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TEACHERS' AND CHILD CARE PROVIDERS' VIEWS OF SEXUALITY, HIV AND AIDS EDUCATION IN WORKING WITH LEARNERS WITH DISABILITIES IN SPECIAL NEEDS SCHOOLS IN SOUTH AFRICA

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By

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ABSTRACT

TEACHERS' AND CHILD CARE PROVIDERS' VIEWS OF SEXUALITY, HIV AND AIDS EDUCATION IN WORKING WITH LEARNERS WITH DISABILITIES IN SPECIAL NEEDS SCHOOLS IN SOUTH AFRICA

By

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Learners with disabilities are at increased risk of HIV infection. Providing sexuality education to learners with disabilities is imperative. Teachers and child care providers are often the primary individuals imparting this knowledge to learners with disabilities.

The purpose of the current investigation was to explore teachers and child care providers views of teaching sexuality, HIV and AIDS programs in working with learners with disabilities at Special Needs Schools. Participants were teachers and child care providers teaching at Special Needs Schools in South Africa. A mixed-method approach was employed using a survey questionnaire and semi-structured individual interviews concurrently.

Descriptive statistics on ten study variables indicate high mean scores for causation (4.5) and levels of comfort (4.4). This is expected given the educational level of the sample. Correlation matrix for the ten study variables indicates strong positive associations for teaching practices with cure ($r = .37$, $p < .01$) and serious AIDS problem ($r = .35$, $p < .05$). The four major constructs indicate high mean scores for both knowledge (4.2) and teaching practices (4.2). Strongest positive correlation between

knowledge and attitudes ($r = 41$, $p < .01$) indicating a high level of knowledge relates positively to attitudes towards taking care for HIV infected persons and the importance of training programs related to HIV and AIDS.

With regards to the qualitative data, participants' reported that their experiences related mostly to dealing with the cognitive abilities of their learners and their own level of comfort. The most important need expressed by participants' related to training, particularly suitable material and lessons addressing the needs of learners with disabilities. Participants also noted that the importance of imparting this knowledge related to sexuality, HIV and AIDS education to their learners. Lessons used are based on mainstream public schools, thus there seem to be no accountability for disability when teaching this topic. Teachers therefore adapt and modify lessons based on the needs of their learners. Implementing new training designs is crucial therefore providing teachers with updated and current training will allow them to teach more effectively on this topic. Relationship of findings to the theoretical framework used to guide the present investigation, implications of study findings related to practice, policy and training, and suggestions for future research are provided.

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LIST OF ABBREVIATIONS

HIV:	Human Immunodeficiency Virus
AIDS:	Acquired immunodeficiency syndrome
ICF:	International Classification of Functioning, Disability and Health
WCED:	Western Cape Education Department
WHO :	World Health Organization
KABP:	Knowledge, Attitudes, Beliefs, Practices
TR:	Transcript
KI:	Key Informant
I:	Interviewer
DOE:	Department of Education
SNS:	Special Needs Schools

CHAPTER 1

Introduction

Background

Globally, the percentage of persons living with HIV has stabilized since 2000 (UNAIDS, 2008) but AIDS has caused immense human suffering worldwide. The impact of the disease has been especially huge on vulnerable populations (Chappell & Radebe, 2009; Groce, 2005), in particular on persons with disabilities. There appears to be an assumption that persons with disabilities are not at high risk of HIV infection (World Bank, 2004). Individuals with disabilities are often perceived as asexual and hence are viewed as not involved in sexual risk behaviors. On the contrary, individuals with mental, physical, sensory or intellectual disabilities are perhaps at increased risk for every known risk factor for HIV and AIDS (Groce, 2003). Further, persons with disabilities are more likely than others to be poor, most stigmatized (World Bank, 2004), poorly educated about sex and vulnerable to sexual abuse (Kaiser Family Foundation, 2007; World Bank, 2004). Behavioral risk factors for HIV related to sexual activity among persons with disabilities are the same as those for the general population (Groce, 2005). Therefore, providing learners with disabilities with sexuality, HIV and AIDS education is essential.

Particularly in sub-Saharan Africa, the HIV and AIDS epidemic has had its most profound impact to date (UNAIDS, 2008). It is reported that nearly 90% of all HIV positive children reside in sub-Saharan Africa where an estimated 67% of all people are living with HIV (UNAIDS, 2008). According to the Kaiser Family Foundation (2007), there are more than 5 million people living with HIV in South Africa alone, the greatest number of any country in the world. Women comprise the majority of those living with

HIV and AIDS in the region and young people are at particular risk (UNAIDS, 2008; Kaiser Family Foundation, 2007). In the South African education system, it has become mandatory for all teachers to teach on the topic of sexuality, HIV and AIDS education to all learners with disabilities. But not many studies have been conducted to investigate what the impact of these educational programs are and in particular, what teachers and child care providers views are related to teaching this topic to learners with disabilities.

Statement and Significance of Problem

Persons with disabilities are largely ignored in HIV prevention campaigns worldwide and this is a matter of grave concern (Groce, 2003). Various reasons have been advanced for the lack of attention to HIV prevention issues for persons with disabilities. These include the lack of appropriate educational material and insufficient training of teachers and health professionals in dealing with person with disability (Wazakili, Mpofu & Devlieger, 2009). Exploring teachers and child care providers views of teaching this topic to learners with disabilities will equip learners with the necessary information to protect themselves from risk factors associated with HIV infection. Specifically since the risk factor related to HIV transmission for adolescents are increased by social marginalization (World Bank, 2004) that alienates them from the rest of society. Often, teens with disabilities are 'excluded from social interaction thus limiting their opportunities to set boundaries for themselves' when they engage with the opposite sex (Groce, 2005,p.217). As a result, teens with disabilities are most often pressured into sex because of the need for acceptance and inclusion Wazakali et al, 2009).

Studies conducted with youth with disabilities (Chappell & Radebe, 2009; Wazakili et al, 2009; Groce, Yousafzai, Dlamini & Wirz, 2006; Mulindwa, 2003; Cheng & Udry, 2002), all concur that reaching disabled populations with AIDS messages is complicated. In Africa in particular, high illiteracy rates are a factor and when AIDS education is available, youth with disability may be often excused from such instruction because teachers may assume that they will not need the information (Chappell & Radebe, 2009). According to the Department of Education in South Africa (DOE) (2004), a large proportion of youth with disabilities are not in formal school. Further, Schneider (2000) reports that youth with disabilities under the age of 18 only reach primary level education and they are less likely to reach grade 12. Chappell and Radebe (2009) further emphasize the critical role education plays in the development of skills, knowledge and identity therefore without education it inevitably leads to youth with disabilities unable to participate in the social and economic mainstream of society. It is important to help youth with disabilities to develop insight into their relationships with members of both sexes and provide the education and understanding that will enable individuals to use their sexuality effectively and sensitively in any role. Given that teachers are the main educators in providing this information, it is imperative to gain an understanding of teachers' and child care providers' views, experiences and beliefs in teaching sexuality HIV and AIDS programs to learners in Special Needs Schools.

