIs) such as HIV and AIDs infection amongst the younger population (Odimegwu et al., 2019a). Research has highlighted that South Africa can be compared to other societies that have a high frequency of sexually transmitted infections with new incidences and prevalence of STIs(Mudau et al., 2018). This behaviour is observed through high risky sexual practices that are common among young people, but not limited to multiple sexual partnerships, early sexual initiation, and inconsistent condom use (Tenkorang et al., 2011).

Previous studies have provided evidence of the participation of disabled young people in sexual activities (Jemtå et al., 2008; Umoren & Adejumo, 2014; Wienholz et al., 2016). The sexual health of both disabled males and females remains a neglected area. However, until recent times concerns regarding the sexuality and reproductive health rights of disabled people have been seen as a cause for concern through empirical research on disability and sexuality. This has been highlighted through the 2006 United Nations Conventions on the Rights of Persons living with disabilities (UNCRPD). Subsequently, WHO 2011 has also been identified through the World Report on Disability (World Health Organization, 2011). The exclusion of disabled people in sexual health services is attributed to attitudinal issues from health professionals that perceive them as asexual, or physical barriers including inaccessible health facilities.

Furthermore, the stigmatization and stereotypes from the community at large that assume disabled persons lack sexuality (Kim, 2011).

In Africa, there is a great unmet need for HIV and sexuality education for individuals living with disabilities(de Reus et al., 2015). Subsequently, the lack of sexuality education material that is tailored towards the specific needs of disabled youth is associated with unsafe sexual behaviours in South Africa(Gibbs et al., 2017).

Despite several studies conducted on the sexual risk behaviours among youth, relatively little is known about the interplay between demographic and socioeconomic associated factors and the sexual behaviours of disabled youth throughout South Africa (Bajos et al., 2010; Manyaapelo et al., 2019; Voon et al., 2014). Additionally, understanding demographic and socioeconomic associated factors with sexual behaviours among disabled youth has significant implications for theory, policy formulation and implementation, and practice in South Africa. Engaging in sexual behaviour is a normative behaviour among the youth, however developing healthy sexuality is an important aspect of youth development (Tolman & McClelland, 2011).

The HIV and AIDS and Strategic Plan for South Africa 2007-2011 has advocated for the rights of people that have any form of impairments to have equivalent access to HIV/AIDS prevention utilities as the general population. Evidence-based research on the commonness of HIV/AIDSAIDS indicated that the infection rates among disabled persons are high and similar to the nondisabled population, with a prevalence of 14.1% among disabled persons and 10.9% among the general population (Rohleder et al., 2012a). Numerous studies have reported that disabled persons engage regularly in HIV risk sexual behaviour, including involvement in transactional sex, and have increased vulnerability to sexual violence(Laganovska & Kviese, 2021; Mudau et al., 2018; Rohleder et al., 2020).

Most of the studies on sexual behaviours among youth do not include youth living with disabilities(Adedini et al., 2021; Owan et al., 2020; Khumalo et al., 2020). Generally, it is often assumed that young disabled people are celibate, or due to being marginalized are unable to select sexual partners (Rembis, 2017). Societal and parental perceptions contribute to views held about young disabled people. Acceptance of youth with disabilities as sexual beings is documented to have mixed messages from teachers, parents, and the community(Sharma & Sivakami, 2021). Although others believe in the right of disabled people to express their sexuality, on other hand, there are fears about inappropriate sexual behaviour and concerns

regarding their vulnerability. However, one can see from prior literature that disabled youth are sexual beings and therefore are also vulnerable to HIV/AIDS (Pilusa & Skaal, 2015).

According to Statistics South Africa (2016), there are adolescents that report engaging in early sexual debut younger than 16 with approximately 16,2% of 5618 young women and 26.7% of 2189 of young men. Additionally, the South African Department of Basic Education emphasis that young people are more likely to experience sexual violence prior the age of 17, with higher chances of the HIV/AIDs infection(Miedema et al., 2020). Prior research has found that youth living with severe disabilities, such as being entirely blind enhances chances of being raped and sexually exploited due to the limitations caused by their impairment.

In relation to age of consent, a 16 year old can consent to sexual intercourse in South Africa, however proving consent in the court of law can be difficult particularly among youth with mild intellectual disabilities as a result of impairments in cognition and memory(Ubisi, 2021).

Therefore, living in a society where getting the proper medical care is a commercial privilege for a selected few. Even to the detriment of those who may lack equal opportunities with those who afford medical support. People living with disabilities are in a disadvantaged position in attainting the sexual health due to myths that persist of being considered as asexual beings. This reflects that sexual behaviours of disabled people are important in attempts to curb the spread of the disease by bringing attention to certain population groups in South Africa that are at risk of spreading the disease.

1.2. Problem Statement

Globally, sexual risk behaviours among youth have been the core of public health concerns in recent decades and are seen through empirical research in the area (Littlejohn et al., 2019). The sexual and reproductive health challenges have significant consequences leading to death, disability, and diseases among young people worldwide this is especially true in Africa (Patton et al., 2017). However, the sexual health of men and women alike living with disabilities remains a neglected area as emphasized in the World Report on Disability as a concern (WHO,2011).

The rates of sexually transmitted infections are profoundly pronounced amongst young adults worldwide and South Africa is no exception. In South Africa, Sexually transmitted diseases are particularly high among the youth (15-24 years old), with a weighted prevalence of STDs and bacterial vaginosis at 5.3% and chlamydia at 11.2% while herpes simplex virus is 17% in

males and 29% in females (Francis et al., 2018). The increase in STDs among this young population can be associated with the transmission of HIV infection and, a lack of knowledge of sexual health (Nguyen et al., 2019). Furthermore, teenage pregnancy is also high with more than 30% of teenagers reporting ever been pregnant (Willan, 2013). Efforts targeted at lessening the HIV and AIDS burden are hindered due to the continued behavioural practices, as the health risk behaviours are associated with sexual risk behaviours (Ankunda et al., 2016). Further delay in tackling the burden of disease of HIV/AIDS which is exacerbated by unsafe sexual behaviours can have dire implications in the health care system and result in youth mortality (Hsu et al., 2018). The behaviours that are adopted in the early stages of life can continue into adulthood. Sexually transmitted infections are particularly important because they most often go undetected, moreover if they are untreated, they lead to complications such as ectopic pregnancy, infertility, and other STIs include several cancers such as those of the cervix, anus, and penis (Muchimba, 2019).

In addition, literature has revealed that the social constructions of disabled people are underlying determinants of their exclusion in sexual and, reproductive health education(McLaughlin, 2020). Youth living with disabilities are perceived to be asexual and lack the sense of agency, to practice and engage in safe sexual intercourse practices and have healthy intimate relationships (McCann et al., 2019) Parents of youth with disabilities hold a similar perception, In South Africa, the parents of youth that are disabled, are not open for sexual discussions because of the belief that they are not sexually active and to avoid to be seen as encouraging the behaviour (Chappell, 2016). The lack of sexuality knowledge from parents, teachers and seldom sexual and reproductive interventions that target young disabled people can lead to the disabled engaging in unprotected sexual intercourse because of the lack of adequate knowledge(Tamas et al., 2019). This could also result in unplanned pregnancies from early sexual behaviors that could have substantial consequences on the well-being and health of the youth(Hultstrand et al., 2019).

Studies about the health discrepancies that are faced by people with disabilities have been done. An example of this is the low HIV/AIDS testing among disabled people than the general public, has been attributed to the barriers such as health facilities do not accommodate persons with physical impairments as ramps are important for wheelchair users. There are no sign language interpreters to convey important messages, unfriendly services, and discrimination (Jones et al., 2018; Swartz & Bantjes, 2016). Access is important, individuals with a disability are impacted differently by health access barriers given their type of disability and severity.

Individuals that are disabled have an equal or an even greater exposure to common risk factors for HIV/AIDS infection (Katuta, 2011a). Due to the complications as a result of STIs, and to gain insight on the effectiveness of prevention, it is important to know about the sexual risk behaviors that can lead to the onset of diseases and potentially other added health complications. Previous research in South Africa has reported that behaviours that are developed in the adolescent phases are the main predictors of the burden of disease in adulthood (Gauge, 2015a).

The HIV and AIDS awareness programs in South Africa such as loveLife, Soul City, and khomanani have various degrees of efficacy and research has documented that they are progressive in yielding a substantial increase in condom uptake among individuals aged 15-30 years, However, the exclusion of disabled persons is still prevalent, Watermeyer et al. (2006) argued and also critiqued the effectiveness of the loveLife programs in terms of excluding disabled persons. Most of the HIV/AIDS education programs in Africa are directed towards non-disabled youths(Catalano et al., 2019).

Most of the studies on sexual behaviours among youth do not include youth with disabilities(Chawla & Sarkar, 2019; Jacka et al., 2019; Wadham et al., 2019). Generally, the assumption is that youth with disabilities are celibate, or due to being marginalized are unable to select sexual partners (Rembis, 2017). However, some studies have sexual activity is common among disabled people that are likely to participate in risky sexual behaviours (Davis et al., 2016; Kelly & Kapperman, 2012). But none of these studies have been done in South Africa and none have looked at sexual behaviours by the type of disability.

1.3. Justification

Youth in South Africa is relatively young and forms part of developmental human resources. Furthermore, they play an integral part in social change, economic expansion, and innovation (Gauge, 2015b). This study focuses on disabled youths as they form the majority of young people living in South Africa and have great potential to adopt healthy sexual behaviours irrespective of their impairments, understanding the association of demographic and socioeconomic factors associated with sexual behaviour can assist in establishing a healthy transition into adulthood. The sexual behavior of disabled youth determines the rate that the HIV infection can spread in the African population(Luseno et al., 2021). Thus for the prevention of other HIV infections and incidences, the sexual behavior of disabled young people is specifically paramount(Schaafsma et al., 2017).

Specifically, focusing on the demographic and socioeconomic associated factors and sexual behaviours has placed the study as a paradigm shift from the general assumptions of disabled youth as asexual and also encourages inclusiveness of disabled youth in sexual health research(Taylor et al., 2017). This study also extends to the body of literature and research that has been done focused on disability and sexuality in South Africa by examining demographic and socioeconomic factors associated with the sexual behaviours of disabled youth. Furthermore, the study is in accordance with the South African National HIV Prevalence, Incidence, Behaviour, and Communication Survey 2017, wherein behavioural determinants of HIV include sexual initiation, multiple sexual partners, and condom utilization. This, therefore, supports the appropriateness of the variables used in the analysis to measure sexual behaviour among disabled youth.

In South Africa, disability is a human rights issue and the inclusion of persons with disabilities is of paramount importance. The constitution of South Africa specifies disability as one of the grounds on which no discrimination should take place (Visagie & Swartz, 2018). There is a lack of knowledge on the sexual behaviours of youth with disabilities in South Africa.

Resultantly, there remains a need for HIV/AIDs Knowledge, sexual and reproductive healthcare among individuals that are disabled(Nguyen et al., 2019). Contrary, available evidence suggests that similar to non-disabled and general public, disabled youth engage in risky sexual behaviours (Chappell, 2013). Therefore, youth with a disability remains more vulnerable to HIV/AIDS infection due partly to being less catered for in health care facilities, stigmatisation, discrimination, and illiteracy about sexual health knowledge(Eremutha & Gabriel, 2019).

Literature that exists on HIV/AIDS and people living with disabilities is mostly focused on those with mental health disabilities. However, research must examine sexual behaviours and the risk of HIV holistically and with the different disability types (Emerson et al., 2010; Wilson et al., 2009). Additionally, South African parents' reluctance to discuss sexuality with their disabled children demonstrates that they perceive their children as unable to exercise sexual agency.

Such perceptions from parents – also prevalent in disabled youth's non-disabled peers – perpetuate the common disregard to acknowledge the sexual agency of young persons living with disabilities(Menon & Sivakami, 2019). Youth with disabilities share similar dynamics as non-disabled people. In particular, humans are sexual beings, and engaging in sexual

intercourse is normal behaviour, as a result, the mindset and practices of disabled persons are not different from individuals that are not disabled (Esmail et al., 2010). Therefore, disabled young people are not excluded from having unprotected sex. A study indicated that youth with disabilities exhibit rates of risky behaviour that are equal to or higher than their peers who are non-disabled or ill (Duerden et al., 2012).

Understanding the sexual behaviours of disabled youth can help to provide efforts in mitigating the risk behaviours and encourage responsible lives among the youth. Specifically, there is a need to intensify the current South African HIV/AIDs prevention efforts aimed at disabled people. These include the Disability and HIV and AIDs Trust (DHAT) organisations which aimed at addressing challenges that disabled persons encounter about HIV (Izarali, 2019), as well as other training projects such as Breaking the Silence and Closing the Gap that intends to impart knowledge and from structures that include disabled persons in HIV/AIDS planning and strategies, including healthcare workers and service management (Hanass-Hancock et al., 2015). The current study will provide findings that will contribute to identifying the demographic and socioeconomic factors associated with sexual behaviours among youth with disabilities. Therefore, the results of the study will also assist in informing policy interventions geared towards contextualising disabled youth sexual behaviours within a South African context.

This study is in alignment, with the global awareness of disability-inclusive development that is gaining prominence. The pledge of, "no one is left behind" is the main agenda of the United Nations Sustainable Development Goal 3 (SDG3), aimed at the promotion of healthy human beings and wellness in all ages (WHO, 2018). The study also aligns with policies such as the South African National Youth Policy (2015) to focus on the health of young people including through youth development initiatives without discriminating on their disability in South Africa. This will result in empowerment and enhance development. The promotion of reproductive sexual health rights among youth is stated in section 7.3.2 in the policy (National Youth Policy, 2015).

The HIV and AIDS and STI Strategic Plan for South Africa 2017-2022 seeks to include the rights of individuals with disabilities in fair HIV prevention strategies (SANAC, 2017). The fourth objective included under the NSP (2017) includes implementing social behavioural transformation programmes that are fundamental in bringing change in the prevalence of the epidemic and encourage social cohesion.

Although the millennium development goals (MDGs) were progressive in achieving the control of HIV/AIDS, the time-lapse of the MDGs without significant mitigation of the disease indicates a need for further empirical research, predominantly in South Africa. Thus, the importance of increased attention to the sexual behaviours of disabled youth is essential in attempts to the risk of HIV. Furthermore, the National Adolescent and Youth Policy (2017) aims for comprehensive reproduction and sexual health and the rights of youth with disabilities. Likewise, significant evaluation of the HIV/AIDs pandemic in South Africa, require establishing the demographic and, socioeconomic associated factors concerning sexual behaviours will inform the above-mentioned Youth policies and programs that seek to encourage healthy outcomes and livelihoods of youths. This study is also aligned with the National Agenda for Research priorities in heath.

1.4. Main research question

What are the levels of demographic and socioeconomic factors associated with sexual behaviours among youth with disabilities aged between 15 and 34 years in South Africa in 2017?

1.4.1. Sub-Questions

a. What are the sexual behaviours of youth by type of disability in South Africa in 2017?
b. What are the demographic and socioeconomic characteristics associated with sexual behaviour among disabled youths in South Africa in 2017?

1.5. Main research objective

To identify the levels of, and demographic and socioeconomic factors associated with sexual behaviours among youths (15-34) with disabilities in South Africa in 2017.

1.5.1. Sub-objectives

a. To examine the levels of sexual behaviours among youth by type of disability in South Africa in 2017.
b. To identify the demographic and socioeconomic characteristics associated with sexual behaviours among youth with disabilities in South Africa in 2017.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Introduction

Previous studies have indicated young people are involved in various risky sexual behaviours such as; engaging in sexual intercourse with multiple sexual partners and, unintended sexual engagements, sexually activities at young ages and exchanging money for sex and, mostly engaging in unprotected sexual intercourse (Okunlola et al., 2020; Tarkang et al., 2019). Disabled Youth Sexual Behaviours: A global overview

Globally, there is approximately 180 million young people between the ages of 10-24 that live with a physical, sensory, intellectual, or mental health disability that is substantial enough to influence their daily lives. Many of these young people reside in low-income countries with little to no access to sexual reproductive health services(Obasi et al., 2019). Literature cites many reasons for the continuation of inappropriate sexual behaviours among persons living with disabilities. These reasons include the absence or inadequate knowledge and skills of appropriate sexual behaviour among people with disabilities (Maart & Jelsma, 2010; Oladunni, 2012). Resultantly, research has reported that harmful sexual behaviours are common in adolescents with intellectual disabilities (Banks, 2014). In 2012, 54% of physically disabled adolescents had engaged in sexual intercourse by the time they reached 15 years of age, and this is therefore classified as early sexual debut (Oladunni, 2012b).

In many instances, the sexual practices of disabled individuals are surrounded by fear and anxiety. According to McKenzie (2013) claims that the difficulties on sexuality endured by people that have disabilities, there is a sense of affirmation and acceptance that they develop in their sexual expression. Thus, sexual intercourse for disabled persons is more than just an activity, however, it is a self-esteem booster. Globally, studies have documented that disabled females continue to be faced with a plethora of challenges on access to sexual and reproductive health services (Boezaarf, 2012;Agaronnik et al., 2020; Mac-Seing et al., 2020)). Both developed and in developing countries, the violation of sexual rights of disabled women, and myths that disabled women cannot participate in sexual and reproductive activities continue to exist (Rohleder et al., 2009; World Health Organization, 2009). Research has highlighted that the sexual rights of disabled women are hindered by negative attitudes of family, communities, vicious religious and cultural practices (Rugoho & Maphosa, 2015). Moreover, persons living

with disabilities are regarded as second-class citizens (Rugoho & Siziba, 2014). These research findings reveal that the needs of persons with disabilities still need prioritisation.

Applying a systematic review approach, a study conducted in the United States that focused on attitudes towards sexual behavior found that attitudes towards sexual intercourse for physically disabled women were similar to attitudes towards non-disabled women. However, among individuals with intellectual disabilities, there was negative attitudes associated with sexual intercourse with a common belief that individuals that had intellectual disabilities should have sexual engagements with other intellectually disabled people(Pebdani & Tashjian, 2021). In relation to sexual behavior and sexual health outcomes among people with and without limiting disability in Britain, a study found that young adults with disabilities had the same sexual behaviour as young non-disabled adults and have higher chances of experiencing adverse sexual health outcomes, this is particularly pronounced for women. In addition, women with limiting disabilities were significantly more likely to have experienced sexual intercourse against their free will, STI diagnosis, an earlier age at first sex while using unreliable contraception(Holdsworth et al., 2018).