Theoretical framework

As shown in figure 1, the proposed study will be based on the biopsychosocial model of disability as described by the World Health Organization's (WHO) definition of the 2001 International Classification of Functioning, Disability and Health (ICF) (WHO,

2008). ICF belongs to the WHO family of international classifications of which ICD-10 (the International Statistical Classification of Diseases and Related Health Problems) is the best known focusing mainly on classifying diseases whereas ICF classifies health (WHO, 2002).

Imperative to note is that the ICF does not classify people but rather it describes the situation of the person being evaluated within an array of health-related domains. Thus, it portrays a unique interaction of the individual's functioning and disability within a given context (Peterson, 2005). This is different from its predecessor, the 1980 Impairment, Disability and Handicap (ICIDH) (Peterson & Kosciulek, 2005) in that it goes beyond providing only diagnosis and focuses on functioning and awareness of impairment.

ICF Biopsychosocial model of disability

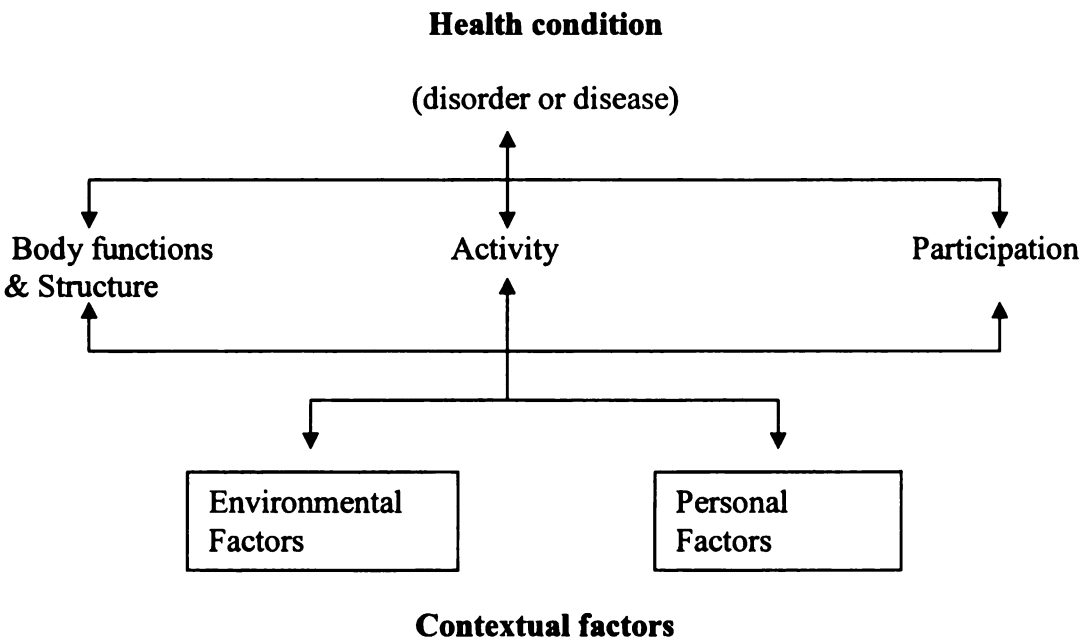

Figure 1: Interaction between components of the International Classification Functioning, Disability and Health. World Health Organization (WHO, 2001).

Disability is traditionally viewed in western society via a medical or individual model where disability is seen as a problem located within the individual, posing it similar to an illness and reliant on medical intervention. This has also been the case in South Africa (Watermeyer et al, 2007). But persons with disabilities are not necessarily ill and most are not likely to be cured of their disability (Woolfson, 2004). This view has not been accurate or helpful in promoting the well being for a person with a disability. The social model of disability on the other hand, views disability as a socially created problem with an unaccommodating physical environment brought about by attitudes and other features of the social environment (WHO, 2002). This model lacks emphasis on the interaction between the impairment, functioning and environment as highlighted by the ICF (Peterson, 2005). On their own neither model is adequate, therefore a useful model synthesizing and drawing on the strength of both these two models is the biopsychosocial model on which the ICF is based upon (WHO, 2002) which is the premise of this dissertation.

The ICF further challenges the medical and social perspectives in making a distinction between impairment and disability, defining disability as the social implication of being disabled in a disability society over and above the experience of the impairments (WHO, 2008). The recognition that disability is socially produced is not, however, to deny the importance of addressing the pain or chronic illness experienced by some disabled people, but instead to argue that the consequences of the impairment itself are distinct from the physical barriers of the built environment and the prejudices and negative attitudes of non-disabled people (WHO, 2008).

The development of the ICF Children and Youth version (ICF-CY) that was published by WHO in 2007, has been extremely instrumental given the differences between the nature and type of functioning between children compared to adults (Simeonsson, 2003; McAnaney, 2007). The ICF-CY is intended to facilitate continuity in documenting functioning, activity, participation and the role of the environment across the transition from childhood to adulthood. Further, it aims to facilitate communication between professionals, service providers and parents. Essentially, the ICF-CY is consistent with the structure and organization of the ICF but in addition expands to cover important aspects of functioning and environment of childhood and adolescence (McAnaney, 2007). Therefore, the current study underscores both the importance and application and ICF and ICF-CY as its foundation.

Peterson and Rosenthal (2005) noted that the ICF in particular reflects important historical developments in rehabilitation that ultimately influenced the scope of practice of rehabilitation practice. According to Peterson and Rosenthal (2005), the revised and current updated ICF reflects a 'holistic' view of persons with disabilities as well as its practical application (Peterson & Kosciulek, 2005) that encapsulates the rehabilitation philosophy. This radical shift in the definition pertains to moving from the emphasis on the person's disabilities to now focusing on their level of health (WHO, 2002). It is this holistic view that is the basis of this study. In reviewing the literature regarding the use of ICF as it relates to different types of disabilities, researchers frequently highlights this holistic view, but more importantly the role and impact of environmental factors as it functions and interacts with the person's disability (Simeonsson, 2003). According to

Simeonsson (2003), the addition of environmental factors exemplifies the importance of the environment as a facilitator or barrier to human functioning.

This study holds that the impact of environmental factors as it relates to societal attitudes towards youth with disabilities and their sexuality is potentially harmful to developing a positive sexuality. Disapproving attitudes and narrow-mindedness related especially to sex and sexuality often limit youth with disability to gain more knowledge and confidence about their own sexuality. Discussing sex and sexuality with any child can make parents and educators uncomfortable and in particular in the case of youth with special needs, thus anxieties and concerns are frequently intensified (Groce, 2005). In addition, cultural, ethical, religious and moral issues influence sexuality and, as such, prescribed sex education is notoriously controversial (Mpofu, Jelsma, Maart, Lopez Levers, Montsi, Tlabiwe, Mupawose, Mwamwenda, Ngoma & Tsombe, 2007). Therefore children with special needs are particularly vulnerable to societal modeling, myths and misconceptions; they are taught to be obedient to authority and that may put them at higher risk of sexual abuse (Mpofu et al, 2007).

The 'rules' surrounding sexuality for individuals with disabilities are frequently not the same as those imposed on the rest of society (Sweeney, 2007). Societal norms of beauty, power, and productivity present a challenge to the person with an acquired disability who is attempting to develop a positive, optimistic approach to their sexuality (Di Giulio, 2003). At the community level, persistent myths and stereotypes still linger concerning the sexuality of persons with disabilities and this has a huge influence on how they receive information regarding HIV and AIDS (Wazakili et al, 2007).

Purpose of the Study

This study focus specifically on teachers and child care providers employed at Special Needs Schools in the Western Cape Province of South Africa. The purpose of the study is to explore teachers' and child care providers' views of sexuality and HIV and AIDS education working with youth with disabilities at Special Needs Schools (SNS). Even though parents are held to be the principal source of this information, professionals (i.e. teachers, social workers, child care providers, occupational therapists) are seen as valuable collaborators providing complementary resources (Guest, 2000). According to Guest (2000), too many authors adopt the view that professionals are the source of all knowledge and enlightenment, but they also struggle with their own inhibitions and may be reluctant to discuss sex with their students. This may be due to embarrassment and or lack of knowledge. Schools, social service agencies and health care delivery systems must develop policies and procedures to address sexuality related issues. It is important to note that this process involves a consultant or staff member with specific knowledge about disabilities. This clearly points to the need for teachers and health care providers to have training to understand and support student needs for information, skills and related health care (Kreinin, 2001).

Research questions

The study will examine the following three questions:

(1) What are teachers' and child care providers' knowledge, attitudes, beliefs and teaching practices of sexuality, HIV and AIDS programs?

(2) How do teachers and child care providers describe teaching experiences, challenges and needs of teaching sexuality, HIV and AIDS programs?

(3) How do key informants describe experiences related to teaching sexuality, HIV and AIDS programs?

Definitions of terms

Sexuality education. Sexuality education is defined by the Sexuality Information and Education Council of the United States (SIECUS), as a "lifelong process of acquiring information and forming attitudes, beliefs and values. It encompasses sexual development, reproductive health, interpersonal relationships, affection, intimacy, body image, and gender roles" (SIECUS, 2009, p.1).

Disability. Disability refers to any impairment, activity limitations, or participation restrictions of the external factors that represent the circumstances in which the individual lives (WHO, 2001, p.17).

Impairment. Impairment does not necessarily imply the presence of a disorder but are manifestations of dysfunction in the body structure or functions (WHO, 2001, p.12)

Health refers to components of health (e.g., seeing, remembering, learning) and health-related components of wellbeing (e.g., labor, education, transportation).

Functioning is an inclusive term covering all body functions, activities, and participation in society.

Overview of the study

The present study explored teachers and child care providers views in teaching sexuality, HIV and AIDS education to learners with disabilities in Special Needs Schools. A mixed-method approach had been employed to collect data on this topic. A survey instrument had been administered and individual interviews conducted with study participants.

CHAPTER 2

Literature Review

Background

The literature on adolescent health-risk behaviors and negative health outcomes is extensive. However, relatively little research has been devoted in this area to youth with disabilities (Blum, 2001). This is based on common misconceptions including ideas that people with disabilities are asexual or conversely, that they are sexually impulsive (Sweeney, 2007). Murphy and Callaghan (2004) describe this a denial of sexuality and argue that people with physical, cognitive or emotional disabilities have a right to sexuality education and reproductive health care. They have the same emotional and physical needs and desires as people who are not disabled. It is often true that people with disabilities are first identified by their disability rather than by their talents, intelligence, and attractiveness or by the fact that they are sexual. For people with disabilities, obstacles to healthy sexuality are often heightened. For young people with special needs there is particular tension between healthy sexuality and personal safety and frequently the desire to keep our children safe also unintentionally keep them dangerously in the dark (Sweeney, 2007).

The fact remains that during adolescence, sexuality is important and sex during this time is the subject of sometimes painful 'conjecture, decision-making, hypothetical thinking and self-conscious concern' (Magaya, 2004, p4). In addition, children with special needs are also vulnerable to societal myths and misconceptions; they are taught to be compliant to authority putting them at higher risk of sexual abuse. The 'rules' surrounding sexuality for individuals with disabilities are often not the same as those

imposed on the rest of society (Sweeney, 2007). Thus, a growing body of research noted that youth with disabilities are in danger for every known risk factor for HIV and AIDS (Groce, 2003; UNAIDS, 2009) because they have equal or greater exposure to all factors of HIV and AIDS infection (World Bank, 2004). This makes sexuality and HIV and AIDS education all the more important (Kreinin, 2001), thus this present study focus on teachers and child care providers teaching this topic to learners with disabilities.

A small but growing literature has identified significant gaps in knowledge, attitudes, beliefs and practices (KABP) around topics of HIV/AIDS among youth with disabilities in the United States and Europe (Nation Information Center for Children and Youth with disabilities (NICHCY, 1992; Mpofu et al, 2007; Wazakili et al, 2009). Little attention has been paid however to the KABP towards HIV and AIDS among teachers and caregivers at Special Needs Schools in South Africa.

The next section will review relevant literature on the topic of sexuality and HIV and AIDS education. The following sub-sections includes: Statistics of HIV and AIDS infection; Disability, sexuality and HIV and AIDS; Schooling and sexuality education; School Attendance and Youth with Disabilities; Teacher's Role in Sexuality, HIV and AIDS Education; Sexuality, HIV and AIDS Curriculum; Teacher's Knowledge and Attitudes Towards Sexuality and HIV/AIDS Education; Exposure to HIV and AIDS information; Sexual activity and HIV infection and Challenges to HIV and AIDS training programs. In conclusion, the Importance and relevance of current research will be discussed.

Review of Relevant Literature

Statistics of HIV and AIDS infection

There are significant HIV and AIDS risk factors affecting all populations and in particular disabled populations around the globe. The HIV and AIDS pandemic is without doubt a serious global health threat of which the burden is being most felt in sub-Saharan Africa (Chappell & Radebe, 2009). According to UNAIDS (2008), of the estimated 33 million adults and children who are infected with HIV worldwide, 22 million of those are living in sub-Saharan Africa. Sub-Saharan Africa remains most heavily affected by HIV accounting for 72% deaths in 2007 (UNAIDS, 2008).

The impact on young people is exacerbated by the fact that the population of sub-Saharan Africa is quite young relative to other regions in the world, with 43% of the population below the age of 15, compared to 28% globally (Kaiser Family Foundation, 2007). The peak of the global pandemic can be found in South Africa, where an estimated 5.7 million people are living with HIV and AIDS (UNAIDS, 2009).

Disability, sexuality and HIV and AIDS

The lack of involvement of disability in particular HIV and AIDS education campaigns, is a result of the widespread belief that people with disabilities are perceived to be 'asexual' (Groce, 2005). Given the notion of asexuality and considering that sexual contact is the most prevalent cause of HIV infection in South Africa, people with disabilities are presumed to be at very low risk of contracting the virus (Swartz, Schneider, & Rohleder, 2006). As a result, sex education programs for youth with disabilities are rare and very few HIV and AIDS educational campaigns target or include the disabled population (Chappell & Radebe, 2009).