A study conducted by Chikumbu (2014) in Zimbabwe, found that disabled people are not anticipated to be engaging in sexual activities. Another study conducted in Zimbabwe, the findings revealed that women with disabilities are commonly perceived as more passive and readily available to submit to male dominance based on disability(Peta et al., 2017). Furthermore, the authors the argued that the traditional conceptualisation of disability has connotations such as witchcraft and evil spirits associated to it and leads to men being hesitant in marrying women with disabilities.

While in African communities, research by Rugoho and Maphosa (2015) indicated that, persons living with disabilities are consisted as hypersexual. Therefore, engaging in sexual and reproductive issues could trigger their sexual feelings, however, disabled persons would lack the ability to contain their sexual desires. In addition, using a qualitative study method through face-to-face semi-structured interviews among twenty-five women with multiple sclerosis found that sexual activity is restricted and has negative impact on their sexual lives(Dehghan-Nayeri et al., 2018). More recently, a study among visually impaired women in Ghana found that impaired young teenagers usually engage in pre-marital sex with no sufficient knowledge to prevent unplanned pregnancies or STIs and therefore results in unwanted pregnancies and not completing school(Abdul Karimu, 2017).

Another research showed that youths with disabilities have an equal or higher risk of engaging in unsafe sexual behaviours and practices, compared to non-disabled adolescents (Oladunni, 2012b). A study conducted on Portuguese men and women with different physical disabilities found that concerning sexual behaviours, kissing, touching, and cuddling including oral sexual intercourse were the most regularly reported sexual activities (Pereira, 2020). This means that physically disabled persons were less likely to engage in sexual activity that involved penetration and also have a higher likelihood of not having sex at all. The study further revealed that people with disabilities who reported not having sex attributed their reason to the absence or lack of the opportunity to have a sexual partner (Pereira, 2020).

Evidence from a study done by Odimegwu et al. (2019) in the Sub-Saharan region, found that youth that are practicing positive sexual behaviours within the same surroundings as youths that practice unsafe sexual behaviours. These results are similar to research conducted by Asubiaro and Fatusi (2014) in observation that that religion and HIV knowledge are seen as protective factors as opposed to early sexual debut at an individual level among young women in Nigeria. Of particular note, protective factors discourage one or more behaviours which could result in negative health outcomes such as engaging in sex with multiple partners. Protective factors also promote behaviours that may eliminate negative health outcomes such as condom use and other contraceptive methods. Similarly, a study conducted by Widman et al. (2016) found that parent's openness to communicate with their adolescent children had a positive response to encouraging safer sex practices, and this was most pronounced for younger females. In addition, the structure of families and socioeconomic influences can lead to positive sexual practices.

2.2. Factors contributing to sexual behaviours among disabled youth:

Research has reported that the behavioral patterns within sexual relationships have an integral role concerning the transmission of HIV/AIDS and STIs (Dimbuene et al., 2014; Wilson et al., 2017). The sexual behaviours of individuals are not solely dependent on their choices and circumstances. However, it is ascertained at the aggregate level (social environment) indicators by which an individual is exposed (Swaziland. Central Statistical Office & Macro International. MEASURE/DHS (Programme), 2008). In South Africa, research has highlighted that youths that have early sexual debut are likely to have more lifetime sexual partners (Zuma et al., 2010). Consequently, engaging in sexual intercourse at younger ages exposes individuals to various unhealthy outcomes such as STIs and HIV (Hallett et al., 2007).

Previous research indicated that disabled young people are associated with decreased levels of sex education and reproductive health knowledge(Toft & Franklin, 2020). This could explain why other research findings showed that disabled females also have the lowest levels of sexual knowledge(McGilloway et al., 2020). The level of knowledge can vary by the severity of the disability; some studies have shown that teachers sometimes, detrimentally, decide if a young person with an intellectual disability would benefit from getting sexual education or vice versa(Jernbro et al., 2020; Sala et al., 2019; Streur et al., 2019).

This deprives young people with disabilities to learn about sexual health at an early age. To address this gap, The findings of a research argued how sexual education awareness is conveyed is most important than the disability itself (Barnard-Brak et al., 2014). Therefore, difficulties that involve understanding sexual education messages among young people with intellectual disabilities can be attributed to the way such messages are communicated and delivered to them (Finlay et al., 2015; Tanabe et al., 2015). Furthermore, HIV testing, and Counselling (HTC) services are not physically accommodative and do not offer counselling by the use of sign language. Conveying important message on HIV/AIDs that are complex and vague cannot be adequately understood by intellectually impaired person. The author further argued that physically handicapped people usually depend on their partners to put on the condom(Nduta et al., 2010).

Several studies have shown the disapproval of some families to the provision of, sexual education to disabled children, which considered as misusing resources and is fueled by societal perceptions that if an individual is disabled, they are incompetent and have no valuable contribution to the community (Gavu et al., 2015; Kassah et al., 2014; Opoku et al., 2018). Hence, the perception has led to the exclusion of physically disabled persons in educational settings. Contributing to the barriers to accessing education by people with disabilities is the friendliness of educational institutions. Although the Disability Act advocates that all public buildings be accessible; many educational infrastructures remain unreachable. Some institutions still lack ramps, including in lecture halls (Mfoafo-M'Carthy et al., 2020), thus indicating that physical accessibility is still a problem for people with physical disabilities (Gregorius, 2016). Notably, Joshi and Chauhan (2011) posit that unsafe sexual intercourse is the second most imperative risk factor in terms of disability and fatality in the world's poorest communities.

Moreover, research by Andersson (2010) in Tanzania found that among people that are disabled and who engage in sexual activities, a considerable proportion is involved in great risk activities such as having sex with many sexual partners accompanied with inconsistent or no condom use. In addition, research conducted in Nigeria found that 29% of disabled youth engaged in sex with multiple sexual partners (Oladunni, 2012c). This clearly illustrates the magnitude of people with disabilities engaging in a sexual relationship with multiple sexual partners. However, a research has shown that multiple sexual partners could be by consensus or coercion, and this can be an underlying determinant for the risk of contracting STIs (Enwereji & Enwereji, 2008).

2.3. South African disabled youth and their sexual behaviours

A quantitative study conducted on South African physically disabled learners in Cape town found that 24.2% of the respondents indicated to be sexually active, there was a quarter of disabled adolescents in the study in grade 8 and 9 indicating 21% and 32%, respectively (Maart & Jelsma, 2010). In addition, the study found that most of the respondents were having high-risk sexual behaviours at the beginning of their sexual activity, for example, having sex with no condom and, substance abuse with sexual activity (Maart & Jelsma, 2010). Some of the participants acknowledged they had equal chances of acquiring HIV.

Research has previously demonstrated evidence that people that are disabled encounter frequent socioeconomic inequalities compared to their non-disabled peers, in high and low resource settings. The socioeconomic inequalities disabled people are subjected to include a higher rate of poverty, reduced level of education, and a higher rate of unemployment (Braithwaite & Mont, 2009; Emerson et al., 2014; World Health Organization, 2019). These social disparities are solid determining factors of health inequalities, such as limited access to health services and poor health(Friedman, 2020).

Rohleder and Swartz (2009) found that educators of disabled youth were not against teaching sexual health education for youth with disabilities and also not opposed to them having profound sexual relationships. Nevertheless, they had concerns that if they distributed condoms to young people it would lead to high-risk sexual behaviour. Moreover, Collins (2006) reported that clinicians who work within mental health institutions would give condoms to patients that they considered already sexually active or had an STI. However, they did not give condoms to the patients who were regarded as too ill to use them, and they did not want to encourage them to be sexually active.

A study conducted in Ghana on visually disabled youths found that youths commonly engaged in pre-marital sexual intercourse (Karimu, 2017). But they lacked suitable knowledge that is essential in attempts for avoiding unplanned pregnancies or sexually transmitted infections. This led to unintended pregnancies and dropping out of school.

Research has documented that by the time young people with disabilities enter adolescence they are most likely to be highly illiterate, resulting in limited opportunities for additional education, employment, and income generation (Kassa et al., 2016). A study conducted in South Africa among deaf and hard of hearing adolescents indicated that schools had no written policy on condom use, furthermore, the educators held diverse perceptions regarding the issue; some perceived condoms as a good demonstration of safe sexual practice for deaf people while others thought of it as an encouragement to engage in premature sexual activity (Mall & Swartz, 2014). These findings are consistent with another study on educators of disabled learners in South Africa, which observed that the subject of condoms is controversial. Educators expressed teaching the message of condomising to learners, however, in some instances demonstrations and provision of condoms provoked learners to have sex (de Reus et al., 2015). These findings showed that although the teaching of condoms in schools can be informative, it can also influence certain unfavorable behaviours among learners living with disabilities. Following a qualitative approach and in-depth interviews, a study conducted in Ghana found a low prevalence of condom use as a way of preventing STIs among the physically disabled community (Akwasi et al., 2020).A study in Nigeria found a substantially proportional HIV prevalence and lower usage of condoms between rural residents than urban residents, and there was an association with low HIV comprehensive knowledge among persons with disabilities (Aderemi et al., 2013).

There is a possibility that disabled persons might be having multiple sexual partners due to exposure to sexual activities. According to Katuta(2011b) disabled females have a higher likelihood of having more sexual partners than their non-disabled peers. The author further argued that poverty and the social sanctions experienced by disabled people make them more exposed to a series of unstable intimate relationships. Research conducted in South Africa among Zulu speaking young men and disabled women established that heterosexual relationships are a underlying determinant for gender roles, women are given subordinate roles under the headship of men, whom the women are required to sexually satisfy, bear them children, on the other hand accepting the superiority, dominance and violence at the hands of the same men(Chappell, 2017).

In South Africa, women living with disabilities symbolise the idea of a dependent women, they are considered as incapable of achieving feminine norms of attractiveness, giving sexual pleasure or parenthood. It is therefore common that women with disabilities are mostly vulnerable to discrimination, emotional, physical and sexual exploitation(Chappell, 2015). In addition, Research has indicated that South Africa is a patriarchal society whereby women are regularly disadvantaged and subjugated, and this is perpetuated by the social inequalities that persist and experienced by physically disabled women(Albertyn, 2009). Furthermore, the social representations and myths fuel the stigmatization among physically disabled women and therefore creates barriers for women to be in meaningful and unbiased sexual relationships(Hunt et al., 2021).

In addition, South African young adults with mild disabilities are not immune to sexual violence, however such incidences are concealed by some special schools, while maintaining that open conversations would lead to withdrawal of financial aid or the government dismal of special schools(Phasha & Nyokangi, 2012).

The review of South African literature on disabled youth attests to what Hanass-Hancock, (2009b) indicated in their study, that there is little information on sexual behaviours and their correlates among disabled youths in South Africa. This has created a gap for a study that will examined the demographic, socioeconomic factors, and sexual behaviours of disabled youth in South Africa. A gap the current study aims to address.

2.4. Deficiencies in Literature

International literature has examined sexual behaviours of disabled people and has shown that disabled people are sexual beings that participate in sexual activity that is unsafe and increases their risks for HIV. A large portion of what is known on individuals that have disabilities in South Africa is focused on knowledge, attitudes, and behaviour among persons with disabilities. Most studies available are also geared towards HIV status and the sexual experience of disabled people. Furthermore, other studies have looked at the sexual behaviours of disabled youth compared to those without disability. The above-mentioned studies have looked at disability holistically, or even focused on one disability using qualitative methods and small sample sizes. However, given the high prevalence of the HIV epidemic, and disabled persons living with HIV, little is known in terms of demographic and socioeconomic factors associated with their sexual behaviours. It is essential to look beyond the lack of sexuality education and HIV knowledge with sexual behaviours of disabled youth, by so doing it

overlooks other demographic and economic dimensions associated with behaviour. Therefore, this study will examine the demographic and socioeconomic factors and the association with sexual behaviours among disabled youths in South Africa.

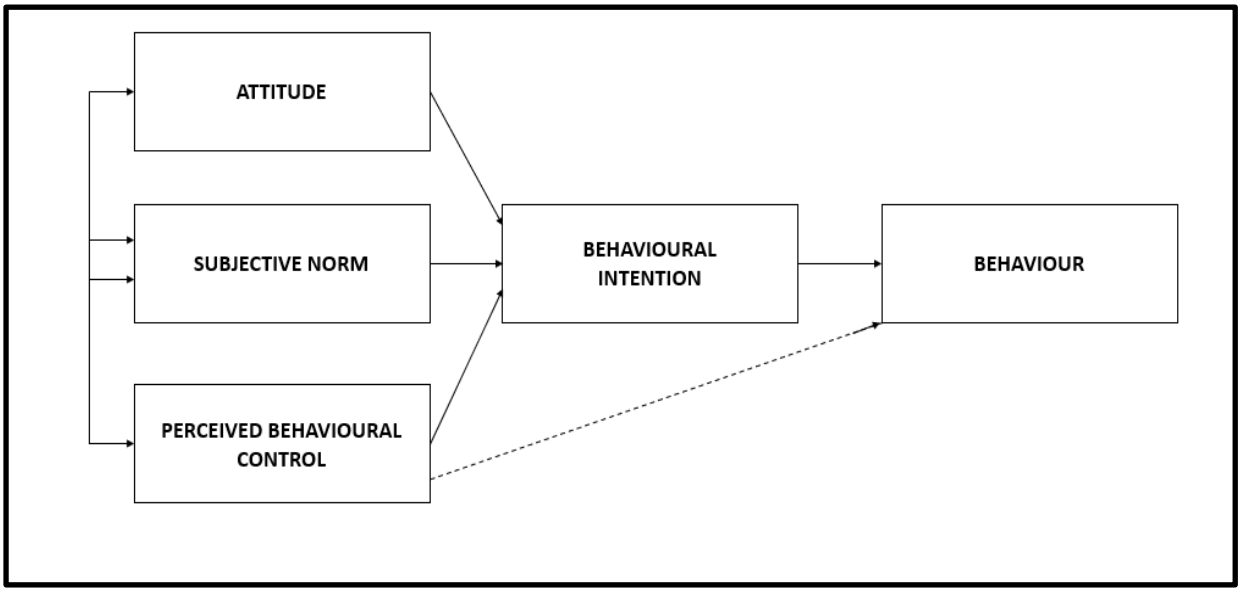
Despite the wealth of research that investigates and seeks to understand sexual risk behaviours among young people, there remains limited research investigating the sexual behaviours of young people with disabilities in South Africa(Eremutha & Gabriel, 2019).

2.5. Theoretical and conceptual framework

The theoretical framework underpinning this study is the theory of Planned Behaviour (TPB), established by Icek Ajzen in 1985 to predict an individual's intention to engage in a behaviour at a specific time and place (Ajzen, 1991a). It highlights the behaviours that people can exert self-control. The theory posits that behavioural intention of an individual implies the extent to which people are willing and their determination, for them to perform the behaviour. The key component in the model are behavioural intentions determined by attitudes, subjective norms, and perceived behavioural control. According to the theory, the behavioural achievement is influenced by motivation (intention) and ability (behavioural control).

Ajzen (1991) articulates that the relative influence of the attitudes, subjective norms, and perceived behavioural control on the prediction of the behaviour, should be based on the behaviour in question and population of interest. In an instance where the attitudes or the normative pressures are stronger than the perceived behaviour; the behaviour might not be predicted. If an individual has a strong intention to engage in a behaviour, they have greater chances to engage in it, given that it is within their control. The theory has also been used in various fields to predict goal-driven behaviours including; to examine health behaviours such as smoking, alcohol consumption, health service utilization, breastfeeding, and use of substances (McEachan et al., 2011). In line with this theory, the current study hypothesised that knowledge, subjective norms, and the perceived behavioural control might predict the sexual behaviours of disabled youth in South Africa. The framework is shown below:

Figure 1: The theory of planned behaviour theoretical framework by (Ajzen, 1991).



2.6. Conceptual framework for the study

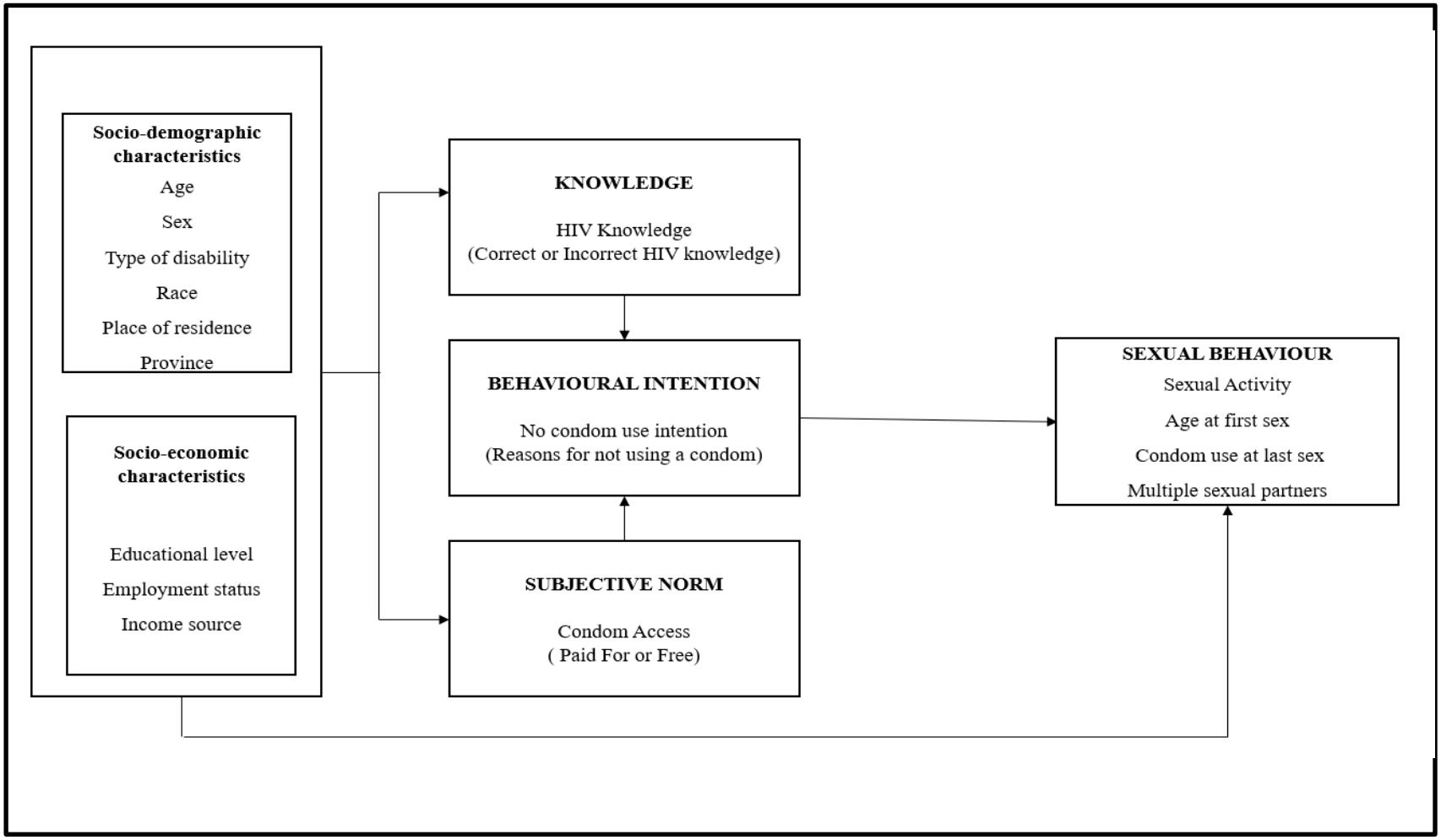


Figure 2: Conceptual framework adapted from Ajzen (1991).

The conceptual framework used in this study is as shown in figure 2, above. The conceptual framework was adapted from the theory of planned behaviour. As discussed above, the theory of planned behaviour articulates that the behaviours of individuals are thoughtful, they consider the consequences of their actions before they decide to engage or not in a certain behaviour. The conceptual framework explores the; demographic and socioeconomic factors, knowledge, behavioural intention, and subjective norm and its influence on sexual behaviours.

The conceptual framework used in this study notes that demographic and socioeconomic factors could operate directly to influence each of the four specific sexual behaviour which are sexual activity, age first sex, condom use, and multiple sexual partnerships. The socio-demographic and socioeconomic factors could influence the three sexual behaviours that disabled you engaged in depending on their background. However, these factors can operate through other mediating factors to influence sexual behaviour. For this study, socio-demographic and socioeconomic factors are seen operating through knowledge of HIV and subjective norm to influence sexual behaviours. The study added a component to the conceptual framework which is HIV knowledge to examine the influence it has on sexual behaviour. Both HIV knowledge and subjective norms influence behavioural intention and ultimately influences sexual behaviours. This study assumed that an individual's HIV knowledge could determine no-condom-use intention, and subjective norms such as condom access determines behavioural intentions that also influence sexual behaviour. The study aims to explored the association between demographic and socioeconomic factors and sexual behaviours among disabled youth in South Africa.

CHAPTER 3: METHODOLOGY

3.1. Introduction

This chapter presented an overview of the study area, sources of data, and methods that were used in this study, to examine sexual behaviours among South African disabled youth. The chapter also outlines data management, data analysis, and this study's limitations.

3.2. Description of Study Area

South Africa was selected as the country of interest for this study. The country is located at the bottommost of the African continent. The neighbouring countries include Botswana, Lesotho, Mozambique, Namibia, Swaziland, and Zimbabwe. In 2020, the mid-year population of South Africa was estimated to be 59,62 million people distributed among the country's nine provinces (Statistics South Africa,2020). Below is the map of South Africa:

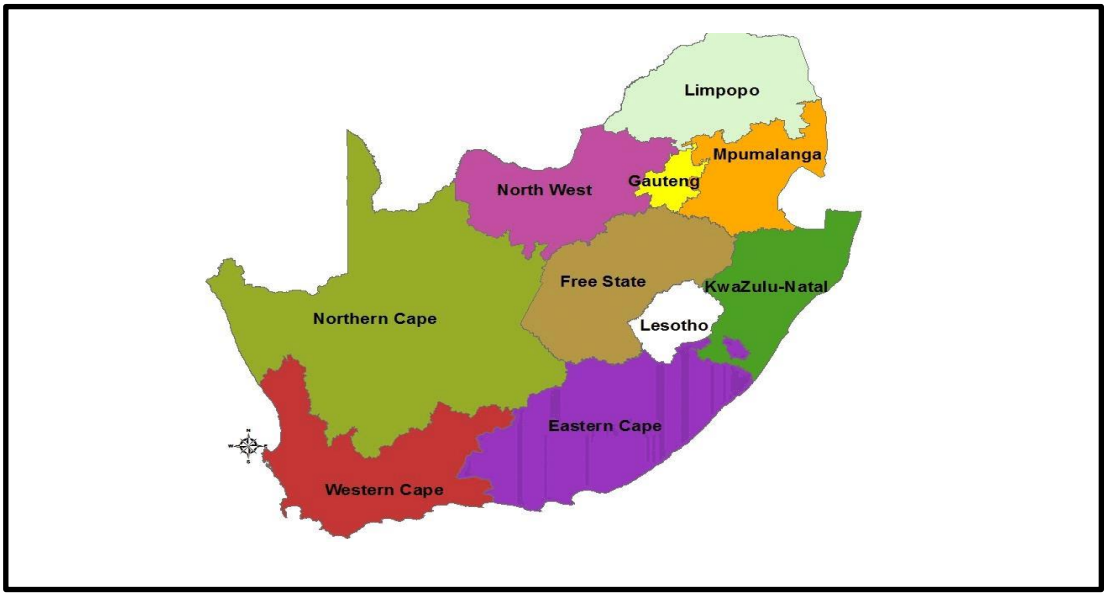


Figure 3: South African map [Source: Statistics South Africa (2011)]

3.3. Data Source

This study utilized secondary data obtained from; the 2017 South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey (SABSSM), questionnaire 4 of individuals aged 15 years and older, conducted by the Human Sciences Research Council (HSRC) since 2002. This 2017 survey is the fifth of the series of the national HIV household survey that is directed by the Human Sciences Research Council (Simbayi et al., 2019). The SABSSM is a national representative survey that includes people of different ages, as well as people residing in South Africa, including infants aged two years and younger. The 2017 survey used a new HSRC master sample. The master sample enables repeated surveys to follow changes in the behaviour of the population, their exposure to information on preventing HIV and HIV status across South Africa (Shisana, Rehle, Simbayi et al. 2009).

3.4. Sampling Design

The SABSSM 2017 is a quantitative population-based household survey that employed a multistage stratified random sampling approach. Eligible individuals were household members of all age groups. They lived in households and hostels whereas individuals living in educational institutions, old age homes, health care, and uniformed-service barracks were not included in the sample (South African National HIV Survey, 2017). The survey was designed to investigate 1 000 small area layers (SALs) and 15 000 households were selected using the systematic sampling method. Additionally, out of the original 15 000 households that were selected for the study, only 11 776 (11.1%) households were willing to partake and a total of 1 307 refused to participate in the survey. Moreover, 39 132 eligible individuals were identified to be interviewed, however, 36 609 were interviewed (South African National HIV Survey, 2017a).

3.5. Study Population and Sample

To investigate the sexual behaviours, a subset of population from the SABSSM 2017 was selected as a sample for the study. The survey comprised of persons with disabilities aged 15 years or older with physical and sensory disabilities. The participants were asked their disability status and the responses were either ‘Yes’, ‘No’ or ‘No response’. If the participants responded ‘Yes’, they were further asked what type of disability they had. The study treated the ‘No response’ category as missing. This study focuses on both males and females disabled youth (15-34 years old) as the population of interest. The study excluded both males and

females disabled youth who never had sexual intercourse in their lifetime and who were not sexually active in the past 12 months preceding the survey. This led to a final sample of 88 019 (55,66%) of disabled youth who responded to questions pertaining to sexual behaviours in this study. Overall, there was 51 179 (59%) sexually active disabled males, and 36 840 (42%) sexually active disabled female's participants in the youth category who completed the survey. All analyses were done using survey weights that were benchmarked to the 2017 mid-year population estimates the weights are used when analysing questionnaire data. The weighing code (ibreal12 combined) was used because the SASSM 2017 dataset id combined all the provinces. Weighing the dataset was used to correct oversampling and undersampling to ensure representative of the entire national population and not only the subset of the population.

3.6. Variables

3.6.1. Dependent variable

The dependent variable was different for each different logistic regression that was conducted. Table 1 summaries how each dependent variable was generated and coded for each logistic regression model:

Table 1: Definition and categorisation of the outcome variables.

Main-dependent Variables			
Variable code	**Definition**	**Original code from the survey**	**How the variable was coded in the study**
Ever had sex			
q5_1	Whether the youth has ever had sexual intercourse in their lifetime.	Yes (1) No (2)	Never had sexual intercourse (0) Has had sexual intercourse (1)
Sexual activity in the past 12 months q5_1			
q5_1	Whether the youth has engaged in sexual activity in the past 12 months preceding the survey.	Yes (1) No (2)	Not sexually active in the past 12 months (0) Sexually active in the past 12 months (1)

Sub-dependent Variables			
Age at first sex q5_3			
q5_3	Whether the youth has had sexual intercourse below OR above 16 years legal age of consent for sex in South African (SA).	11 12 13 14 15 16 17 18	Below SA legal consent age for sex under 16 years (0) Above SA legal consent age for sex over 16 years (1)

		19 20 21 22 23 25 26 30	
Condom use			
q6_20	Whether the youth has used a condom at last sex with the most recent person with whom they had sex	Yes (1) No (2)	No condom use (0) Used a condom (1)
Multiple sexual partners			

q6_2	Whether the youth did not or had multiple sexual partners in the last 12 months	0 1	One or None (0) Two or More (1)

Table 1 above showed the main and sub-dependent variables that were analysed to measure sexual behaviours which are comprised of four categories, in this study. All sexual behaviours were asked under the sexual history section in the survey. Respondents were asked if they ever had sex and if they were sexually active in the past 12 months preceding the study, they could either answer “Yes” or “No”.

To measure the time of sexual initiation the study utilized age at first sex and grouped the variable into two categories: (1) below the age of sexual consent and, (2) above the age of sexual consent, according to the South African Sexual Offences and Related Matters in South Africa in which legal age for consensual sexual activity remains at 16 years old for sex or any sexual related sexual act (Strode et al., 2010). Condom use was deduced from the question

“Did you use a condom at last sex with the most recent person with whom you had sex”? Furthermore, to determine whether participants were engaged in concurrent sexual partnerships, they were asked how many sexual partners they had in the past 12 months. In this study, participants who had less than two sexual partners were not considered to be involved in multiple concurrent sexual partnerships. Those who responded to having two or more sexual partners were considered to be involved in concurrent sexual partnerships. A 12-month reference period was used to obtain recent behaviours and reduce recall errors.

3.7. Main independent Variables

Table 2: Variable codes and categorization of the main independent variables.

Variable name	Original codes	How variables will be coded in this study
Disability Status	Yes No No response	No (0) Yes (1)
Sex	Male Female	Male (1) Female (2)
Physical Sight Partial Hearing Communication/Speech Mental or psychiatric illness	Physical (1) Sight (2) Partial Hearing (3) Communication/Speech (4) Mental or psychiatric illness (5)	Physical Disability (1) Sight Disability (2) Hearing Disability (3) Communication Disability (4) Mental Disability (5)
Respondents Age	15 16 17 18 19 20 21 22 23 24 25	15-19 (1) 20-24 (2) 25-29 (3) 30-34 (4)

	26 27 28 29 30 31 32 33 34	
Race	African White Coloured Indian/Asian	Black/African (1) White (2) Coloured (3) Indian/Asian (4)
Place of Residence	Urban Rural Informal Rural formal	Urban areas (1) Rural areas (2)
Province	Western Cape Eastern Cape Northern Cape Free State KwaZulu Natal North West Gauteng Mpumalanga Limpopo	Western Cape (1) Eastern Cape (2) Northern Cape (3) Free State (4) KwaZulu Natal (5) North West (6) Gauteng (7) Mpumalanga (8) Limpopo (9)
Level of Education	Pre-school/ Gr R Grade 1/Sub a/Class 1 Grade 2/Sub b/Class 2	Below-secondary (1) Secondary (2) Higher (3)

	Grade 3/Standard 1/Abet 1 Grade 4 /Standard 2/Abet 2 Grade 5 /Standard 3/Abet 2 Grade 6 /Standard 4/Abet 3 Grade 7/Standard 5/Abet 3 Grade 8 /Standard 6/Abet 3 Grade 9 /Standard 7/Abet 3 Grade 10/Standard 8/Ntc 1 Grade 11/Standard 9/Ntc 2 Grade 12/Standard 10/Ntc 3 Further studies incomplete Diploma/undergraduate degree/other post-school completed Further degree completed Don't know	
Employment status	Unemployed Sick/disabled and unable to work Student/pupil/learner Employed/Self-employed Other	Employed (1) Unemployed (2) At school (3)
Source of Income	Salary/earnings Contributions by family members or relatives Government pensions/grants (e.g., old age pension, child support grant, disability grant) Other sources	Salary/earnings (1) Family members/relatives (2) Government or private organizations (3)

HIV Knowledge Whether a person can reduce the risk of HIV by having fewer sexual partners? Whether a healthy-looking person can have HIV? Whether HIV be transmitted from a mother to her unborn baby? Whether the risk of HIV transmission be reduced by having sex with only one uninfected partner who has no other partners? Whether a person can get HIV by sharing food with someone who is infected? Whether a person can reduce the risk of getting HIV by using a condom every time he/she has sex? Whether medical male circumcision can reduce the risk of HIV infection in males? Whether the risk of HIV transmission through sex can be reduced by an HIV-positive partner consistently taking drugs that treat HIV?	Yes (1) No (2) Don't Know (3)	Correct HIV Knowledge (1) Incorrect HIV Knowledge (2)
Condom Access	Paid For Free Not sure/Don't Know	Paid For (1) Free (2) Don't remember (3)

No condom Intention	Did not have a Condom Partner objected Used other contraceptives Don't like them Didn't think it was Necessary Married I am faithful /trust them Drunk/High Other	No condoms (1) Partner objected (2) Trust partner (3)

3.7.1. Socio-Demographic factors

The study examined the socio-demographic factors of sexual behaviours. These are shown below.

Disability: is a categorical variable that recodes the disability status of the respondents (question 1.11).

Type of disability: a categorical variable that measures what is the disability an individual has (question 1.13)

Sex: is a categorical variable that measures the sex of the respondent (question 1.2)

Age: was asked as a continuous variable for ages 15 years and older, for this study it is recoded into a categorical variable. The intervals are (1)15-19 years; (2) 20-24 years; (3) 25-29 years; (4) 30-34 years (question 1.1).

Race: is a categorical variable that records the individual's racial classification as observed by the data collector. For this study, the race variable will be recoded into four main racial categories of 22 South Africa (1) African (2) White (3) Coloured and (4) Indian. The questionnaire had the option of "Other", this was recoded into the Indian/Asian category (question 16.7)

Place of residence is a categorical variable that defines the residential area of a respondent. Due to differences in the conditions between formal and informal residential areas, the study used two categories for the place of residence category. This was be helpful to make a distinction between (1) Urban areas (2) Rural areas (question 16.1)

Province: is a categorical variable and records the reported de facto province of residence of the individual. It is categorised into (1) Western Cape (2) Eastern Cape (3) Northern Cape (4) Free State (5) Kwa-Zulu Natal (6) North West (7) Gauteng (8) Mpumalanga (9) Limpopo.

3.7.2. Socio-economic factors

Education: is a categorical variable describing the self-reported highest educational attainment of the participant. Education level was categorised into (1) below-secondary; (2) Secondary; and (3) Higher (question 1.15c)

Employment status: is a categorical variable that records the self-reported economic activity of the participants. This was measured through the question: "How would you describe your

present employment situation?". This was categorised into (1) Unemployed, and (2) At school (3) Employed. All respondents who reported that they were not looking for work or were sick/disabled and unable to work were recoded as unemployed. Student/pupil/learner were recoded as at school. Part-time, self-employed, working in informal sector respondents were recoded as employed (question 1.7)

Income source: This variable measures the individual's main source of income (question 1.9 under section 1 of the questionnaire)

3.7.3. *Behavioural factors:*

The study also considered factors that could have an association with the sexual behaviours of disabled youth. These are described below:

HIV Knowledge: The variable was used to measure the knowledge and perceptions of HIV and AIDS; the following questions were asked with eight items (question 2.2) The HIV knowledge was created through Stata by assessing the questions that individuals answered correctly and incorrectly. Only correct responses were scored 1 and incorrect responses scored 2 and those that don't know 3. The study recoded into (1) Incorrect knowledge and (2) Correct Knowledge and those that had unsure/don't know responses were replaced as missing.

Can a person reduce the risk of HIV by having fewer sexual partners? Yes.

Can a healthy-looking person have HIV? Yes.

Can HIV be transmitted from a mother to her unborn baby? Yes.

Can the risk of HIV transmission be reduced by having sex with only one uninfected partner who has no other partners? Yes.

Can a person get HIV by sharing food with someone who is infected? No.

Can a person reduce the risk of getting HIV by using a condom every time he/she has sex? Yes.

Can medical male circumcision reduce the risk of HIV infection in males? Yes.

Can the risk of HIV transmission through sex be reduced by an HIV-positive partner consistently taking drugs that treat HIV? No.

Condom access: To measure if the respondent and their partner paid for the last condom or they got it for free (both male and female condoms) (1) Paid (2) Free (question 6.28).

No condom use intention: To measure the reasons for not using during sexual intercourse Did not have a Condom (1) Partner objected (2) Used other contraceptives (3) Don't like them (4) Didn't think it was Necessary (5) I am married (6) I am faithful /trust them (7) I was drunk/high

(8) Other (9). This was categorised into three groups (1) No condom, (2) Partner objected (#) Trust partner (question 6.23).

3.8. Ethical considerations

This study used a secondary dataset conducted in 2017. The dataset was accessed on the HRSC website where registration was required to be permitted to use the dataset. Permission to access and use the dataset was given by the HSRC. The information of the respondents in the survey is anonymous and voluntary informed consent was required either verbal or formal consent, the respondents are also not known by the researcher of this study. The names and personal information of the respondents were also confidential. Therefore, no privacy was violated in this regard. The Faculty of Humanities at the University of Witwatersrand approved this research project, and the ethics protocol number is WDEMG2020/07/06.

3.9. Data Management

The data management and analysis in this study was done in relation to the two objectives. To examine the levels of sexual behaviour, cross-tabulations showing the frequency, and percentage distributions of the different types of sexual behaviours in the three categories of behaviour. Furthermore, to identify the demographic and socioeconomic characteristics associated with sexual behaviours among youths with disabilities in South Africa. The analysis was done using Stata statistical software package version 14. Moreover, Stata was used for data cleaning methods and recoding certain variables suitable for this study. All the statistical tests in the study were done at the 5% level of significance and 95% confidence interval.