Unfortunately, many health professionals still fail to address the issues of sexuality and disability (Swartz et al, 2006) suggesting that this could be related to the fact that health professionals receive insufficient training in dealing with issues of sexuality in relation to disability and are therefore anxious about raising the issue. This lack of knowledge and anxiety could be seen as a barrier by which people with disabilities are prevented from receiving adequate information relating to sex and HIV (Gallant & Maticka-Tyndale, 2004)

This notion was highlighted in a study conducted in Zambia, whereby women with disabilities reported having attracted a lot of negative attention from nurses whilst attending reproductive health services, which inevitably discouraged them from using such services (Smith, Murray, Yousafzai, & Kasonka, 2004).

In addition to providing this information, parents and professionals need to allow children and youth opportunities for discussion and observation, as well as to practice important skills such as decision-making, assertiveness, and socializing. Thus, sexuality education is not achieved in a series of lectures that take place when children are approaching or experiencing puberty. Sexuality education is a life-long process and should begin as early in a child's life as possible (Tepper, 2001; SIECUS, 2009).

Providing comprehensive sexuality education to children and youth with disabilities is particularly important and challenging due to their unique needs. These individuals often have fewer opportunities to acquire information from their peers, have fewer chances to observe, develop, and practice appropriate social and sexual behavior, may have a reading level that limits their access to information, may require special materials that explain sexuality in ways they can understand, and may need more time

and repetition in order to understand the concepts presented to them (NICHCY, 1992)

Yet, with opportunities to learn about and discuss the many dimensions of human sexuality, young people with disabilities can gain an understanding of the role that sexuality plays in all our lives, the social aspects to human sexuality, and values and attitudes about sexuality and social and sexual behavior.

Schooling and sexuality education

Education affects many aspects of one's life as well as health behavior. Educational level is strongly associated with one's knowledge and perceptions about reproductive health aspects like contraception, fertility and reproductive health service utilization (Mulindwa, 2003). In addition, formal schooling enhances one's ability to manipulate and explore opportunities available for improved welfare.

Murphy and Callaghan (2004) found that there was clear evidence in their study that sex education was associated with higher levels of knowledge and lower levels of vulnerability amongst people with intellectual disabilities. Participants in their study with intellectual disabilities showed limited understanding of consenting and non-consenting situations as wrong while non-consenting situations were sometimes not recognize as abusive.

This suggested that they were more vulnerable to abuse perhaps partly because they do not recognize abusive situations. This apparent increase level of vulnerability may be partly accounted for by the limited sexual knowledge of adults with intellectual disabilities because without sufficient knowledge and education, it is difficult to decide what is and in not acceptable socio-sexual behavior (Murphy & Callaghan, 2004). In addition, given the current political climate, sexuality education is often reduced to

biological and or values-based approaches, neglecting essential relational and collective aspects of sexuality (Romeo & Kelley, 2009).

School attendance and youth with disabilities

Sexuality education, a subject of discussion in many schools, is often a controversial topic and when issues of disabilities are added to the conversations a variety of opinions exist (Blanchett & Wolfe, 2002). Sexuality education can provide youth with disabilities with the opportunity to learn appropriate socio-sexual skills, protect themselves from sexual abuse, sexually transmitted diseases, and unwanted pregnancies.

Participants in Mulindwa's (2003) study done in Uganda noted that youth with disabilities and particularly women with disabilities generally miss-out on opportunities of attaining formal schooling. Some groups attributed this to parental attitudes against children with disabilities while other participants felt that the un-friendliness of the Ugandan school system together with negative attitudes contributes to the youth with disabilities failure to attain formal education (Mulindwa, 2003).

It is further reported in this study that only 64% of the female respondents had ever attended school compared to 86% of their male counterparts. Most of the respondents had attained only primary school education (56% men and 48% women). Noteworthy is that 36% of women had never attended school (Mulindwa, 2003).

According to the DOE of South Africa (2004), a large proportion of youth with disabilities are not in formal education. Of the 2.5 million people who have a permanent physical, mental, sensory, intellectual or communication disability in South Africa an estimated 4-5% of them are between the ages of 14-35 years of age (StatsSA, 2001). Schneider (2000) also reports that youth with disabilities under the age of 18 are more

likely to only reach primary level education and even less likely to reach Grade 12. Education plays a crucial role in the development of skills, knowledge and identity. Without education it inevitably leads to youth with disabilities being unable to participate in the social and economic mainstream of society. Kelly (2002) puts forward that education in particular school education has a significant role in reducing the high prevalence rates of HIV amongst the youth.

Teachers' role in sexuality, HIV and AIDS education

Teachers form an integral role in formal programs of sexuality education; at times they are the main and or the only people explicitly discussing sexuality with young people. The sexuality education literature has long noted the importance of educators being well prepared for teaching sexuality education in public schools (Schultz & Boyd, 1984; Greenberg, 1989). McCary (1982) states, 'of all the arguments against school sex education, perhaps the most valid concerns is the qualifications of those who teach it' (p.17). Thomas, Long, Whitten, Hamilton, Fraser & Askins (1985) found that sexuality education could result in long-term knowledge gain if taught by well-trained and experienced sexuality educators. The danger exists, that sexuality educators who are still struggling to accept images of themselves as sexual beings, may have those negative attitudes interfere with their abilities to teach sexuality education (Yarber & McCabe, 1984).

Teachers are often left with the difficult decision of understanding the material, different viewpoints and sometimes having to select information or follow curriculum that will meet the needs of all students. Even if a teacher is not directly asked to focus in areas of sexuality education, it may not be uncommon for teachers to be exposed to

questions their students may have about the topic, making many teachers feel unsure and uncomfortable about how to handle specific questions. Yet, little is known about teachers' attitudes about sexuality education or the factors that shape how and how they teach specifically in Special schools in South Africa.

Many teachers report feeling ill prepared during teacher education programs and thus they do not feel comfortable to teach sexuality programs to their students (Louw, 2001). Providing teachers with the opportunity to receive knowledge as well as work through their own anxieties is important (Donovan, 1998) and teachers "should be required to have a good command of the subject matter, and adequate level of comfort with the content, and should engage in active value clarification" (Blanchett & Wolfe, 2002, p.55). In U.S. public schools, physical education teachers are most likely to provide sexuality education in middle and high schools, followed by health educators, biology teachers, home economics teachers, and school nurses, making it a necessary training topic for all in the education field (Gonzalez-Acquaro, 2009). In South African schools, on secondary level or high school teachers are selected either based on their area of specialization related to subjects such as biology and physical science. On primary level or middle or elementary school, all teachers receive some form of training in order to teach topics related to sexuality and HIV and AIDS to their students.

Sexuality, HIV and AIDS curriculum

Over the years there have been repeated attempts to address sexuality in schools. Decisions on the type of sexuality education programs, curriculum and standards that should or should not be provided in schools are often left to the local level and typically include comprehensive, abstinence based, abstinence only, abstinence only until

marriage, and fear based programs (Gonzalez-Acquaro (2009). The goals of these efforts have varied and ranging from reducing teenage pregnancy rates, to increase safer sex practices, to protection against sexually transmitted infections including HIV and AIDS (James, Reddy, Ruiter, McCauley & Van den Borne, 2006).