3.10. Data Analysis

The examination of the statistics that were obtained in the 2017 SABSSM was conducted in different phrases for the set objectives. All the statistical tests were conducted at a 5% level of significance and 95% confidence interval.

Objective one: Examine levels of sexual behaviour by type of disability among youth in South Africa.

To examine the levels of sexual behaviour, cross-tabulations showing the frequency, and percentage distributions of the different types of sexual behaviours in the three categories of behaviour were done. The different outcome levels by ever engaging in sexual intercourse and sexual activity in the past 12 months were presented in graphs. Furthermore, the levels of the

type of disability among sexually active youth were also presented. Rates of sexual behaviour as per the different types of behaviour; age at first sex, condom use at last sex, and multiple sexual partners were generated per 1,000 disabled youth in South Africa. Age and sex-specific rates of sexual behaviours by the three types of behaviours were calculated per 1000 disabled youth in South Africa. The formulas for these calculations are as follows:

Age-specific rate by sexual behaviour: (*sexual activity, age at first sex, condom use, multiple sexual partners):*

$$\frac{Number\ of\ sexually\ active\ \ disabled\ youth\ \ aged\ 15-34\ years\ per\ 1000\ disabled\ youth\ engaging\ in\ each\ \ sexual\ behaviour}{Total\ population\ of\ \ all\ disabled\ youth\ \ in\ each\ age\ group} x1000$$

Sex-specific rates: (*sexual activity, age at first sex, condom use, multiple sexual partners):*

$$\frac{Number\ of\ \ male\ and\ Female\ per\ 1000\ disabled\ persons\ engaging\ in\ each\ \ sexual\ behaviour}{Total\ population\ of\ \ all\ female\ and\ male\ disabled\ youth} x1000$$

Objective two: To identify the demographic and socioeconomic characteristics associated with sexual behaviours among youths with disabilities in South Africa.

This included a binary logistic regression model of all the independent variables. This consisted of four models of each sexual behaviour. The binary logistic regression indicated all the significant and insignificant independent variables that influence the dependent variables (sexual behaviours). Logistic regression showing all odds ratios (OR) was used to examine demographic and socioeconomic factors that influence sexual behaviours. Logistic regression estimates the odd probabilities that occur as the independent variable values changes (Mertler & Reinhart, 2016).

The second objective of the study was conducted using three binary logistic regression models using the formula:

Logit (p) = refers to the log (to base e) of the odds ratio or likelihood ratio that the dependent variable is 1 (specifies whether or not the event will occur)

p= probability that a case is in a particular category

b_0= the constant of the equation

b_1 = the coefficient of the predictor variables

The four outcome variables of the study; sexually active, age at first sex, condom use, and multiple sexual partnerships, were conducted using a binary logistic regression model. All four outcomes consisted of both an adjusted and an unadjusted model. The adjusted model included all the key independent and control variables. Both the adjusted and unadjusted models for each of the outcome variables were done.

Model One: Included sexually active (yes/no) sex and all the main independent variables of the study.

Model Two: Included age at first sex and all of the main independent variables of the study.

Model Three: Included condom use at last and all of the main independent variables of the study.

Model Four: Included multiple sexual partners and all of the main independent variables of the study.

3.11. Hypothesis Testing

Ho: Demographic and socioeconomic characteristics are NOT associated with sexual behaviours among youth with disabilities in South Africa.

H_1: Demographic and socioeconomic characteristics are associated with sexual behaviours among youth with disabilities in South Africa.

3.12. Limitations

The study made use of a survey that is self-reported and subject to recall bias and social desirability bias. The questions about sexual history asked the respondents to recall their sexual activity in the last 12 months, age at first sex, condom use, and sexual partners. Respondents possibly could not accurately remember these details. Questions on sexual behaviour were generally sensitive, and this could be particularly pronounced for disabled people because of stigmatisation, as they are sometimes considered asexual. As means to avoid judgment, disabled youth might not have answered honestly. There is no way of determining at what point in time knowledge was acquired and if there were any behavioural changes over time. In addition, the survey and questionnaire did not define disability in terms of severity, therefore the study could not define disabled youth in terms of their severity.

Despite these limitations, the findings of this study are important to formulating current policies and programmes to improve the sexual health of disabled youth in South Africa. It is important because this work must have contributed to the existing knowledge.

CHAPTER 4: RESULTS

This chapter presents the results of the study, that were obtained using different analytical methods. Firstly, a univariate analysis that includes background characteristics of disabled youth and levels of sexual behaviour among disabled youth. Secondly, to examine the levels of sexual behaviour age and sex-specific rates were conducted. Thirdly, this chapter ends by conducting a bivariate logistic regression of each predictor variable by each specific sexual behaviour and multivariate analysis. This includes unadjusted and adjusted odds ratios.

4.1. Sample characteristics of disabled youth

Figure 4 below presents the percentage distribution of the types of disabilities among disabled youth in South Africa. As shown on figure 4, out of a sample of 88 019 disabled males and females, the majority of disabled youth in South Africa have a physical disability (52% [N= 45 483]). The second highest form of disability was sight disability (32 % [N= 28 529]). Moreover, there were 16% (N= 13 795) of disabled youth with a mental disability. Figure 4 also showed that a lower percentage of disabled youth had a hearing disability 6% (N=5 585). The lowest percentage were those with a speech disability 2% (N= 1 554).

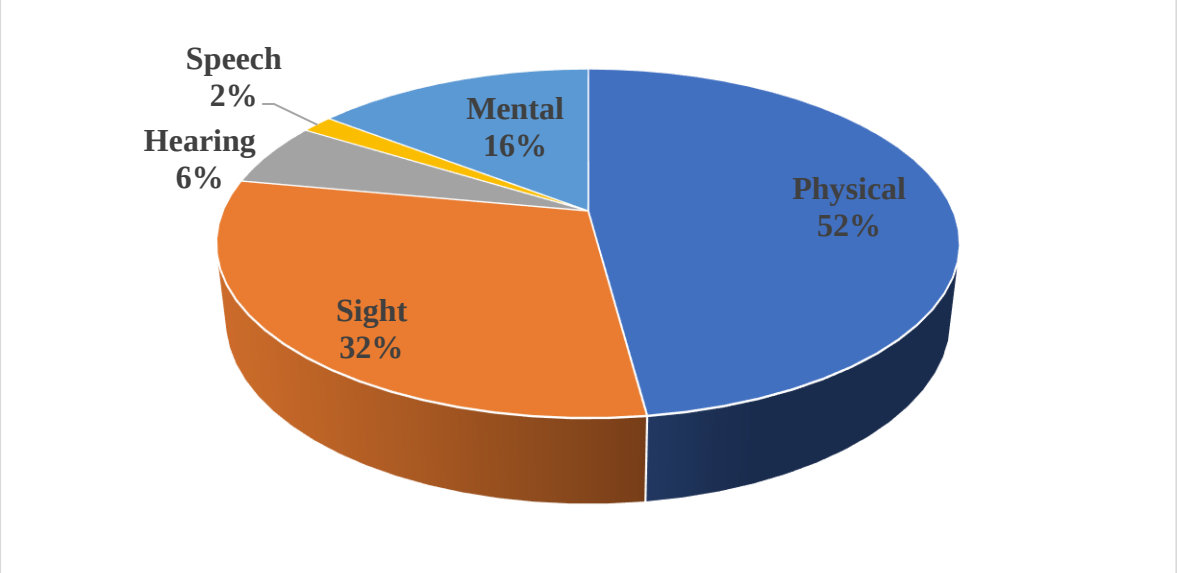


Figure 4: Percentage distribution of disabled youth by type of disability in the study.

Figure 5 below showed the percentage distribution of disabled participants that had ever had sex. The figure depicts that the majority of disabled males (56% [N= 88 108]) reported that

they had ever had sex, while only 44% (N= 68 376) of disabled females had had sex in their lifetime. In addition, a higher percentage of males never had sex in their lifetime (66% [N = 93 481]) compared to their female counterparts (34% [N= 48 452])

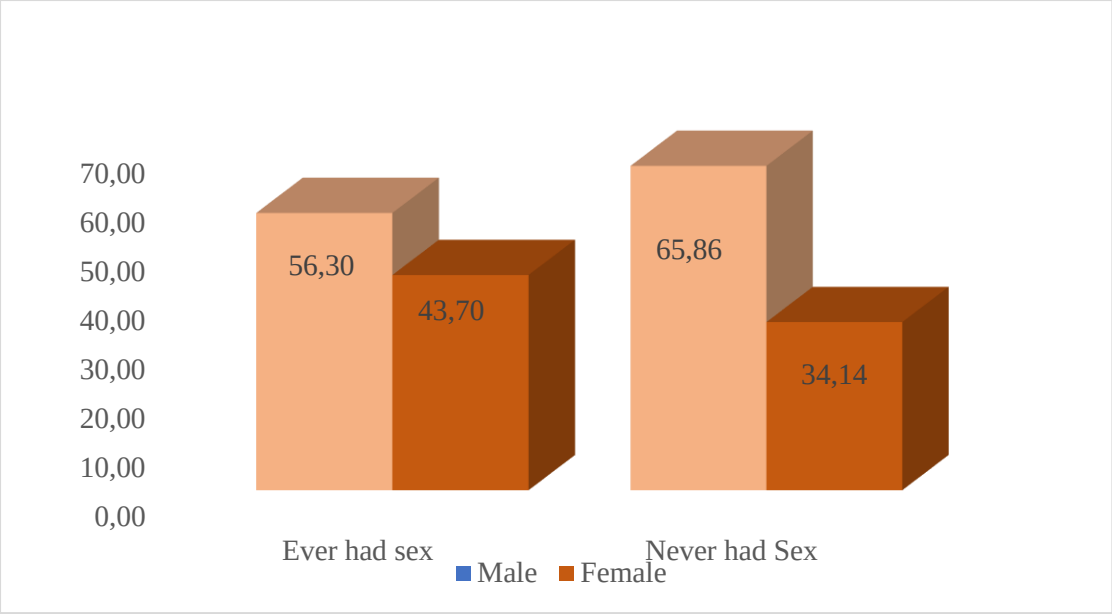


Figure 5: Percentage distribution of sexual intercourse in their lifetime among disabled youth.

Figure 6 showed the percentage distribution of sexual activity in the past 12 months among disabled youth in South Africa. It is noted that most of the disabled male participants (58% [N= 51 179]) were sexually active in the past 12 months preceding the survey. Amongst disabled females, only 42% (N= 30 177) were sexually active in the past 12 months. Approximately 57% (N= 39 948) and 43% (N= 36 840) of disabled males and females were also not sexually active in the past 12 months.

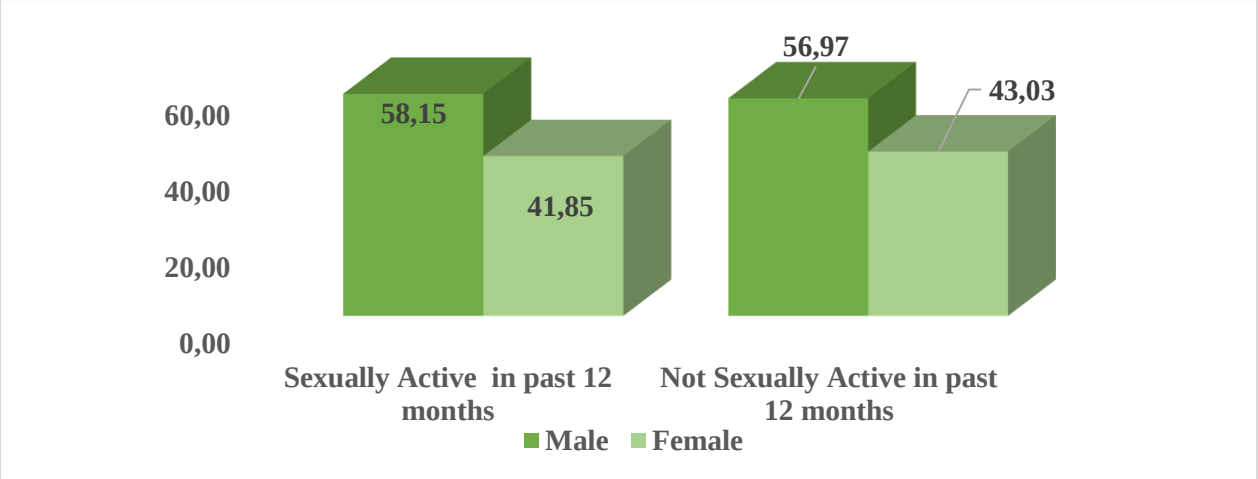


Figure 6: Percentage distribution of sexual activity in the past 12 months among disabled males and females (15-34) in the study.

Figure 7 above showed that among those who had sexual intercourse below the legal consent age; a higher percentage of about (35% [N= 30 253]) were disabled males, and only 17% (N= 11 346) were females. Among all those who had sex above the legal consent age; a lower percentage of males had sex above the legal consent age (65% [N= 57 330]), while most females (83% [N= 55 221]) had sex above the legal consent age. There is a high percentage of male disabled youth who used condoms (83% [N= 28 499]) compared to 62% (N= 13 653) of females that used a condom at last sex with their most recent partner. Results showed that all disabled youth who had two or more sexual partners (92% [N= 14 370]) were males and 8% (N= 3 021) were females.

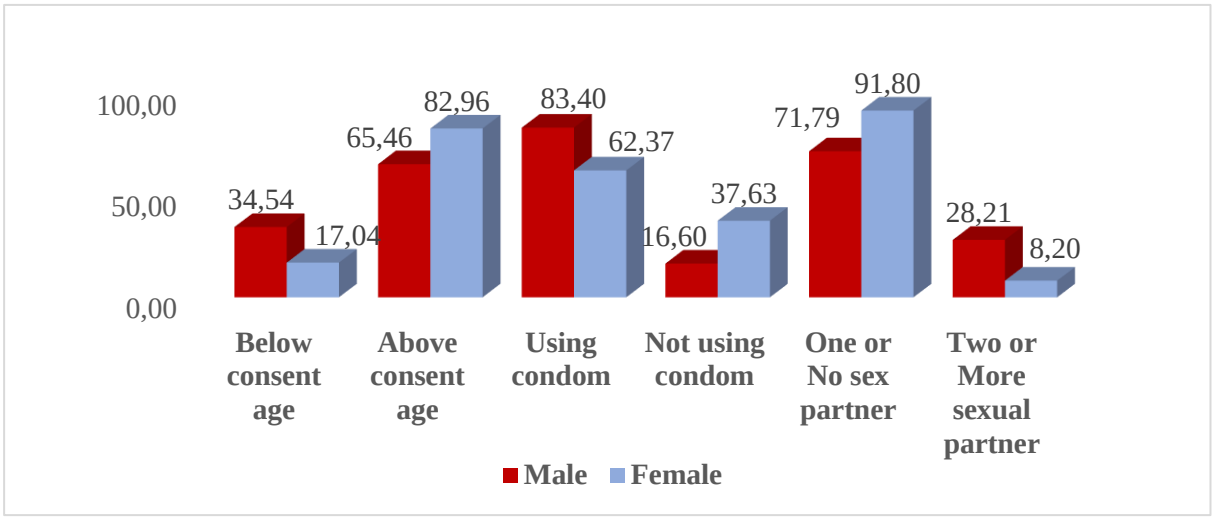


Figure 7: Percentage distribution of levels of sexual behaviour among disabled youth in South Africa.

Table 3: Frequency distribution and age-specific rates of engaging in one of each of the four sexual behaviours among disabled youth aged 15 to 34 years in South Africa, 2017.

Age-specific rate by sexually active in the past 12 months per 1000 disabled youth				
Age-group	**Not sexually Active in the past 12 months**	**Rate per 1000**	**Sexually active in the past 12 months**	**Rate per 1000**
15-19	7 085	141	3 076	61
20-24	12 027	173	20 125	290
25-29	16 281	234	22 946	330
30-34	34 731	293	41 871	354
Total	70 125	228	88 019	286
Age-specific rate by Age at first sex per 1000 disabled youth				
Total	**Below legal consent age**	**Rate per 1000**	**Above legal consent age**	**Rate per 1000**
15-19	737	15	6 512	129
20-24	4 840	70	28 396	409
25-29	11 490	165	25 163	362
30-34	24 530	207	51 261	433

Total	41 598	135	111 332	362
Age-specific rate by condom-use per 1000 disabled youth				
Age-group	**No**	**Rate per 1000**	**Yes**	**Rate per 1000**
15-19	262	5	2 814	56
20-24	2 480	36	10 021	144
25-29	6 007	86	12 149	175
30-34	5 159	44	17 003	144
Total	13 907	45	41 988	137
Age-specific rate by multiple sexual partners per 1000 disabled youth				
Age-group	**One or None**	**Rate per 1000**	**Two or More**	**Rate per 1000**
15-19	3 076	61	0	0
20-24	18 203	262	1 922	28
25-29	17 477	252	5 305	76
30-34	30 662	259	10 398	88

Total	69 419	226	17 625	57

Table 3 showed the age-specific rates of each of the four sexual behaviours. The table reveals that the overall rate of not being sexually active in the past 12 months among disabled youth was highest among the 30-34-year-age-group (293 per 1000 disabled youth) while being sexually active was highest among 25-29-year-age-group (330 per 1000 disabled youth). In addition, the lowest rates of being sexually active in the past 12 months among the disabled youth respondents were among the 15-19-year-age-group (61 per 1000 disabled youth).

Regarding age at first sex, the rates of disabled youth who engaged in sex below the legal sex consent age were highest in the 30-34year-age-group. Moreover, the lowest to had engaged in sex below the legal consent age were in the 15-19-year-age-group at the rate of 5 per 1000 disabled youth; and low among the 20-24-year-age-group at 36 per 1000 disabled youth. The rates of engaging in sex above the legal consent age was the lowest in the 15-19-year-age-group (129 per 1000 disabled youth), followed by those in the 25-29-year-age-group (362 per 1000 disabled youth).

In terms of condom use during sex with the most recent partner, disabled youth aged 15-19 years had the lowest rate of engaging in sex without a condom (5 per 1000 disabled youth). This was followed by those aged 20-24 years, disabled youth who had the lowest rated of not using a condom during last sexual intercourse with the most recent partner (36 per 1000 disabled youth). The rates of using a condom at last sexual intercourse were highest among those aged 25-29 years (175 per 1000 disabled youth).

Rates of having no sexual partner in the past 12 months were highest in the 30-34-year-age-group (259 per 1000 disabled youth). The rates of having two or more sexual partners were the lowest among those in the 15-19 and 20-24-year-age-group, and they were between 0 and 28 per 1000 disabled youth.

Table 4: Frequency distribution and sex-specific rates of engaging in one of each of the four sexual behaviours among disabled youth aged 15 to 34 years in South Africa, 2017.

	Sex-specific rate by Sexually Active in the past 12 months per 1000 disabled youth			
Characteristics	**Not sexually Active in the past 12 months**	**Rate per 1000**	**Sexually active in the past 12 months**	**Rate per 1000**
Male	39 948	212	51 179	271
Female	30 177	254	36 840	310
Total	70 125	228	88 019	286
	Sex-specific rate by Age at first sex per 1000 disabled youth			
	Below legal consent age	**Rate per 1000**	**Above legal consent age**	**Rate per 1000**
Male	29 982	159	57 086	303
Female	11 346	95	54 246	456
Total	41 327	134	111 332	362
	Sex-specific rate by Condom use per 1000 disabled youth			
	No	**Rate per 1000**	**Yes**	**Rate per 1000**
Male	5 671	151	28 499	30

Female	8 236	113	13 489	69
Total	13 907	137	41 988	45
	Sex-specific rate by Multiple sexual partners per 1000 disabled youth			
	One or None	**Rate per 1000**	**Two or More**	**Rate per 1000**
Male	36 575	194	14 604	77
Female	32 844	276	3 021	25
Total	69 419	226	17 625	57

Table 4 showed the sex-specific rates by each of the four sexual behaviours. The table indicated that the rates of, not being sexually active in the past 12 months, were the lowest among males at 212 per 1000 disabled youth. Furthermore, the table showed that females had the highest rates of being sexually active in the past 12 months (310 per 1000 disabled youth).

The rates of having sexual intercourse below the legal consent age were highest among males (159 per 1000 disabled youth). Rates of engaging in sexual intercourse above the legal consent age were highest among females (456 per 1000 disabled youth).

Regarding condom use at last sexual intercourse, males had the highest rate of not using a condom during sex (151 per 1000 disabled youth). Rates of using a condom during sex were the highest among females (69 per 1000 disabled youth).

Having one or no sexual partner was the highest among females at 276 per 1000 disabled youth, while the rates of having two or more sexual partners was the highest among males at 77 per 1000 disabled youth.

4.2. Multivariate analysis

Table 5: Unadjusted Odds Ratio for Binary Logistic Regression Model Results of the association between four categories of sexual behaviour and demographic and socioeconomic characteristics among disabled youth.

Main independent variables	**Sexually Active in the past 12 months**		**Age at first sex**		**Condom use**		**Multiple sexual partners in the past 12 months**	
	OR	**CI**	**OR**	**CI**	**OR**	**CI**	**OR**	**CI**
Age-group								
15-19 (RC)								
20-24	1.39*	1.2209 - 1.6022	2.46*	2.1678 - 2.8014	0.66*	0.5469 - 0.8042	0.76*	0.6363 - 0.9222
25-29	1.61*	1.4078 - 1.8520	2.83*	2.4908 - 3.2287	0.51*	0.4234 - 0.6209	0.67*	0.5605 - 0.8136
30-34	1.56*	1.3578 - 1.7945	3.18*	2.7865 - 3.6504	0.50*	0.4148 - 0.61558	0.54*	0.4461 - 0.6609
Sex								
Male (RC)								
Female	1.00	0.9200 - 1.0957	2.22*	2.0346 - 2.4226	0.61*	0.5469 - 0.6838	0.24*	0.2152 - 0.2789
Type of disability								
Physical disability								
Sight disability	0.77	0.3295 - 1.8100	0.77	0.3324 - 1.8255	0.89	0.3176 - 2.5062	1.21	0.3566 - 4.1215
Hearing disability	0.13*	0.0456 - 0.4067	0.49	0.1692 - 1.4510	1.00	0.9142 -1.4058	10.92	1.8245 - 65.4742
Speech disability	0.32	0.0732 - 1.4647	0.49	0.0907 - 2.7086	1.04	0.4796 - 0.9868	2.42	0.2520 - 23.3286
Mental disability	0.17*	0.0823 - 0.3912	1.30	0.4467 - 3.7981	0.34	0.0482 - 2.4365	1.00	
Race								
African (RC)								
White	0.74*	0.6517 - 0.8494	0.96	0.8396 - 1.1028	0.93	0.7664 - 1.1400	0.99	0.8214 - 1.21689
Coloured	1.15	0.9125 - 1.4675	1.94*	1.4791 - 2.5590	1.03	0.7551 - 1.4092	0.95	0.7042 - 1.2981
Indian	1.08	0.8908 - 1.3330	1.58*	1.2756 - 1.9702	1.55*	1.1465 - 2.0957	0.68	0.5070 - 0.9255
Place of residence								

Urban area (RC)								
Rural area	0.81*	0.7465 - 0.8874	1.10*	1.0134 - 1.2044	0.97	0.8738 - 1.0854	0.65	0.5774 - 0.7374
Level of Education								
Below-Secondary (RC)								
Secondary	1.36*	1.1533 - 1.6250	2.15*	1.8410 - 2.5336	1.17	0.9199 - 1.5051	1.11	0.8510 - 1.4702
Higher	2.26*	1.7350 - 2.9491	3.00*	2.3312 - 3.8680	1.19	0.8680 - 1.6488	1.18	0.8358 - 1.6745
Employment status								
Unemployed (RC)								
At school	0.86*	0.7668 - 0.9806	0.59*	0.5254 - 0.6666	1.90*	1.6031 - 2.2536	1.52*	1.2878 - 1.8008
Employed	1.43	1.2937 - 1.5848	1.00	0.9120 - 1.1106	1.03	0.9174 - 1.1698	1.14	1.0042 - 1.3071
Income source								
Salary/earnings (RC)								
Family and relatives	1.13	0.9156 - 1.4019	0.86	0.7195 - 1.0480	1.02	0.8099 - 1.2978	1.35	1.0762 - 1.7021
Government or private donations	0.55*	0.4718 - 0.6510	0.93	0.7895 - 1.1107	0.81	0.6594 - 0.9990	0.50*	0.3774 - 0.6846
Province								
Western Cape (RC)								
Eastern Cape	0.70*	0.5610 - 0.8898	0.72*	0.5730 - 0.9184	0.80	0.5856 - 1.0977	1.34	0.9583 - 1.8751
Northern Cape	0.76*	0.6042 - 0.9764	0.72*	0.5712 - 0.9253	1.23	0.8729 - 1.7537	1.00	0.6991 - 1.4479
Free State	0.90	0.6957 - 1.1792	0.77	0.5987 - 1.0109	1.41	0.9742 - 2.0441	1.76*	1.2483 - 2.4955
KwaZulu Natal	0.78*	0.6555 - 0.9450	1.31*	1.0874 - 1.5982	1.14	0.8874 - 1.4756	0.96	0.7388 - 1.2651
North West	0.91	0.7283 - 1.1577	0.76	0.6098 - 0.9684	0.99	0.7319 - 1.3440	1.43	1.0460 - 1.9792
Gauteng	1.20	0.9866 - 1.4781	0.74*	0.6077 - 0.9043	1.10	0.8463 - 1.4498	1.58	1.2078 - 2.0885
Mpumalanga	1.69*	1.3569 - 2.1179	0.71*	0.5845 - 0.8823	1.05	0.8029 - 1.3819	0.76*	0.5617 - 1.0370
Limpopo	1.34*	1.0464 - 1.7400	0.88	0.6916 - 1.12254	0.86	0.6331 - 1.1685	1.38	1.0045 - 1.9196
HIV Knowledge								

Incorrect HIV transmission Knowledge (RC)								
Correct HIV transmission Knowledge	0.95	0.8741 - 1.0535	1.00	0.9176 - 1.1038	1.10	0.9869 - 1.2435	0.81*	0.7190 - 0.9201
Condom Access								
Paid For (RC)								
Free	0.79	0.5841 - 1.0856	0.83	0.7207 - 0.9746	1.03	0.9012 - 1.1914	0.75*	0.6373 - 0.9057
No condom use intention								
No condom (RC)								
Partner objected	1.37	0.2726 - 0.2752	1.12	0.8882 - 1.4301				0.3942 - 0.7719
Trust partner	1.55	0.3215 - 0.3065	1.3*	1.1552 - 1.5708				0.3302 - 0.5060

RC = Reference Category, *p < 0.05 represents significant results at 95% level of confidence

Table 5 above presents the bivariate logistic regression model. The table outlines that disabled individuals aged 25-29 years were 1.61 times significantly more likely to have been sexually active in the past 12 months compared to disabled youth aged 15-19 years. Disabled females had 1.00 times odds of being sexually active in the past 12 months similar to their male counterparts that have 1.00 times odds of being sexually active in the past 12months. The odds of being sexually active were 0.13 times lower among those with a hearing disability and 0.77 times lower among those with a sight disability compared to those with a physical disability. Indians who had 1.08 times higher odds of being sexually active when compared to disabled Africans. Coloureds also had 1.15 times higher odds of being sexually active than disabled Africans. Disabled youth from rural areas had significantly lesser odds of being sexually active than those from urban areas. Among disabled youth, having a secondary or higher education was statistically associated with being sexual activity. The odds of being sexually active were 1.36 times higher among those with secondary education compared those with a below secondary education. The odds of being sexually active in the past 12 months increased with an increase in educational attainment.

The odds of being sexually active among disabled youth at school were 0.86 times significantly less likely compared to those that were employed. The odds of being sexually active increased by employment status. Those that received an income from family and relatives were 1.13 times more likely to be sexually active compared to those that receive their income from their salary. Being from Gauteng, Mpumalanga, and Limpopo provinces increased the odds of being sexually active compared to being from the Western Cape province. Disabled youth from Eastern Cape province were 0.70 times less likely to be sexually active compared to disabled youth that resides in the Western Cape province.

The study did not find a significant relationship between being sexually active and HIV/AIDS knowledge. Disabled youth with correct HIV/AIDS knowledge had 0.95 times lesser odds of being sexually active compared to those with incorrect knowledge. The odds were 0.79 times lesser among disabled youth that received condoms for free compared to their counterparts who reported paying for condoms. Disabled youth whose partner objected to use a condom had 1.37 times higher odds of being sexually active and 1.55 times higher odds of being sexually active if they trusted their partners compared to those who never had a condom.

Regarding age at first sex, in the unadjusted model, all the categories of age groups were significantly related to age at first sex. The odds of having sex above the South African legal

consent age decreased with an increase in age. Disabled youth aged 20-24 years had 0.51 times lesser odds of having sex above legal consent age compared to those in the 15-19-age-group. There was a relationship between sex and age at first sex, disabled females had 2.22 times higher odds of having sex above 16 years compared to disabled males. Although not statistically significant, disabled youth with a mental disability had 1.30 times higher odds of having sex above legal consent age than those with a physical disability. For disabled Coloureds and Indians, there was a significant relationship between race and age at first sex. The odds of having sex above legal age were 0.96 times less among the disabled White population compared to disabled Africans. Disabled youth from rural settings had 1.10 times significantly higher odds of having sex above legal consent age compared to those from urban communities. The odds of having sex above legal age increased with the level of education. Disabled youth with secondary school level education had 2.15 times higher odds of having sex above the legal sex consent age. All categories of educational attainment were significantly related to age at first sex.

Disabled youth at school had 0.59 significant greater odds of having sex above legal consent age than disabled youth that are employed. Disabled youth that receives income from families and relatives had 0.86 times lesser odds of being sexually active. The results of the study showed no statistical relationship between income source and age at first sex. Being from KwaZulu-Natal province increased the odds of having sex above the legal consent age compared to being from the Western Cape province. Disabled youth from the following provinces: Eastern Cape (0.72), Northern Cape (0.72), Gauteng (0.74), and Mpumalanga (0.71), had significantly lesser odds of having sex above the legal consent age. Having correct HIV/AIDS knowledge increased the odds of having sex above the legal consent age but the relationship was not significant. Disabled youth that indicated that they received a condom for free had 0.83 times lesser odds of having sex above the legal consent age compared to those that received the condom paid for a condom. Disabled youth who reported that the sexual partner objected to use a condom had 1.12 times higher odds of having sex above legal consent age compared to those that never had a condom at all.

The results of the unadjusted model for condom use at last sex showed that age was statistically significant. The odds of using a condom at last sex decreased with an increase in age. Sex and condom use at last sex were significantly associated. Disabled females had 0.61 lesser odds of using a condom at last sex compared to disabled males. The results showed that the type of disability was not a significant predictor of condom use at last sex. Those with a speech

disability had 1.04 higher odds of using a condom than those with a physical disability. Indians had 1.55 times significantly higher odds of using a condom than African disabled youth. The odds of using a condom at last sex were 0.97 times lesser among disabled youth in rural areas compared to those living in urban areas.

Compared to having only secondary education, the odds of using a condom at last sex increased linearly with educational attainment. Respondents with secondary and higher education were more likely to use a condom than those who only had secondary education. Compared to disabled youth with below secondary education, disabled youth with secondary education had 1.11 times higher odds of using a condom. Disabled youth with higher education had 1.18 times odds of using a condom at last sex and the relationship was also not significant.

With regards to employment status, disabled youth at school had 1.90 higher odds of using a condom at last sex than those with below secondary education. Employment status was a significant predictor of condom use at sex. Although not statistically significant, disabled youth that received their income from family and relatives had 1.02 times higher odds of using a condom at last sex than disabled youth that obtain their salary earnings. There was no significant relation between the province of residence and condom use except for Free State and Mpumalanga provinces.

Having HIV/AIDS knowledge and condom use at last sex were significantly associated. Disabled youth with correct HIV/AIDS knowledge had 1.10 times higher odds of using a condom at last sex than disabled youth with incorrect HIV/AIDS knowledge. In terms of condom access, the odds of using a condom at last sex for those who had free access to the condom were 1.03 times higher compared to disabled youth that paid to access the condom. Lastly, the unadjusted results showed that condom use at last sex was at 4.37 times increased odds among the disabled whose partners objected to using a condom at last sex.

The unadjusted regression model for multiple sexual partners indicates that the association between age and multiple sexual partners was statistically significant. Having two or more sexual partners decreased with an increase in age. The odds of having two or more sexual partners were 0.76 times lesser among disabled individuals aged 20-24 years compared to those aged15-19 years.

Furthermore, the results showed that disabled females had 0.24 lesser odds of having two or more sexual partners compared to disabled males. Although not statistically significant, disabled individuals with a hearing disability had 1092 times higher odds of having two or

more sexual partners compared to individuals with a physical disability. There was no relationship between race and multiple sexual partnerships; the odds of having two or more sexual partners were 0.99 times less likely among Whites compared to African disabled youth.

With regards to the place of residence, disabled youth in rural areas had 0.65 times decreased odds of having two or more sexual partners than disabled youth residing in urban areas. In terms of the level of education, disabled youth with secondary (1.11) and higher education (1.18) had increased odds of having two or more sexual partners compared to disabled youth with below secondary education. The odds of having two or more sexual partners were 1.52 times significantly higher among disabled youth at school than disabled youth that were unemployed – the relationship was also statistically significant. Disabled youth that received an income from their family and relatives had 1.35 times higher odds of having two or more multiple sexual partners. However, disabled youth that received their income from families or relatives had 0.50 times less odds of having two or more sexual partners than disabled youth that receive their income from their salaries.

Residing in the following provinces: Eastern Cape, Northern Cape, Free State, North West, Gauteng, and Limpopo had increased odds of having two or more sexual partners compared to those from the Western Cape province. In addition, being from KwaZulu Natal and Mpumalanga provinces decreased the odds of having multiple sexual partnerships. Disabled youth from KwaZulu-Natal province had 0.96 times less odds of having two or more sexual partners compared to those from the Western Cape province. Whilst disabled individuals from Mpumalanga province had 0.76 times lesser odds of having two or more sexual partners compared to disabled individuals from Western Cape province. The results showed that HIV knowledge was a significant predictor of multiple sexual partnerships. Wherein, disabled youth with correct HIV knowledge had 0.81 times lesser odds of having two or more sexual partners than disabled youth with incorrect HIV knowledge. Disabled respondents that received a condom for free had 0.75 times significantly lesser odds of having two or more sexual partners compared to disabled youth that paid for a condom. Lastly, the odds of having two or more sexual partners were 0.55 times higher among those whose partners objected to use a condom than those that did not have a condom at all. There is a significant association between no condom intention and multiple sexual partners.

Table 6: Adjusted Odds Ratio for Binary Logistic Regression Model Results of the association between all the independent variables with four categories of sexual behaviours among disabled youth.