In the Van Oost, Csinsak, De Bourdeaudhuij (1994) study, both principals' and teachers' views of sexuality education were examined with the focus on the major goals in school-based sexuality education. A representative sample of 400 schools was drawn from 1,050 secondary schools in Flanders. Some of the major questions included: What are the goals for sexuality education?; Is it the task of a school to teach sexuality education?; Who should be responsible to taught sexuality education?; What topics should be taught?; and How confident are teachers with sexuality education?.

All goals were deemed important but both principals and teachers agreed that developing a responsible attitude toward sexuality is the most important goal for sexuality education. Teachers used instructional strategies for sexuality education and less common were group work, demonstration and role-play. Principals preferred teachers instead of external experts to present most topics in sexuality education (Van Oost, Csinsak & De Bourdeaudhuij, 1994).

Teachers themselves also have their preferences regarding certain topics. In the study done by Darroch, Landry & Singh (2000), teachers indicated that the most important topics of information they wanted to communicate to their students were related to abstinence and responsibility. Further, STDs including HIV and AIDS, reproductive facts and self-esteem were also cited as some of the most important topics or messages to be taught.

With regards to different styles of teaching, teachers prefer to use a didactic style of teaching sexuality more and they reported comfort with teaching more fact based rather than skill based topics (James, et al, 2006). This explained students high impact on knowledge in this particular study compared with the lack of impact on the psychosocial determinants or sexual behavior. Issues such as condom-using behavior requires more than just knowledge, positive attitudes and beliefs about its use, it requires skills that address the more proximal determinants of safe sexual behavior, such as self-efficacy beliefs and skills related to actual condom use. It is therefore of great concern that Firestone (1994) further found in his study that most teachers choose to address 'easier' topics.

The fact remains that teachers communicate their feelings and beliefs about sexuality continuously. As in the case of parents with their children, teachers too send messages to their students about sexuality both verbally and nonverbally, through praise and punishment, in the interactions they have with them, in the tasks they give them to do, and in the expectations they hold for them. The school setting is probably one of the most important learning environments because it is there that children and youth encounter the most extensive opportunities to socialize and mix with their peers (NICHCY, 1992). Therefore, both parents and the school system should take on responsibility for teaching children and youth about appropriate behavior, social skills, and the development of sexuality (NICHCY, 1992).

In particular, youth with disabilities do need special attention and guidance because they first learn that they are disabled before learning to see themselves as sexual people. Therefore, sexuality educators need to affirm that people of all abilities,

including those with early and late-onset disabilities, physical and mental disabilities are sexual people (Tepper, 2001). Also, teachers and child care providers must consider the point in life at which their students' disabilities occurred and the subsequent effect the disabilities may have had on their psychosocial development.

Sexuality education for youth with disabilities should promote maturation as a sexual person providing them with opportunities to develop healthy social skills. Being overprotected by parents and family can lead to restriction of these appropriate skills (NICHCY, 1992).

Teacher's knowledge and attitudes towards sexuality and HIV/AIDS education

Of the few studies conducted, Schultz and Boyd (1984) examined sexuality attitudes of home economic secondary teachers and human sexuality. The study also investigated the relationships among these attitudes, selected demographic variables and the degree to what 25 sexuality topics were taught by teachers. Sexuality attitudes were assessed by an inventory with a 9-point Likert response format.

According to Gonzalez-Acquaro (2009), in their study implementing a pretest-post-test design, teachers in the training groups, information and information/ reflection, scored significantly higher compared to teachers in the control group on the knowledge questionnaire, the attitudes survey, and the self-efficacy survey. Teachers in the information/reflection group scored the highest on the attitudes survey compared to the control and information only group. Results of this study indicated that providing training for teachers in topics related to sexuality education and intellectual disabilities can increase not only their knowledge toward the topic but also their attitudes and their feelings of self-efficacy (Gonzalez-Acquaro, 2009). Having opportunities to reflect can

assist teachers in understanding and improving their teaching practice while helping teachers understand different viewpoints and needs.

Teachers perceive themselves to having a great deal of competence to teaching sexuality education, high item score of 7.7. A low item score of 3.8 was found on school and community influences, thus teachers perceive getting limited support from the community. In this study, the high average item score of 8.1 for personal sexuality feelings factor suggests that teachers have very positive feelings about their own sexuality (Gonzalez-Acquaro, 2009).

This the authors conclude needs to be given further attention when planning in-service training for teachers to allow them to have more opportunities to explore their own personal feelings toward sexuality. This will result in sexuality educators who feel positive and comfortable with their own sexuality and go beyond teaching only the physiological aspects of human reproductions and issues relating to sexuality.

Exposure to HIV and AIDS information

Blanchett (2000) noted that young people with disabilities are less likely included in samples when conducting studies, which focus on specifically HIV and AIDS knowledge and risk behaviors. Thus, little is known about the HIV and AIDS knowledge and risk behaviors of youth with disabilities. Those studies that have been done indicate the gaps in knowledge acquisition of populations with disabilities.

The Disabled Women's Network and Resource Organization's (DWNRO) commissioned a study with purposively selecting Kampala, Katakwi and Rakai districts in Uganda. The study adopted a three-stage selection criterion together with random procedures to select eligible respondents within the three study districts (Mulindwa,

2003). The general objective of the study was to establish the reproductive health needs of disabled persons in a bid to facilitate the design and implementation of reproductive health programs, including HIV and AIDS programs. Both quantitative and qualitative survey methods were adopted and the results indicated that more females than males with disabilities reported awareness of abstinence as a major HIV prevention strategy (Mulindwa, 2003).

Further studies conducted (Chappell & Radebe, 2009) indicate youth with disabilities learn and get information from various other sources. Overall it would appear that youth with disabilities living within the seven sub-districts of uMgungundlovu district in KwaZulu-Natal, South Africa are indeed exposed to information on HIV and AIDS from a variety of different sources. Interestingly, many of the participants indicated school and the media as being the main places in which they learnt about HIV. Media access is essential in increasing people's awareness and knowledge of what is taking place around them, which may eventually affect their perceptions and behavior (Chappell & Radebe, 2009).

Mulindwa's (2003) study established access to media by asking whether respondents listen to radio and read newspapers. The results showed that 70% of the female respondents in Kampala District listen to the radio daily compared to 86% of the male respondents. In Rakai District, the proportion that listens to radio is 58% of females compared to 67% of males. Daily radio listenership is only 16% among females in Katakwi compared to 41% of the male respondents. Noteworthy is that 35% of females in Katakwi District never listen to the radio. Over a half of the respondents in Katakwi and Rakai Districts never read newspapers. The percentages for women are higher than those

of males in both districts. Of the respondents that read newspapers, a good number of them in all the three districts do it occasionally.

This is very different to Collins et al (2001) study whereby youth with disabilities were often excluded from health education classes in school.