Main independent variables	Model 1		Model 2		Model 3		Model 4	
Age-group								
15-19 (RC)								
20-24	1.22	[0.7819 - 1.9054]	11.2*	[2.1033 - 60.6130]	0.62	[0.2773 - 1.4168]	0.28	[0.0237 - 3.5343]
25-29	1.57*	[1.0116 - 2.4371]	8.31*	[1.6135 - 42.8608]	0.49	[0.2199 - 1.1062]	0.29	[0.0256 - 3.4717]
30-34	1.46	[0.9465 - 2.2686]	6.66*	[1.2847 - 34.6065]	0.47	[0.2099 - 1.0612]	0.53	[0.0464 - 6.1322]
Sex								
Male (RC)								
Female	0.83*	[0.6959 - 0.9958]	3.95*	[1.8939 - 8.2684]	0.92	[0.7147 - 1.2007]	0.25*	[0.1092 - 0.6134]
Type of disability								
Physical disability (RC)								
Sight disability	0.68*	[0.1805 - 2.6258]	0.77	[0.3296 - 1.8142]	0.97	[0.3749 - 2.5268]	1.21	[0.3580 - 4.1444]
Hearing disability	0.17	[0.0284 - 1.1357]	0.48	[0.1663 - 1.4372]	0.89	[0.3176 - 2.5125]	11.09*	[1.8331 - 7.1877]
Speech disability	0.87	[0.0859 - 8.9507]	0.43	[0.0766 - 2.4687]	0.44	[0.9529 - 1.5622]	3.64	[0.3299 - 40.1893]
Mental disability	0.21*	[0.0696 - 0.6340]	1.50	[0.4996 - 4.5079]	0.34	[0.0479 - 2.4887]	2.41	[0.3012 - 0.6114]
Race								
African (RC)								
White	0.78	[0.5932 - 1.0318]	0.97	[0.2423 - 3.9149]	1.62*	[1.0047 - 2.6134]	0.75	[0.1450 - 3.9778]
Coloured	1.15	[0.7828 - 1.7149]	7.31	[0.6935 - 76.8596]	1.08	[0.5817 - 2.0254]	0.34	[0.0310 - 3.7617]
Indian	0.87	[0.6402 - 1.2000]	2.61	[0.0542 - 0.7840]	3.40*	[1.7273 - 6.6929]	0.38	[0.0387 - 3.8960]
Place of residence								
Urban area (RC)								
Rural area	0.81 [	0.6739 - 0.9827]	1.14	[0.6033 - 2.1574]	0.82	[0.6246 - 1.0906]	1.07	[0.4768 - 2.4279]
Level of Education								

Below-Secondary (RC)								
Secondary	1.23	[0.9322 - 1.6453]	0.92	[0.2659 - 3.2120]	1.01	[0.5956 - 1.7435]	0.94	[0.2025 - 4.3792]
Higher	2.05*	[1.3625 - 3.0996]	0.74	[0.1544 - 3.5688]	0.99	[0.5229 - 1.9009]	3.03	[0.4944 -18.6502]
Employment status								
Unemployed (RC)								
At school	1.68	[0.5709 - 4.9602]	0.39	[0.0221 - 6.8860]	0.91	[0.2552 - 3.2982]	1.30	[0.7104 - 1.2268]
Employed	1.26	[0.9076 - 1.7678]	1.07	[0.3346 - 3.4615]	0.84	[0.5193 - 1.3648]	2.37	[0.5392 - 10.4706]
Income source								
Salary/earnings (RC)								
Family and relatives	1.78*	[1.2234 - 2.6042]	0.56	[0.1789 - 1.7807]	0.71	[0.4423 - 1.1571]	2.34	[0.6305 - 8.7408]
Government or private donations	1.00	[0.6952 - 1.4589]	0.60	[0.1418 - 2.5476]	0.60	[0.3441 - 1.0593]	1.44	[0.2114 - 9.9032]
Province								
Western Cape (RC)								
Eastern Cape	0.87	[0.5866 - 1.3074]	0.22	[0.0199 - 2.4541]	0.58	[0.2958 - 1.1555]	0.35	[0.0396 - 3.0955]
Northern Cape	1.03	[0.7079 - 1.5085]	0.14	[0.0145 - 1.5254]	1.23	[0.6211 - 2.4735]	0.42	[0.0564 - 3.1387]
Free State	0.93	[0.6011 - 1.4696]	0.13	[0.0119 - 1.4262]	0.70	[0.3463 - 1.4209]	0.28	[0.0304 - 2.7367]
KwaZulu Natal	0.81	[0.5802 1.1547]	0.29	[0.0306 - 2.8329]	0.81	[0.4599 - 1.4407]	0.29	[0.0544 - 1.5834]
North West	0.82	[0.5543 - 1.2415]	0.24	[0.0211 - 2.7220]	0.97	[0.5007 - 1.8971]	0.44	[0.0662 - 2.9287]
Gauteng	0.97	[0.6777- 1.3897]	0.15	[0.0160 - 1.4990]	0.82	[0.4642 - 1.4632]	0.48	[0.0910 - 2.6043]
Mpumalanga	1.85*	[1.2269 - 2.8160]	0.31	[0.0318 - 3.0909]	0.82	[0.4588 - 1.4700]	0.49	[0.0923 - 2.6166]
Limpopo	1.50	[0.9122 - 2.4939]	0.24	[0.0211 - 2.9578]	0.75	[0.3654 - 1.5396]	0.50	[0.2549 – 1.0268]
HIV Knowledge								
Incorrect HIV Knowledge (RC)								
Correct HIV Knowledge	0.89	[0.7490 - 1.0595]	0.63	[0.3344 - 1.21590]	1.20	[0.9369 - 1.5440]	0.83	[0.3928 - 1.7805]
Condom Access								

Paid For (RC)								
Free	0.42	[0.2654 - 0.6536]	0.88	[0.4642 - 1.6716]	1.12	[0.8673 - 1.4570]	1.07	[0.4931 - 2.3529]
No condom use intention								
No condom (RC)								
Partner objected			1.01	[0.4092 - 2.5178]			1.69	[0.6212 - 4.6275]
Trust partner			1.11	[0.5799 - 2.1245]			0.40*	[0.1650 - 0.9894]

RC = Reference Category, *p < 0.05 represents significant results at 95% level of confidence

Model 1 in table 6 showed the results from the binary logistic regression which showed an association between sexual activity and all the main independent variables. Disabled youth aged 25-29 years had 1.57 times significantly higher odds of being sexually active compared to those aged 15-19 years. Disabled females were 0.83 times less likely to be sexually active compared to disabled males. Disabled individuals with a sight disability had 0.68 times significantly lesser odds of being sexually active compared to those who had a physical disability.

Disabled youth from the coloured population were 1.15 times more likely to be sexually active compared to African disabled youth. Moreover, White disabled youth (0.78) and Indian (0.87) were less likely to be sexually active than African disabled youth. The results further indicated that disabled youth with secondary education were 1.23 times more likely to be sexually active than disabled youth with below secondary education. In addition, having higher education was significantly associated with being sexually active. The odds of being sexually active increased between secondary and higher education.

As shown in Table 6 disabled youth at school were 1.68 times more likely to be sexually active. The employed disabled youth were 1.26 times more likely to be sexually active compared to unemployed disabled youth. Among disabled youth that received income from family or relatives were more 1.78 times likely to be sexually active, than disabled youth that receives their income from salary earnings. Being from the following provinces: Northern Cape, Mpumalanga, and Limpopo increased the odds of being sexually active. Disabled youth from Northern Cape province had 1.03 times higher of being sexually, whilst disabled youth from Mpumalanga province had 1.85 times significantly higher odds of being sexually active compared to disabled youth from the Western Cape province. Those who resided in Limpopo province had 1.50 times higher odds of being sexually active than those from the Western Cape province. Disabled youth with correct HIV knowledge were 0.89 times less likely to be sexually active than disabled youth with incorrect HIV knowledge. In terms of condom access, disabled youth that who reported getting a condom for free were 0.42 times less likely to be sexually active compared to those that paid for a condom.

Model 2 considered the associations between age at first sex while controlling for all the independent variables. All categories of age were significantly associated with age at first sex. The odds of having sex above the legal consent age decreased with an increase in age. The odds of having sex above the legal consent age were 6.66 times lesser among 30-34 youth and

8.31 times higher among youth aged 25-29. Moreover, the odds of having sex above the legal consent age were 11.2 times significantly higher among disabled youth aged 20-24 compared to youth aged 15-19. Disabled females were 3.95 times more likely to have sex above the legal consent age than disabled males, the association was statistically significant. The study found no statistical significance between the type of disability and having sex above the legal consent age. The odds of having sex above the legal consent age were 1.50 times higher among those with a mental disability than those with a physical disability.

Disabled Coloureds had 7.31 higher odds of having sex above the legal consent age than African disabled youth. The odds of having sex above the legal consent age were 1.14 times higher among disabled youth from rural areas than disabled youth from urban areas.

Engaging in sex above the legal consent age was 0.92 times less likely among disabled youth with secondary when compared to disabled youth with below secondary education. The results further indicated that disabled youth at school were 0.39 times less likely to have sex above the legal consent age compared to unemployed disabled youth. Additionally, the odds of having sex above the legal consent age were 1.07 times more likely among currently employed disabled youth than unemployed disabled youth.

With regards to income source, disabled youth that received income from family or relatives had 0.56 times lesser odds of engaging in sex above the legal consent age and those that receive income from government or private donations were 0.60 times less likely to have sex above the legal consent age compared to disabled youth that received income from salary earnings. The study found no significant relationship between province and age at first sex. The odds of having sex above the legal consent age were 0.15 times less likely among disabled youth from Gauteng province. The odds of having sex above the legal consent age was 0.63 less likely among disabled youth with correct HIV knowledge than disabled youth with incorrect HIV knowledge. With reference to condom access, disabled youth that received condoms for free were 0.88 less likely to have sex above the legal consent age than disabled youth that paid for their condoms. In addition, the odds of having sex above the legal consent age was 1.45 times more likely among disabled youth that did not know how they accessed their condoms compared to disabled youth that paid for their condoms.

Model 3 considered the association between condom use while controlling for all the socio-demographic and economic characteristics. It showed that age was not a significant predictor of condom use. The adjusted odds ratio demonstrated that using a condom at last sex decreased

with an increase in age. The odds of using a condom at last sex were 0.47 times less likely among disabled youth aged 30-34 years than those aged 15-19 years.

The study found that disabled females were 0.92 less likely to use a condom at sex compared to disabled males. There was no significant association found between sex of the young people and condom use at last sex. In terms of the type of disability, the odds of using a condom were 0.34 times less likely among disabled youth with a mental disability than those with a physical disability. The study did not find a significant relationship between the type of disability and condom use at last sex. White disabled youth had 1.62 times higher odds of using a condom than African disabled youth. The odds of using a condom were 3.40 times higher among Indian disabled youth than Africans. Regarding the place of residence, disabled youth from rural areas were 0.82 times less likely to use a condom than disabled youth living in urban areas.

Disabled youth with secondary education were 1.01 times more likely to use a condom at last sex than disabled youth with below secondary education. Furthermore, disabled youth with higher education were 0.84 less likely to use a condom at last sex than disabled youth with a below secondary education. The odds of using a condom was 0.91 times less likely among disabled youth at school and 0.84 times less likely among currently employed disabled than unemployed disabled youth. Using a condom was 0.71 times less likely among disabled youth that received an income from family or relatives than disabled youth that receive their income from salary earnings. Furthermore, disabled youth that received income from government or private donations had 0.60 times less odds of using a condom, compared to those that received their income from salary earnings. Being from KwaZulu-Natal province increased the odds of using a condom at last sex. The odds of using a condom were 1.23 times higher for disabled youth in the KwaZulu-Natal province than those from the Western Cape province.

The odds of using a condom at last sex were 1.20 more likely among disabled youth with correct HIV compared to disabled youth with incorrect HIV knowledge. In relation to condom access, the odds of using a condom were 1.12 times higher among disabled youth that received their condoms for free than disabled youth that paid for their condoms. Additionally, the odds of using a condom for disabled youth that did not know how they accessed their condoms was 0.16 times less likely than disabled youth that paid for their condoms.

Model 4 considered the association between multiple sexual partnerships while controlling for all the socio-demographic and economic characteristics. It showed that age was not statistically significantly associated with having two or more sexual partners. Having two or more sexual

partners increased with an increase in age. The odds of having two or more sexual partners were 0.28 times less likely among disabled youth aged 25-29 years compared to those aged 15-19 years. A significant association was found between sex of the young people and having multiple sexual partnerships. Females had 0.25 times lesser odds of having two or more sexual partners. Compared to disabled youth with a physical disability, disabled youth with a hearing disability had 11.09 times higher odds of having two or more sexual partnerships. There was no significant relationship between race and multiple sexual partners. Whites had 0.75 times lesser odds of having two or more sex partners in the past 12 months compared to African disabled youth.

Disabled youth from rural settings had 1.07 times higher odds of having two or more sexual partners compared to those from urban areas. Furthermore, disabled youth with secondary education had 0.94 lesser odds of having two or more sexual partners than disabled youth with below secondary education. Disabled youth were 3.03 times more likely to have two or more sexual partners than disabled youth with below secondary education. The odds of having two or more sexual partners were 1.30 times likely among disabled youth at school and 2.37 times more likely among employed disabled youth compared to unemployed disabled youth. The results showed that having two or more sexual partners was 2.34 times more likely among disabled youth that received an income from their families or relatives, 1.44 times more likely among those that receive income from government or private donations compared to disabled youth that received an income from their salaries. All the nine provinces were not statistically associated with multiple sexual partnerships. Disabled youth from Eastern Cape had 0.35 times lesser odds of having two or more sexual partners compared to disabled youth from the Western Cape province. In terms of HIV knowledge, the odds of having two or more sexual partners were 0.83 less likely among disabled youth with correct HIV knowledge than disabled youth with incorrect HIV knowledge. Having two or more sexual partners was 1.07 times more likely among disabled youth that received condoms for free compared to those that paid for the condom. Moreover, having two or more sexual partners was 1.69 times more likely among those whose partners objected to use a condom than disabled youth who never had a condom.

CHAPTER 5: DISCUSSION

The findings of the study were discussed in relation to the specific study objectives that were obtained using different analytical methods. Firstly, a univariate analysis that includes background characteristics of disabled youth and levels of sexual behaviour among disabled youth. Secondly, to examine the levels of sexual behaviour age and sex-specific rates were conducted. Thirdly, this chapter ends by conducting a bivariate logistic regression of each predictor variable by each specific sexual behaviour and multivariate analysis. This includes unadjusted and adjusted odds ratios.

5.1. Discussion of Objective 1: "To examine levels of sexual behaviours by type of disability among disabled youth in South Africa"

In the present study, sexual behaviours were categorized into four categories defined as sexual activity in the past 12 months, age at first sex, condom use, and multiple sexual partnerships. A larger percentage of disabled youths had a physical disability in South Africa. This finding is consistent with a study done in three of the nine provinces in South Africa that also found that a majority of 55.1% indicated that they had a physical impairment (Rohleder et al., 2012b).

Contrary to the popular belief that disabled people are not sexually active, this study showed that disabled youth aged 15-34 years had ever had sex in their lifetime. Most disabled men had ever had sex 56.30% versus the 43.70% disabled females that had ever had sex. Similarly, disabled men were found to have the highest percentage of engaging in sexual intercourse the past 12 months 58.15% as compared to 41.85% sexually active disabled females in the past 12 months. The plausible explanation for these variations can be because of the fear of pregnancy among females that can lead to end of their schooling career and not being a school goer increases chances of early marriage and sexual experience (Yaya & Bishwajit, 2018). These results showed that there only marginal differences in the level of sexual engagement among disabled males and females in South Africa.

Although the well-known suggestion is that men aged 15-24 commonly engage in early sexual debut as means of affirming their masculinity, this study had an unexpected finding whereby disabled males had their sexual debut above the legal sex SA consent age that is above the age of 16. The study revealed that in the unadjusted model disabled females were 2.22 times more likely to have their sexual debut below the legal consent age and the adjusted model showed that females were 3.95 times more likely to have their sexual debut below the legal consent age. There is a possibility that disabled female youth in South Africa engage in sexual activity

early that is below the legal sexual consent age to assert their femininity. Moreover, this could be due to the child molestation of girls, particularly pronounced for disabled people, sexual violence of disabled females, and the dominant patriarchal culture that encourages early marriages among children in South Africa (Yeo & Moore, 2003). These results could also be attributed to research that has reported that girls that live with disabilities are considered as more prone to sexual exploitation due to their state of disability and is challenging for them to defend themselves and prevent violent situations (Rousso, 2003).

In addition, this study is consistent with other studies, disabled females were less likely compared to disabled men to engage in sex with multiple sexual partners(Bonomi et al., 2018; Mavuso & Maharaj, 2015; Schembri Lia & Abela, 2020). Amongst the sexually active disabled males, 77 per 1000 had multiple sex partners, while only 25 per 100 disabled females had multiple sex partners. This could be attributed to culture and gendered roles that separate female sexuality from that of males. This can be aligned to the subcultural hypothesis which posited that males have power and authority, as opposed to female sexual behaviours that take place outside of the marriage context, are rigorous (Goethals, 1971). Therefore, the gender society standards that persist that men's sexual needs are uncontrollable have an important in encouraging multiple sexual partnerships(Onoya et al., 2015).

Another expected finding consistent with other studies' findings was that condom use at last sex was lower among female disabled youth. The low use of condoms among females could be attributed to the patriarchal relationship that is prominent in South Africa and the majority of women have difficulty in negotiating condom use with their partners, especially when they are in male-dominated relationships or financially dependent on their partners.(MacPhail et al., 2009:Lindtner, 2020; Maharajh & Haffejee, 2021)).

5.2. Discussion of Objective 2: "To identify the demographic and socioeconomic characteristics associated with sexual behaviours among youths with disabilities in South Africa"

The study findings presented an unadjusted and adjusted model to identify the demographic and socioeconomic characteristics associated with sexual behaviours among disabled youth. The study has shown that demographic and socioeconomic factors display differences in the association to sexual behaviours. Across all models among the demographic variables, age, type of disability and province had a significant association with sexual activity. These findings are consistent with other studies that established that there is an association between

sociodemographic variables and sexual activity among youth(Baines et al., 2018; Darteh et al., 2020; Ueda et al., 2020). Furthermore, A large-scale study conducted among a United Kingdom birth cohort of sexual activity and readiness amongst the youth reported that sexual intercourse and socio-demographic characteristics such as social class, and lower level of maternal education had an association (Heron et al., 2015). Research has found that age is one of the significant demographic determinants of sexual practices(Moreau et al., 2019). This study found that sexual activity increased with an increase in age among disabled youths, however as compared to a study conducted in Ireland youths were most likely to have had sex at older ages, with an experience of alcohol or drugs, and are from disadvantaged backgrounds with many friends (Young et al., 2018).

The findings of this study revealed that young disabled people in the older age group (25-29) were more likely to have multiple sexual partners and sexual intercourse above the legal sex consent of 16 years in South Africa. Having multiple sexual partners among older disabled people could be attributed to the to a common phenomenon in which they tend to remain with a few trusted sexual partners and whereby females consider themselves as worthy to continue to enjoy unprotected sexual intercourse considering it as a safe practice (Odimegwu & Somefun, 2017).

The findings of this study suggested that White, Coloureds, and Indian disabled youth have higher odds of using a condom and reduced odds of having two or more sexual partners than African counterparts. This is in line with a study conducted in South Africa among non-disabled youth found that Black youths had higher odds of engaging in risky sexual behaviours than White youths (Muloiwa, 2016).

These findings supported the known phenomenon in South Africa whereby teenage pregnancy is found to be more pronounced among black adolescents(Nkosi & Pretorius, 2019). Race can influence safe or unsafe sexual behaviours (Odimegwu & Somefun, 2017). A possible explanation for these results is that in South Africa, empirical research highlights that although differences in HIV prevalence by gender can be argued, there exist historical societal situations which continued race inequalities. The circumstances increased the vulnerability of certain groups to HIV infections, particularly Black African that consist of the majority of the population (Weine & Kashuba, 2012). Furthermore, racially perpetuated HIV can be linked to the socio-political-economic classification due to the apartheid era in South Africa (Gilbert & Selikow, 2011). In addition, a plausible explanation for the differences that exist between race

and sexual engagement can be as a result of access to correct knowledge about the importance of using protection. Therefore, people of different racial groups are able to weigh the benefits of practising safe sexual intercourse and make comparison to the disadvantage of engaging in unsafe sex that enhance chances of STIs and unintended pregnancies. Furthermore, knowledge on the prevention of STIs through protected sexual intercourse can increase their absence of fear in having multiple sexual partners(MacArthur et al., 2018).

The adjusted odds ratios indicated that there are lesser odds of using a condom at last sex and increased odds of having two or more sexual partners among disabled youth residing in rural areas than disabled youth from urban settings. Therefore, it was revealed that disabled youth in rural areas were more likely to engage unsafe sexual behaviours with the lack of knowledge on healthy sexual behaviours. Similar to few other studies that have found a rural and urban distinction in sexual behaviour, wherein urban dwellers practice safe sex than those living in rural settings (Guiella & Madise, 2007;Chimbindi et al., 2018; Houle et al., 2018). One can also argue that the differences in condom use between rural and urban settings can be due to the conservative settings in rural areas whereby young people may fear being judged and specifically young disabled people wanting to avoid stigmatisation. In addition, it is evident from this study that disabled youth in rural areas were involved in unsafe sexual behaviours compared to their urban counterparts plausibly as a result of lack of knowledge on healthy sexual behaviours.

By province, the unadjusted model showed that disabled youth residing in Northern Cape, Free State, KwaZulu Natal, Gauteng, and Mpumalanga reported condom use compared to those in Eastern Cape, North West, and Limpopo. Across all models, the province was a significant predictor of sexual behaviour. The finding can be as a result of the socio-cultural perceptions and acceptance of sexual and reproductive health services including the use of modern contraceptives such as condoms. The myths and misconceptions regarding contraception at provincial level influences partners acceptance and contraceptives uptake particularly among young people(Mwaisaka et al., 2020). . Furthermore, the difference in engagement on sexual behaviours among disabled youth may indicate that there may be a lack of sexual reproductive literacy to address fears pertaining to contraceptive use and its importance. In addition, gender specific interventions targeted at young men and women regarding accurate information on SRH health could be impacting people's sexual decision-making and sexual behaviour. In a study by Mbeve (2017), findings revealed that in that in Mpumalanga, Limpopo, and Eastern Cape the access to condoms was difficult, they have to travel long distances to the hospital or

clinics to get the condoms. On the other hand, those in Gauteng, go downstairs at Clicks to buy a condoms, or even from the spaza shops inside their buildings.

Disabled youth with secondary education had increased odds of using a condom and lesser odds of having two or more sexual partners. This is line with the observation that having a primary or secondary education can lead to more positive sexual behaviours such as using a condom at first and more recent sexual intercourse (Odimegwu et al., 2019c). However, this is linked with an increasing propensity to have more lifetime sexual partners and engaging in sexual intercourse in an instance whereby individuals are exposed to non-formal education. On the contrary, another study among high-school students found that student with physical disabilities had higher odds of having had sex with more than four sexual partners during their lifetime(Jones & Lollar, 2008). Although in South African schools condoms are free and available, it is important that the physical environment is designed accordingly for condoms to be attainable to meet the needs of people with disabilities(Engelbert Bain et al., 2021). t. Although a clinic can be able to improve access to disabled persons with physical disabilities with the provision of ramp wheelchair users, however, this shall not benefit those with hearing impairment in terms of access because they would mostly require sign language interpretations.

Research has highlighted that correct and consistent condom use is observed as an effective protective strategy for HIV, STIs, and unintended and unwanted pregnancy prevention (Siegler et al., 2019). Based on the findings of this study on the low condom use at last sex, there are policy implications on the transmission of HIV/AIDS among young people with disabilities. Youth with mental disabilities were less likely to use condoms during sexual intercourse, and more likely to have multiple sexual partnerships. A possible explanation for this finding could be that persons with mental impairment's first sexual experience could have been abusive. Additionally, if they are in a congregate setting whereby their sexuality is highly controlled or punished, they tend to have negative reactions to anything sexual(Fisher et al., 2016). They also often involve anger and fear about their genitals (Griffiths & Fedoroff, 2014). In addition, research highlights that young people with mild or moderate intellectual disabilities encounter various episodes of violence such as threats and being attacked, theft, and social exclusion (Jansen et al., 2011).

Literature has also found that condom use is associated with self-efficacy, a physically disabled person with low levels of condom use self-efficacy is less likely to consistently use condoms

during sexual intercourse, and lack of confidence in their capacity to purchase condoms and negotiate usage may result in having unprotected sex (Tarkang et al., 2015).

Moreover, the reduced levels of condom use among female disabled youth compared to disabled male counterparts could be due to cultural silence around pre or extramarital sexual intercourse together with the absence of self-confidence and failure to negotiate condoms with sexual partners(Khalili et al., 2020). Given the efforts to encourage condom use uptake among persons with disabilities, there should be more attention focused on women who are biologically at more risk of acquiring HIV because of their weak negotiating power fir safe sex with partners(Abimanyi-Ochom et al., 2017).

The unadjusted odds ratios of this study indicated that disabled youth's odds of engaging in sex above the legal consent age increased with age. This finding is supported by a similar study conducted in the United States and found that adolescents with disabilities are often neglected from research on sexual behaviour, yet they seldom partake in social activities and form sexual relations (Shandra & Chowdhury, 2012). The isolation of disabled youth can lead to lesser opportunities to; learn about sex from their peers, have sexual experience, and have the necessary social skills to form healthier sexual relationships. Furthermore, the isolation of youth with disabilities reduces their likeliness to sexually debut above the legal consent age due to a lack of sexual knowledge. In previous research, it has been highlighted that a lack of friendship and opportunity to engage in sex topics with friends is associated with a lack of consolidation and understanding of issues about sexual health (Jahoda & Pownall, 2014). One can argue the value of socialising with peers, positive peer pressure in terms of sexual health can lead to more positive sexual behaviours(Adimora et al., 2018).

The findings of this study showed that disabled youth with correct HIV knowledge had 0.89 lesser odds of being sexually active compared to disabled youth with incorrect HIV Knowledge. Research has revealed that an increase in HIV/AIDs knowledge is essential and can influence an increase in HIV counselling and testing (HCT) as it is observed to mediate safe sex practices (Menzies et al., 2009). Other studies have reported that the possible benefits of an individual knowing their HIV status through HCT including risk reduction implementations such as correct and consistent condom usage, decrease in sexual partners (Bunnell et al., 2006). Similarly in Uganda and South Africa, the lower levels of HIV knowledge among disabled persons particularly females are attributed to the misinterpretation of the risk, inadequate and poor HIV services, and a high prevalence of non-consensual sexual

behaviours (Abimanyi-Ochom et al., 2017). The deficiency of organisational attention to HIV/AIDS exceeds the classroom settings, most disabled adult South Africans are beyond the reach of AIDS programmes within the schools.

The results for the current study revealed that having two or more sexual partners was high among disabled youth who reported to be employed compared to their unemployed counterparts. Research has indicated that employment status is an avenue to financial independence; the lack of it can create an economic dependency that increases people's, particularly girls, sexual health at risk(Krishnan et al., 2010; Kyegombe et al., 2020; Reed et al., 2018). The lack of opportunities including employment among disabled persons can lead youth to resort to other means of making a living such as engaging in risky sexual behaviours including transactional sex as means of survival(McMillan et al., 2018). Furthermore, there were increased odds of using a condom at last sex among disabled youth that receives income from family or government/private donations. While there may be many reasonable explanations for this observation, there are no firm conclusions that can be drawn using the present data. Undeniably, many youths with disabilities do not attend or remain in school for a long time to be able to benefit from Life Orientation (Rohleder et al., 2010).

Research has reported that rape can be interrelated to cultural myths and misconceptions about disabled persons with beliefs such as virgin cleansing as they could be regarded as virgins and easy targets for rape, further increasing their vulnerability to HIV/AIDs (Groce & Trasi, 2004). In South Africa, HIV/AIDs prevention education is an integral part of the national curriculum for schools. However, a study conducted by Visser and colleagues (2004) observed that this the programme was not implemented effectively across schools. They indicated that most schools had limited resources and hindered their ability to prioritise HIV/AIDS when confronted by other vital social issues. The participants of the Africa Campaign on Disability and HIV and AIDS issued the Kampala Declaration to call upon African governments to include disability in its diversity as a crosscutting concern in all the poverty reduction strategies and make HIV programmes easily accessible to disabled persons (Hanass-Hancock et al., 2011).

Women together with traditional notions of appropriate feminine behaviour are associated with sexual scripts that expect them to embody attractiveness and desirability (Eaton & Rose, 2011) instead of sexual desire. Such leads to men's ability to show physical prowess and sexual skill while females maintain feminine beauty. However physically disabled men and women may

not be observed to conform to norms related to gender and therefore labelled as less gendered than non-disabled persons (Hunt et al., 2017). Additionally, research has observed that multiple sexual partnerships are a common as consensus or coercion among youth with disabilities and this leads to their increased risk of STIs (Groce, 2003).

5.3. Applicability of the findings to the theoretical and conceptual framework

The theory underpinning this study is the theory of planned behaviour. The theory has assisted in guiding the current study. The theory posits that the intention to achieve or prevent a behaviour is influenced by perceived attitude, perceived peer influence, and perceived self-efficacy (Ajzen, 1991b).

The theory's tenets posit that the immediate antecedent of a behaviour is the intention to perform that behaviour. In essence, intentions are therefore determined by three independent constructs such as the attitudes towards the behaviour, whether it is positively or negatively valued. Secondly, the subjective norms, which are interrelated to the social pressure to engage or not in the behaviour. Lastly, perceived behavioural control which describes people's perception of the ease or difficulty to perform the behaviour (Úbeda-Colomer et al., 2019). Identifying the demographic and socioeconomic factors associated with sexual behaviours using the theory of planned behaviour among disabled youth is valuable in promoting and strengthening sexual education programmes. In addition, it is important to assess preventative intention on sexual behaviours among disabled youth at an early age of adolescence and among young adults to mitigate sexual adverse outcomes such as STIs and unwanted pregnancies.

The framework in turn enhances our understanding of the demographic and socioeconomic factors that influence behavioural intention (no condom use intention) as independent predictors of sexual behaviour beyond the direct variables of the theory of planned behaviour. In addition, the current study was able to show how subjective norms (condom access) and knowledge (HIV knowledge) sequentially influenced the sexual behaviours of youth living with disabilities in South Africa. The socio-demographic variables such as age, sex, race, type of disability, place of residence, province, and the socio-economic variables such as educational level, employment status and income source are variables that were used to give plausible explanations on the behavioural intention. Throughout existing literature, the theory of planned behaviour has been utilized to predict a variety of behaviours in many different populations, the theory has been described as the most extensively used theory in the study of sexual risk behaviour in the Western World (Albarracin et al., 2001).

CHAPTER 6: CONCLUSION, RECOMMENDATIONS, AND LIMITATIONS

6.1. Conclusion

The inference that is drawn from this is that demographic and socioeconomic factors are associated with sexual behaviours among disabled youth in South Africa. In addition, the study identified that some demographic and socioeconomic factors were associated with the different categories of sexual behaviour among disabled youth. This has some policy implications and would therefore, enlighten evidence-based programmatic interventions. This study has highlighted empirical information that can assist in attempts to mitigate the spread of STIs, including HIV/AIDs fatal outcomes of unsafe sexual practices in the country. The findings of this study will help accelerate the steps directed towards accomplishing good health and well-being in South Africa, especially the achievement of the 2030 target 3 of the Sustainable Development Goal. In addition, the findings of this study are line with the objective of the Convention on the rights of persons with disabilities that advocates for inclusion of sexual health promotion and implementation strategies.

The study established that young people living with disabilities in South Africa are sexually active being and their sexual engagement differed by different types of disabilities they had. Disabled youth also engaged In sexual behaviours that can increase their risk to HIV/AIDs. It is, therefore, important that the government of South Africa through its intervention programmes and department intensify efforts that target HIV prevention strategies and advocate for sexual reproductive health services that are specifically tailored towards the different sexual health needs of disabled individuals. Furthermore, workshops that are catered for young people with disabilities and their sexual health's needs in assisting them in understanding importance of family planning, how to use condom use effectively are essential. In terms an individual with a physical disability they may require to have ramps in health institutions that allow them to easily access condoms. Moreover, other services can be provided through home-based assistance or Disabled Persons Organizations (DPOs) for convenient geographical access for disabled persons.

The study indicated that there are gender differences in sexual behaviour, which implies that there different risks for HIV/AIDs among both males and females disabled youths in South Africa. Therefore, policymakers including planners target interventions regarding safer sexual practices must be tailored to gender among disabled young people.

6.2. Recommendations

From this study, it is apparent that sexual and reproductive health campaigns regarding condom use should be emphasised on disabled youth in rural areas. However, interventions should not neglect disabled youth urban residents.

In light of the results of this study, prevention methods were only assessed with one item which is the use of condoms. Future studies may need to include a more comprehensive assessment, such as including different forms of contraceptive methods about sexual behaviours among disabled youth.

Due to the world becoming more digitised and youth are increasingly more likely to use social media, the exposure can result in positive or negative behavioural outcomes. Research needs to investigate whether social media networks have an impact on disabled youth engaging in safe or unsafe sexual behaviours. This is due to the ease of access of such platforms, with no parental supervision, and being of legal age can lead to engaging with people or online activities that yield negative outcomes. Thus, research needs to identify various forms of social associations that can impact sexual behaviours.

Noteworthy, in the future, the study recommends the collection of, where possible, more detailed data on the type, length of, and overlap sexual partnerships; including the frequency of sexual intercourse and the consistency of condom use in those partnerships. Given the difficulties in obtaining measurements on disabled youth sexual behaviours, further research on more correct and effective ways to collect valid survey data would be beneficial.

The South African Department of Education needs to ensure that teachers that work with youth with disabilities are well-trained to teach them as to discourage the stigmatization regarding sexual and reproductive health. Given that sociodemographic and socioeconomic characteristics were significantly associated with sexual behaviours, the Disability and HIV and AIDs Trust need to ensure that demographic and socioeconomics of disabled youth are taken into consideration for appropriate health services. It is also vital that HIV and AIDs and STI Strategic Plan for South Africa, integrates family planning services in their framework that are tailored and specifically designed for youth living with disabilities.

6.3. Limitations

The study was limited because the source of data was based on self-reporting informants (self-administered questionnaire) which could have led to under-identification and under-reporting of information. Therefore, validity and reliability have not been established in this study. Furthermore, due to self-reported sexual health information recall and social desirability biases may have decreased the validity of the survey and distorted comparisons of sexual behaviours among disabled youth by sub-groups, disability type, and other demographic and socioeconomic factors. Some disabled respondents may have been unable to recall whether they used a condom at their last sexual engagement, resulting in inaccurate data being provided. In addition, information thought to have the possibility of leading to judgments could have been withheld by the disabled respondents.

Similar to other household surveys, young people residing in boarding schools, in the streets, in prisons, and uniformed service quarters et cetera were excluded from the survey. The study was therefore limited to the varying size of the survey.

The study also utilised secondary data and it indicated that the variables used in the analysis are limited to what was collected during the survey. Other variables omitted by the survey that could be included in the logistic model to explain the association can have possibly not been included. Despite these limitations, the findings highlight the levels, and the demographic and socioeconomic factors associated with sexual behaviour among youth with disabilities in South Africa.

6.4. Suggestions for Further Studies

Of particular note is that demographic and socioeconomic factors are prone to temporal changes. Therefore, there is a need for a more recent analysis utilising data from recent surveys exploring predictors of sexual behaviours among disabled youth that were excluded in this analysis. The stage of being a youth is associated with a time of change and transition, therefore, studies can use a mixed-method study approach to evaluate the sexual behaviours of disabled youth with a life context full of change at different points in time.

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Appendix 1:

Annexure A: Table of weighted frequency and percentage of characteristics of disabled youth (15-34) in South Africa.

Main Independent variables	Frequencies (N)	Percentages (%)
Total	88 019	100.0
Age-group		
15-19	3 076	3.5
20-24	20 125	22.9
25-29	22 946	26.0
30-34	41 871	47.6
Mean Age	24.9	
Sex		
Male	51 179	58.1
Female	36 840	41.9
Type of disability		
Physical	45 483	51.7
Sight	28 529	32.4
Hearing	5 585	6.4
Speech	1 554	1.8
Mental	13 795	15.7
Race		
African	70 874	81.2
White	8 829	10.1
Coloured	1 205	1.4
Indian	6 136	7.1
Place of residence		
Urban areas	61 194	69.5

Rural areas	26 825	30.5
Level of Education		
Below-Secondary	11 044	14.9
Secondary	60 229	81.7
Higher	2 409	3.3
Employment status		
Unemployed	57 942	65.8
At school	7 809	8.9
Employed	22 268	25.3
Income source		
Salary/earnings	16 564	33.6
Family and relatives	9 456	19.2
Government or private organization	23 243	47.2
Province		
Western Cape	14 037	16.0
Eastern Cape	6 497	7.4
Northern Cape	2 806	3.2
Free State	5 417	6.2
KwaZulu Natal	12 046	13.7
North West	8 548	9.7
Gauteng	21 750	24.7
Mpumalanga	10 770	12.3
Limpopo	6 148	7.0
HIV/AIDS Knowledge		
Incorrect HIV Knowledge	31 481	35.8
Correct HIV Knowledge	56 539	64.2

Condom Access		
Paid For	19 208	40.8
Free	27 908	59.2
No condom use intention		
No condoms	12 662	31.5
Partner objected	2 409	6.0
Trust partner	25 113	62.5

APPENDIX 2:

Annexure B: Tabular presentation of some of the reviewed articles

Title	Author(s) and Year	Journal	Data Source and Methods of Analysis	Main Results	Gaps in the study
Sexual behavior and practices among adolescents with disabilities in southwest Nigeria. Sexuality and Disability	Taiwo Modupe Oladunni-2012	Sexuality and Disability	A quantitative cross-sectional survey was done among 140 adolescents with physical disabilities in four handicapped schools in Osun state South West	More than half of the study sample indicated to be sexually active, and approximately 30% reported having had multiple sexual partners. This is similar to findings in the general population. This study highlighted that particular unhealthy sexual behaviours and practices among adolescents with disabilities have dire consequences on their lives in adulthood. This can be due to their poor knowledge of sexual health due to lack of access to sexual information and education. The participants reported incidences of sexual assault. The outcome of this study indicated that adolescents with a disability are highly vulnerable and at higher risk of contracting HIV/AIDS and possibly at risk for new infections.	This was a cross-sectional study therefore causality cannot be inferred. Due to the sensitive nature of sexual behaviors, the respondents might have not been open and honest in their responses due to preexisting judgments about disabled people as asexual beings. The study utilized self-administered questions and maybe validity and reliability concerns.