In a study done by Groce, Yousafzai, Dlamini & Wirz (2006), focusing on deaf and hearing populations, knowledge of HIV and AIDS is directly related to accessible sources of information. Therefore, the survey sought information on where respondents were regularly receiving messages about AIDS. In their study, the sources of information were distinctly different between the deaf and hearing populations.

According to Groce et al (2006), the top 3 sources of HIV/AIDS information listed by the deaf population were posters (70%), Disabled People's Organizations (DPOs) (69%) and television (66%). By contrast, the hearing population listed Radio (95%), Relatives (89%) and Newspapers (79%) (Groce et al, 2006). There is ome concern related to the sources from which the deaf population is getting their information. Posters and bill boards do not contain in depth information and tend to be in English, posing difficulties in properly understanding the information.

Despite this exposure, many of the participants still lacked clear understanding of what HIV and AIDS were and some even doubted the authenticity of the information they had received. Therefore, training teachers periodically and providing them with the necessary support is imperative to achieve positive outcomes for youth disabilities as they develop their own sexuality that they which they are currently deprived from.

Sexual activity and HIV and AIDS infection

Blum et al (2001) identified the risk involvement of three groups of young people with disabilities; mobility impairment, learning disabilities and emotional disabilities relative to a comparison group. Their analysis was based on the National Longitudinal Study of Adolescent Health (ADD Health), a nationally representative sample of 20,780 7th through 12th grade youth in the United States. They found that for most negative health outcomes studies, youth with disabilities were found to be significantly more involved than their peers. Compared to their peers they were significantly more likely to report suicide attempts, regular smoking, regular alcohol abuse, use of marijuana and having had their first sexual intercourse at the age of 12 which was highly significant compared to the comparison group (Blum et al 2001).

Indeed, the Global Survey on Disability and HIV and AIDS conducted by Yale University and the World Bank has proven the assumption wrong that people with disabilities are not sexually active (World Bank, 2008). A project funded by Peral S Buck International Vietnam, that focused on adolescence with Down syndrome showed that a quarter of the respondents 14 years and younger, show interests for the opposite sex and that after age 14 this number is doubled. It is interesting in this study that the increased interest for the opposite sex of female respondents is equally present in both age groups (USAID, 2003).

Mulindwa (2003) found incidence and management of STIs present in their study, confirming reports of frequent sexual activity for people with disabilities. The proportion ever contracted STIs is 38% of women and 35% of men. Further, incidence of

STIs was reported to be higher among females in urban areas of the three districts that relates to exposure of sexual activity (Mulindwa, 2003). Further, in the Disabled Women's Network and Resource Organization (DWNRO), the data show that 85% of women and 82% of men in the sample have engaged in sex. Women with disabilities have sex earlier (16 years) than their male counterparts (18 years).

This finding is different to a study conducted with youth with disabilities in Zimbabwe, reporting that sexual intercourse for males earlier than females and for some starting as early as at age nine, but females who reported having sex engage in sex more frequently than males (Magaya, 2004). This study employed self-reporting measures to determine the interplay between sexual risk behavior, family structure and family environment.

Results also show that the incidence of sexually transmitted infections is higher among women in urban areas (41%) and those with primary education (42%). Awareness about HIV/AIDS is almost universal. However, only 6% of either sex reported testing for HIV as a means of knowing one's HIV status. Most persons with disabilities are aware that HIV is transmitted through sexual intercourse with an infected party (Magaya, 2004).

Blumberg and Dickey (1999) in analyzing findings from the 1999 US National Health Interview Survey, results show that adults with mental health disorders are more likely to report a medium or high chance of becoming infected with HIV. In addition, they are more likely to be tested for HIV infection, and are more likely to expect to be tested within the next 12 months than are members of the general population (Dickey and Blumberg, 1999). Such findings should not be unexpected for individuals with disability.

Of most concern was the findings from the study on STI/HIV Prevention for Deaf and Hearing impaired Young Persons of Ho Chi Minh Deaf club targeting 30 deaf youths to participate and several of them were selected and trained to become peer educators. It was found that sexual practice of most deaf youth of the club seems to remain far from being safe of STI/HIV infection indicating that they had no idea of condoms, nor do they know much of contraceptive methods or transmission of HIV/AIDS. Most were employed as low skilled workers and 30% earn less than one dollar per day (USAID, 2003).

It is important though to remember that a disability that may have less significant implications in a life lived in a developed country may make a huge difference for a disabled individual in a developing country, especially if supporting equipment i.e. hearing aids, wheelchairs are unavailable or unaffordable (World Bank, 2004). Even so, men and women with disabilities are even more likely to be victims of violence or rape although they are less likely to obtain police intervention or legal protection (Groce & Trasi, 2004).

Challenges to HIV/AIDS training programs

Reaching disabled individuals with HIV and AIDS messages presents unique challenges. According to Ambrose (2004) this is especially the case in many rural areas in Africa where most people with disabilities live, there is a general misconception that HIV/AIDS is caused by witchcraft. This is a big constraint to efforts that are meant to sensitise people with disabilities on the nature and threat of HIV and AIDS.

Instead of seeking medical care, a person having HIV and AIDS or disability would prefer to visit a witchdoctor or traditional healer. There are many chances of

people with disabilities acquiring HIV and AIDS through practices of witchcraft either through sexual abuse by the witchdoctors or sharing of sharp instruments/equipment and performance of cultural rituals. This increases the likelihood of infection by HIV and AIDS (Ambrose, 2004).

Groce (2003) noted that factors such as increased physical vulnerability, the need for attendant care, life in institutions, and the almost universal belief that disabled people cannot be a reliable witness on their own behalf make them targets for predators. Also, in cultures in which it is believed that HIV-positive individuals can rid themselves of the virus by having sex with virgins, has bring about a significant rise in rape of disabled children and adults. Assumed to be virgins, they are specifically targeted (Groce, 2003). In some countries, parents of intellectually disabled children now report rape as their leading concern for their children's current and future well-being (Groce & Trasi, 2004).

Disability disproportionately affects the poor (Swartz et al, 2006). Those who are poor are likely to live and work in more physically dangerous environments, have less to eat, and receive poorer quality medical care or none at all. This feedback loop between disability and poverty places people with disabilities at a marked disadvantage at every stage of their lives (Groce et al, 2006). Therefore, children with disabilities, particularly those with more visible disabilities are frequently assumed to be in frail health and unlikely to survive into adulthood. Indeed, in many countries, a significantly disabled child is referred to as 'an innocent' or a 'little angel' (Groce et al, 2006). From this perspective, sending such children to school, including them in social interactions, or preparing them for participation in the adult world seems unnecessary.

Educating disabled populations about AIDS is also difficult. Lack of access to

education has resulted in extremely low literacy rates, which makes communication of messages about HIVIAIDS even more difficult. This lack of access is reflected in significantly lower rates of knowledge about HIV prevention in several studies among deaf people and adolescents with intellectual impairment. Sex education programs for those with disabilities are rare. Indeed, where HIVIAIDS educational campaigns are on radio or television, groups such as the deaf and the blind are at a distinct disadvantage (Groce et al, 2006).