1. How Zulu-speaking youth with physical and visual disabilities understand love and relationships in constructing their sexual identities.	Paul Chappell-2014	Culture Health And Sexuality-Department of Anthropology and Development Studies.	The study adopted a qualitative methodology and used a participatory research design. The study population was 22 Zulu-speaking, 15–20-year-olds, with physical and visual disabilities bring into discourse issues surrounding love, relationships, sex, and HIV and AIDS in the construction of their sexual sense of self. All the focus-group discussions and interviews were translated and transcribed by a professional transcriber from isiZulu to English. The data were analyzed using content analysis to categorize the data into themes and highlight significant findings concerning the research question. Foulcauldian discourse analysis was utilized, which involved examining issues of power and cultural/societal ideologies within the text.	The findings of this study outlined how the young participants bring into discourse issues of love, initiating relationships, and their perceptions of dating non-disabled youth. Through their discussions, it was evident that the young participants did not explicitly focus on their disability identity and experience but, instead, were strongly influenced by cultural norms surrounding gender roles and local traditions. At times, however, alternative positions were taken that contradicted these norms.	The data in the study was being translated from isiZulu to English, there is the possibility that the nuances of particular words and phrases could have been lost in translation. The study recognized young people with disabilities as social agents, the study took a unique position by training three of the young participants as co-researchers. Given this position and their limited research experience, there is a possibility that the co-researchers may not have necessarily explored in-depth some of the topics raised by the other participants. In addition, due to the smaller sample of participants with physical disabilities, their voices were not so fully represented as those of others.
2. Sexual vulnerability and HIV seroprevalence	Adonis Touko, Célestin P Mboua, Peter	Journal of the International aid's society. - 2010	This was a quantitative cross-sectional study, encompassing a serology component, with the aim of better understanding	From the results, it was clear that the hearing impaired were highly involved in risky sexual practices, as observed through	Sexual activity is real and intense among the study's sample, who are, in most cases, more exposed to

among the deaf and hearing impaired in Cameroon.	M Tohmuntain, Anne B Perrot.		sexual behaviour and determining HIV seroprevalence within the deaf in Yaounde. The respondents were identified in the five subdivisions of Yaounde through the application of the "snowball" sampling procedure. This procedure is often used for studies on hard-to-reach groups and hidden groups, such as men who have sex with men. For the behavioural survey, recruitment in each of the subdivisions was done with the assistance of leaders of deaf and hearing-impaired associations. The interview process followed a progressive path. First, interviews were conducted with leaders of associations, hearing impaired persons known by leaders of associations, and hearing-impaired persons known by the persons recruited. Second, each informant was used as a resource person for the identification of one or more other deaf people in the same subdivision until a total	major sexual indicators, such as age at first sexual intercourse; condom use; and knowledge of sexually transmitted infections and AIDS. Furthermore, it was noted that the HIV prevalence rate of the hearing impaired in the capital of Cameroon was 4%, close to the prevalence in the city's general population (4.7%).	sexual risk than hearing persons, contrary to social clichés, which assume that these people are asexual. To tackle this vulnerability, it is crucial to intensify research efforts to increase the knowledge of the impact of HIV/AIDS among PWD in general and the hearing impaired in particular. This will greatly contribute to furnishing decision-makers and programme managers with the adequate and required information, encouraging them to initiate education and HIV prevention projects.

			of 25 informants per subdivision had been identified. These people were then interviewed. A total of 118 deaf participants were interviewed for the behavioural component, using sign language as a means of data collection, while 101 participants underwent HIV serology testing. Descriptive analyses were done for behavioural data with Epi info software, while sera were tested by health personnel, using rapid and confirmation test reagents for further analysis.		
3. Sexual Behaviours and Vulnerabilities to HIV: A case study of the Hearing and Visually Impaired pupils of Munali Boys and Munali Girls High Schools in Lusaka	Stephen Katuta	Medical Journal of Zambia, Vol. 38, No. 3 (2011*).*	An exploratory descriptive cross-sectional the study was employed. The setting of this study was a pupil sample of 51 from five streams grade 8 to 12. The study restricted to the visually and hearing-impaired pupils of Munali Boys and Munali Girls High Schools in Lusaka was chosen for this study. The study was driven by the inductive strategy. This is one strategy that is associated	The study found that within the study population, only 4 teenagers among the hearing and visually impaired pupils (2 males and 2 females) said they were HIV positive and 19 said they were HIV negative and all these hearing and visually impaired pupils were teenagers. The other 28 hearing and visually impaired pupils did not know their sero status. The self-report sero prevalence was 7% and this was higher than the nations. There was no	Similar to findings across the globe, disabled individuals (male and female) have a higher likelihood of being victims of sexual abuse and rape compared to their non-disabled peers. Therefore, Factors such as increased physical vulnerability described in this study like the need for attendant care, life in institutions, and the almost universal belief that disabled people cannot be a reliable

			with positivism. Within the extent of this strategy, the the researcher wanted to make careful observations, measure phenomena, analyse the data obtained, and based on the conceptions derived from that the researchers who intend to use this strategy must employ four inductive stages that guide the methodology of conducting quantitative inductive research.	significant difference in knowing one's HIV status by age group (ñ = 0.200) and not even by sex (ñ = 0.347). Being a girl was associated with significant vulnerabilities and risky behaviours.	witnesses on their behalf make them targets for predators. In cultures such as the ones explained in the study sexual behaviours like condom use, the number of sexual partners, and STIs may be under-reported. In national probability surveys, adult men, relative to women, tended to report greater numbers of sexual partners 5, 17 and, among people with risk factors for HIV/STDs, men are more likely to report using condoms (i.e., women report more non-use than men). Thus, men may be over reporting their numbers of sexual partners and their condom use (or women may be underreporting). Consequently, methodological conditions that may increase comfort with the interview or question might be expected to have opposite effects on men's and women's responses. That is, men may

					report somewhat fewer and women somewhat more of some target behaviours (i.e., numbers of partners, condom use). In addition, evidence suggests that the largest reduction in gender differences in reports of numbers of sexual partners will occur for measures assessing longer periods (e.g., lifetime vs. past 12 months). A lack of association seen in this study should be interpreted with caution because of a lack of diversity and sufficient numbers of males in the sample.
4. Health Information Needs of d/Deaf Adolescent Females: A Call to Action	Chad E. Smith, Marilyn Massey-Stokes, and Ann Lieberth	American Annals of the Deaf, Vol. 157, No. 1 (SPRING 2012), pp. 41-47.	The article aimed to address health risks of adolescents and Deaf adolescents, in particular, health literacy, communication issues affecting deaf adolescents. The Internet is a source of health information and the health information needs of a deaf adolescent female. The article used a call to action to create a web-based response to address the unique health information and	Adolescents seek health information from a variety of sources, including family, peers, health care providers, mass media, and the Internet. Evidence indicates that adolescents who are deaf have unique health-related needs, yet health communication efforts have not reached them. Despite the Internet's exponential growth and the growth of online health information-seeking	As part of a comprehensive effort, effective health communication strategies are essential to enhance the health literacy of this population so that they can be better armed to adopt or sustain healthy behaviors. Within the scope of this multidisciplinary effort, it is important to address those who have limited English proficiency, such as deaf

			communication needs of deaf adolescent females.	behavior among adolescents, reliable information devoted specifically to deaf adolescents who communicate primarily in ASL is rare. Deaf adolescent females face numerous challenges accessing web-based health information to enhance their decision-making about important health issues such as body image, physical activity and nutrition, puberty, and relationships.	adolescent females. Therefore, there is a clear need to develop a web-based health communication tool to provide deaf teen girls with access to reliable, accurate health information that is both captioned and presented visually in ASL. This will require a multifaceted approach that starts with obtaining qualitative data from the target population regarding its member's health interests and health information seeking practices, as well as the communication barriers they encounter in seeking quality health information. Once audience-specific information is obtained, the next steps will involve planning, implementing, and evaluating a free, web-based repository of reliable health resources specifically designed for delivery in both ASL and English print. Implementation of such a project will require the integration of professionals

					from health education, deaf education, library science, and instructional technology. Featured health topics might include body image and eating disorder prevention, nutrition and physical activity, mental health, stress management, puberty, relationships, sexuality, alcohol, tobacco, other drugs, and ASL for health vocabulary.
5. Condom Use Among Deaf College Students	Jason J. Zodda Ph.D	JADARA Volume 49 Number 2 Winter *2015*	The study recruited 120participants from Gallaudet University. A university that predominately enrolls deaf and hard-of-hearing young adults. At the time of data collection, the undergraduate student body was made up of 1,145 students (Gallaudet University, 2009), which indicated that this study sampled about 10% of the student body. The inclusion criteria were quite broad to include most Gallaudet University undergraduate students: full-time undergraduate students	Of the three types of sexual contact studied, the results indicated that deaf college students engage in significantly more risky sexual behavior (i.e., less consistent condom use) during vaginal intercourse than hearing young adults. These findings indicate that deaf young adults are at a higher risk than hearing young adults for experiencing negative consequences of risky sexual behavior, namely sexually transmitted infections and unplanned pregnancies. The most severe consequent may be	The current study would likely have benefited from a larger sample. Granted, the composition mirrored about 10% of the Gallaudet undergraduate population. Though the sample was not random, participants self-selected to join the study. A future study may benefit from a larger sample, composed of randomly selected participants from several geographic regions as it may generate results more generalizable to the greater deaf population. A second limitation is the

			between the ages of 18 and 25 years who identified themselves as deaf, Deaf, or Hard of Hearing. Participants who were married (regardless of sexual orientation) were excluded from the research. All measures were converted to electronic questionnaires and uploaded to an encrypted server. All measures were completely anonymous, using an ID number to organize the collected data. No identifying participant information was collected. Basic background information was collected to assess the representativeness of the sample. All measures were evaluated by experts in deaf literacy to ensure they could be accurately administered to young adults who are deaf. Following the approval of the Gallaudet University Institutional Review Board, participants were recruited via fliers, newsletter postings, and posters. Participants independently completed the electronic questionnaires in a confidential	the transmission or acquisition of HIV.	study's sample of what appeared to be heavily weighted with participants who come from families with deaf relatives. About one-third of the current study's sample reported having at least one deaf parent and about half reported having at least one deaf relative in their family. There are several possible reasons for this; all are speculative, though may become interesting future research topics. For instance, children born into deaf families may be more comfortable discussing their sexual history and therefore chose to participate more than persons from hearing families. A second possibility is that families who have deaf relatives may be more likely to send their children to schools that predominately enroll deaf students. Regardless of the reason, this limitation

			environment. The results of this study were generated from a sample that was representative of the university's age, gender, and racial/ethnic background, allowing these results to be generalized to the greater deaf collegiate population.		indicates that the results are less generalizable to the overall deaf population of the United States; the results are a representation of deaf young collegiate students.
6. Dating persons with physical disabilities: the perceptions of South Africans without disabilities	Xanthe Hunt, Leslie Swartz, Mark Thomas Carew, Stine Hellum Braathen, Mussa Chiwaula & Poul Rohleder-2017	Culture, Health & Sexuality An International Journal for Research, Intervention, and Care	Data from 1723 survey respondents were analyzed thematically. Findings reveal largely negative attitudes towards people with physical disabilities. The project involved the analysis of qualitative data from story completion vignettes completed by 1723 respondents. The vignettes formed part of a larger mixed-methods survey on societal attitudes towards people with physical disabilities in South Africa. The survey included questions exploring perceptions of different facets of physical disability and sexuality, as well as a demographic questionnaire. In the introduction to the survey, a person with physical disabilities was defined as 'someone with a physical	Findings reveal largely negative attitudes towards people with physical disabilities. Respondents without disability perceived numerous barriers to dating a person with a physical disability, including social stigma, anxiety, and concerns about the burden of care they believed such a relationship would place upon them. However, there was some evidence to suggest that some positive attitudes do exist, and a few respondents were open to dating a person with physical disabilities. Findings contribute to a nuancing and expanding of the 'myth of asexuality among physically disabled people by showing that people with physical disabilities are actively desexualized by	It is worth noting that the sample had more white respondents, fewer men, and respondents with a higher degree of education than the South African population at large. This limits the generalizability of the findings of the study.

			impairment that has a substantial and long-term adverse effect on the person's ability to perform normal day-to-day activities, for example walking, eating, going shopping. Gender-matched vignettes were employed to elicit participant beliefs about, discursive practices used, and ways of thinking about, dating a person with physical disabilities. The vignettes were constructed in consultation with a group of people with physical disabilities.	persons without a disability. Future research is needed to explore how the inclusive attitudes, of which we did find evidence here, can be further cultivated.	
7. HIV status, knowledge, attitudes and behaviour of persons with and without disability in South Africa: evidence from a national population-based survey	Supa Pengpid, Karl Peltzer, 2019	Pan African Medical Journal	Cross-sectional data of 26404 participants 15 years and older from the "2012 South African national HIV prevalence, incidence, and behaviour survey" were analyzed. The sampling strategy was stratified by province, type of geolocality, and predominant population or racial groups. Using multistage sampling, a random sample of "enumeration areas" (EAs) was selected and within EAs households were randomly selected. All individuals within a household	The study found a high prevalence of HIV infection in persons with disabilities (16.7%), in particular, those with hearing impairment (31.6%). This study confirmed that persons with hearing impairment had together with persons with communication and speech impairment (21.6% and 5.9% high HIV/AIDS knowledge, respectively) had the poorest HIV/AIDS knowledge among the different types of disabilities. study shows that people with	Disability was only assessed with one item, which has its limitations. Future studies may want to include a more comprehensive assessment, such as using the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0). Due to the cross-sectional nature of the study, no causative conclusions can be drawn.

			were eligible to participate. This analysis is based on data on individuals aged 15 years and older who participated in the survey. The study survey proposal was approved by the "HSRC Research Ethics Committee and by the "Centers for Disease Control and Prevention" (CDC). The response rate for participating in the survey at the household level was 84.7% and for HIV testing 67.5%. descriptive statistics were used to summarize the prevalence of study variables. Pearson Chi-square was used to test for differences by disability status. Multivariable logistic regression was used to estimate the impact of disability status on HIV/AIDS knowledge, HIV/AIDS stigma, sexual risk behaviours, and psychological distress. In addition, multivariable logistic regression was utilized to estimate associations with HIV positive status for persons with disability and persons without disability separately. All	disabilities have additional disadvantages such as lower education and lower-income compared to persons with disabilities, which makes them even more vulnerable to HIV risk. The finding that individuals with a disability experienced more psychological distress than persons without a disability may refer to the additional mental distress people with disabilities suffer from due to their impairments. This study found that in both groups (with and without disability), psychological distress and high HIV stigma were associated with an increased prevalence of HIV infection. This finding emphasizes the need for mental health and stigma prevention interventions. While sexual violence was associated with an increased risk of HIV infection in Cameroon, this study could not find such an association. These differences may be attributed to different ways of assessing sexual violence.	

			variables that were statistically significant at the P <0.05 levels in bivariate analyses were included in the multivariable model. In the paper, weighted percentages are presented. The "svy" command was utilized to take into account the multi-stage cluster design of the survey. All statistical analyses were performed utilizing Stata software version 12 (Stata Corp., College Station, TX, USA).		
8. The sexual behaviour of physically disabled adolescents	Soraya Maart, Jennifer Jelsma-2014	Disability and Rehabilitation	A cross-sectional, descriptive, and analytical research design was used to describe the sexual behavior of adolescents with physical impairments attending schools for disabled youth within the Cape Town Metropolitan area. Statistics Version 8 was used to analyze the data. Descriptive statistics were utilized and as the data in the National Survey is presented by grade rather than age, the grade was used as the grouping variable. As explained in the Results section, only Grade 8 and Grade 9 data were	The most important finding in this study is that adolescents with physical disabilities are engaging in health risk behaviours to a similar degree to the adolescents without disability. Most at risk would appear to be the younger adolescents, particularly the females, who are starting sexual activity early and are not taking adequate precautions. It is suggested that sex education emphasizes the need to delay the onset of sexual activity in adolescents with	The inclusion criteria of the study limited the sample size to adolescents with physical disabilities and thus the study may not reflect the health risk behaviours of other disability groups. The responses might be biased towards adolescents who are more compliant and more likely to participate voluntarily in research. It has been reported that in the age group of 5-18, 22% of those with disabilities in the Western Cape had never attended school and this

			utilized and these were amalgamated and compared with the amalgamated Grade 8 and Grade 9 data published in the Report. The Chi-square test was used to test for association between response and membership of either the National or Special Schools group. The values of the numerator and denominators were taken from published data from the survey.	a disability, the regular use of condoms, and the early treatment of STIs.	study, being school-based in an urban area would obviously exclude a large number of possible respondents. The comparison between the sample from Special Schools and the National sample did not reveal any associations between group and behaviour. However, the numbers were small and if a larger group of adolescents with special needs were included, more associations might emerge as being significant.
9. Gender differences in HIV knowledge and unsafe sexual behaviours among disabled people in South Africa.	Poul Rohleder Arne H. Eide Leslie Swartz Chitra Ranchod, Margie Schneider & Clare Schür-2012	Disability & Rehabilitation	Data was collected by means of a survey questionnaire from a total sample of 285 disabled individuals in three of the nine provinces in South Africa. Data was analysed by means of descriptive statistics. Participants were recruited in three of the nine provinces in South Africa (Gauteng, KwaZulu-Natal, and Western Cape provinces). Within these three provinces, six sites were selected	Results indicated that the majority of disabled people participating. in this study had ever had sex. Men were more likely to report having had more sexual partners than women. Results of HIV knowledge indicate that there were a high number of people who indicated uncertainty about HIV transmission. There were low levels of knowledge about HIV prevention,	There are limitations to the study. In particular, while data was collected from three different regions in South Africa with varying population groups, the sample is not representative of the South African population. While only slightly, the gender of the sample was twisted, with slightly more male participants than females. Furthermore, there was a large amount of missing data

			and comprised three urban, two rural, and one peri-urban or informal settlement.	although a majority recognized the importance of condoms in preventing HIV. More men than women felt that condoms were unreliable or were “too much trouble,” however many did indicate that they were willing to use condoms. Despite the recognition of the importance of condoms in HIV prevention, there were relatively high levels of reported unsafe sexual behaviour. Few gender differences were found with unsafe sexual behaviour, although significantly more men than women reported concurrent sexual relationships, and more men than women reported having sex without a condom after alcohol use	which needed to be reduced. Despite these limitations, the sampling is regarded as significant for providing a descriptive analysis of gender differences in HIV knowledge and risk behaviours.