When teachers do perceive themselves as having a great deal of competence related to teaching sexuality education in public schools (Schultz & Boyd, 1984), but they perceive a limited level of support from the community for the inclusion and teaching of sexuality education in schools. Firestone (1994) noted in his study that teachers report that members of the local community were typically seen as the greatest barrier to full exploration of difficult issues.

Even if AIDS messages do reach disabled populations, low literacy rates and limited education levels complicate comprehension of these messages. Therefore, well trained teachers are best suited to convey comprehensive sexuality and HIV/AIDS programs because literacy is vital to understanding HIV messages and translating them into individual behavior change (World Bank, 2008).

This study is therefore based on the conceptual framework that well trained and educated teachers and child care providers' lead to better outcomes for their students. Therefore, the level and quality of teachers' and children providers' knowledge, attitudes, beliefs and teaching practices of HIV/AIDS is imperative to positive aspects of students' development of a healthy sexuality.

Importance and relevance of current research

People with disabilities very often feel unease, shame and fear, even guilt in relation to their sexual organs, sexual reaction and feelings (Zdravka & Mihokovic, 2007) which are a part of the normal process of maturation, it is important to provide sufficient support in the form of sexuality and HIV and AIDS education from well trained teachers and care providers. Especially during their youth and adult age, interest in their own sexuality, as well as a desire to experience sexuality increases. But very often people with disabilities describe sexual behavior as bad, indecent, dangerous and forbidden and they speak of it with unease. Further, their experience of their own sexuality in terms of fear and insecurity results in the suppression of their own sexual needs and wishes that further leads to a negative attitude towards sexuality or an unhealthy sexuality experience.

In addition, extreme poverty and social sanctions against marrying a disabled person mean that they are likely to become involved in a series of unstable relationships (Groce, 2003). On the other hand, people with disabilities who do have a positive attitude towards their sexuality do not have a sufficiently developed sense of responsibility and the need for the protection of dignity (Zdravka & Mihokovic, 2007) thus they need proper guidance. Given the context they often live in, it is not surprising that research on the sexual knowledge, sexual experience and sexuality education of people with disability confirms the disadvantages they face (Di Giulio, 2003). This is connected to social skill about suitable behavior.

For some of the young people, their disability may be visible and evident, for others the disability may be hidden but whatever the situation, it is therefore incumbent

upon teachers to understand the associated risks so as to help youth with disabilities avoid additional behaviors that will adversely affect their health and the quality of their lives (Blum et al, 2001).

Ballan (2001) noted that the biggest myth though is that sexuality education will cause people with disabilities to become overly stimulated and to engage in sexual activity when normally they would not. This myth is based on the belief that sharing information will unleash desires and conflicts that would otherwise have remained dormant and that knowledge will trigger uncomfortable and insatiable urges (Ballan, 2001).

Although human sexuality is varied and complex, in the education realm this broad subject often becomes focused upon the narrow concept of sexual intercourse, the realities of which provoke understandable concern by adults on behalf of the youngsters in their care (Sweeney, 2007). The truth is that sexuality is an integral part of every person's life from infancy and no matter what cognitive abilities a person might have, growth into adulthood combines a physically maturing body and a range of sexual and social needs and feelings (Ballan (2001).

With non-disabled youth gaining information from variety of sources, youth with disabilities on the other hand, are far more dependent on adults for what information they receive. Sometimes even parents think that their children are too young to be told about HIV/ and AIDS. Instead of making them understand the dangers of the epidemic, they only give open-ended instructions: 'don't do this', 'don't do that' As a result of this, adolescents do not get correct, appropriate and reliable information (NICHCY, 1992).

In some other instances, some parents are not able to communicate and/or talk to their children because of lack of modes of communication because they do not know sign language, for example. These young people need to be informed that they are not condemned to a life of celibacy. It should be remembered that these young people are human. Disabled they may be, but this will not distract from their natural desires for healthy interpersonal relationships and sensual experiences (NICHCY, 1992).

According to Kreinin (2001), it is heartening though to see teachers acknowledging the needs of disabled youth but it is sad that much is based on preventing negative aspects of sexuality, sexual abuse, teenage pregnancy and disease. This is crucial but it is important to provide all children, including those with disabilities, with accurate information and skills to lead them to view sexuality as a natural and healthy part of life (Kreinin, 2001). It is important to help people with disabilities, in particular youth to develop insight into their relationships with members of both sexes and provide the education and understanding that will enable individuals to use their sexuality effectively and sensitively in any role (Guest, 2000).

Since parents shy away from this responsibility teaching their children on the topic of sexuality and HIV/AIDS education, teachers are the adults next in line taken up this task. The ultimate value of getting information from teachers regarding their perceptions on HIV and AIDS and knowing what teachers are thinking and feeling can help improve HIV and AIDS education programs. The ultimate outcomes for students with disabilities will be better relative to their personal adjustment, sexual health, academic achievement and adult functioning.

CHAPTER 3

Method

Context of the study

The education system in South Africa underwent a huge transformation after the country's democracy in 1994 with the introduction of a new curriculum for all schools. The new curriculum reflects updated subjects and topics including a Life Skills program that is mandatory in all schools. As part of this Life Skills program, all teachers are compelled to teach sexuality, HIV and AIDS programs to all learners including learners at Special Needs Schools. SNS in the Western Cape Province, rank second highest in number of all SNS in South Africa.

The people in the Western Cape Province in particular, comes from many diverse cultural backgrounds and gives the province a very cosmopolitan essence, creating a demographic profile quite different from the remaining eight provinces in South Africa. As a result, race issues in this province have been unique in how the previous system of oppression, Apartheid[1], affected fundamental services including educational opportunities for the different race groups. Evidence still exits of disparities in Special Needs Schools that directly relates as a result of the previous policies of apartheid.

The SNS in this present study include specialization services to learners across all types of disabilities as well as specific specialization services on a particular disability type. Thus, some SNS only accept enrollment of learners with a specific disability type and other SNS enroll learners with irrespective of the disability type. All SNS schools

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[1] 'Apartheid' is the system of oppression that previously divided South Africans based on race into four categories 'White', 'African', 'Coloured' and 'Indian'

have four major educational phases including the foundation, intermediate, senior and school leaver phases.

Participants

The population of interest in this study was teachers and child care providers at Special Needs Schools in South Africa. Participants in this study were all employed by the national Department of Education of that particular school where data were collected. All participants were in a teaching position providing lessons and/ or special care services (i.e. counseling, evaluation) to students with disabilities between the ages of six and twenty years old. Students at Special Needs Schools are grouped in academic phases given their intellectual abilities and need for care given their specific impairment. The phases include the foundation, intermediate, senior, occupational and the school leaver phase. Both male and female teachers and child care providers were included in the study as participants, however females make up the majority of staff members at Special Needs Schools in the education system of South Africa.

The educational qualification of teaching staff at the Special Needs Schools include a three or four year training diploma or degree in teaching at college level or/ and at university level. These training diplomas or degrees does not necessarily include specialization in working with youth with disabilities, instead teachers choose to do an additional short courses to be skilled in working with youth with disabilities. Only those participants who take on a position of child care provider received training specializing in working with youth with disabilities. The child care provider position is similar to paraprofessionals in United States schools and includes a psychologist, occupational therapist, and nurse positions.

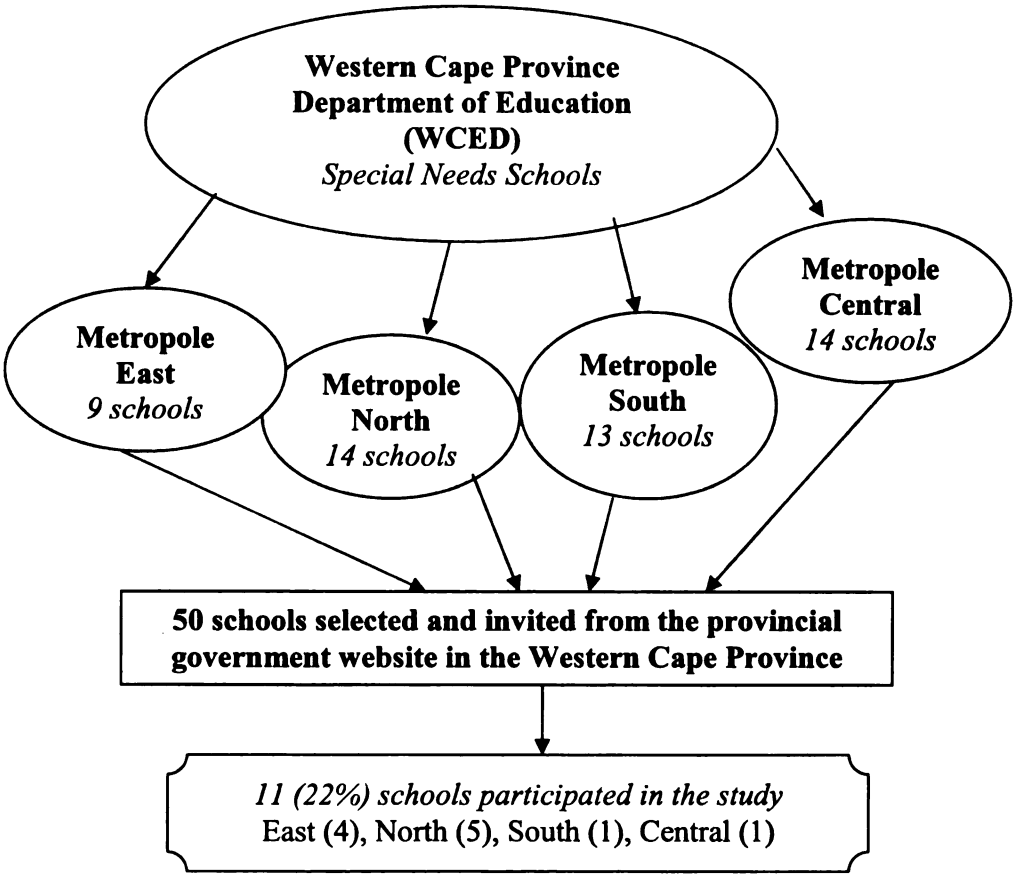
The participants were teachers and child care providers from all racial backgrounds. The majority of schools in this study were located in previously 'white' areas with the majority of staff members also coming from a predominantly 'white' racial background. This is due to the historical background of South Africa during the system of 'Apartheid' where the majority of Special Needs Schools were located in white areas and open to only 'white' learners for enrollment as well as enrollment for only some of the 'coloured' students. In addition to teachers and child care providers, participants further included key informants who were teachers in the position of either specifically coordinating the HIV and AIDS program or in charge of the sexuality, HIV and AIDS curriculum at that particular school.

The sample for this study was drawn from the provincial government website that provide information and services available to all citizens within the Western Cape province. This sample from the Western Cape province was selected, based on several variables including meeting the selection criteria of the population of interest, familiarity with prior participation in empirical research, and overall willingness to participate.

All 50 Special Needs Schools listed on the provincial government website were selected to participate in this study. These 50 schools were divided into four regions within the Western Cape province that include the Metropole East, South, North and Central. Each region had listed between nine to fourteen schools (see Figure 3 below) with contact details as well as the school's specialization information provided. (see profile of schools in Appendix F).

Figure 2

Number of schools selected and number of schools who participated in study



All 50 schools received an invitation to participate in the study via email notification. A total of 15 schools responded and a total of 11 (22%) schools participated in the study. Generally, the number of staff members including both teachers and child care providers at each Special Needs Schools varies between ten and forty teachers in number, depending on the number of learners at each school. A total of 78 surveys were collected. Initially only 6 schools responded with a total of 57 questionnaires completed. It was anticipated that the 50 principals would notify their teachers and child care

providers with principals motivating a higher level of teacher response. A second reminder mailing yielded a total 21 completed questionnaires from 5 more schools.

Participant Demographic Characteristics

Demographic data, including age, race/ethnicity, gender, educational level, language, marital status, job title, years teaching experience, grade level and training was collected. The demographic data questionnaire was part of the survey questionnaire, the '*Teachers Views on HIV and AIDS Education Survey*' is attached as Appendix A. The total sample (n=78) was comprised of 68 teachers and 10 child care providers. The data presented is the combined responses collected from both teachers and child providers at SNS. The majority of the sample participants comprised of females (84.6%, n = 66) with only 12.8% (n = 10) males in the sample. The average age of participants was 45.6 with the highest percentage of participants comprising the age categories of 41-50 (28.2%) and 51-60 (32.1%). Nearly 72% (n = 56) of participants were married and more than half of the sample (61.5%, n = 48) was Afrikaans speaking.

In relation to race/ethnicity, the participant breakdown was as follows: 10.3% (n = 8) of participants were African; 33.3% (n = 26) were Coloured; 55.1% (n = 43) were White; None of the participants identified as being Indian or belonging to more than one racial/ ethnic group (i.e. Other). Except for one participant, all other participants in the sample had an educational qualification of at least three years or more. This educational qualification include either a diploma or certificate (55.1%, n = 43), a BA degree (19.2%, n = 15) or a post degree (i.e. Honors, B Ed, etc.) (21.8%, n = 17). The average number of years teaching for the sample was 13.1 years ranging from (2 months to 38 years). All participants indicated a form of training that they have had related to teaching this topic

to learners with disabilities, with the majority of the sample (69.3%, n = 54) having had a general type of training.

Table 1
Participant Demographic Characteristics (N = 78)

Variables	Freq	%	M	SD	Range
Gender					
Female	66	84.6			
Male	10	12.8			
Age			45.6	10.9	21-68
20 – 30 years	9	11.5			
31 – 40 years	13	16.7			
41 – 50 years	22	28.2			
51 – 60 years	25	32.1			
61 years and older	5	6.4			
Race					
African	8	10.3			
Coloured	26	33.3			
White	43	55.1			
Indian	0	0.0			
Other	0	0.0			
Marital Status					
Divorced	6	7.7			
Married	56	71.8			
Single	15	19.2			
Widowed	1	1.3			
Educational Qualification					
BA degree	15	19.2			
Diploma/ Certificate	43	55.1			
Matric	1	1.3			
Post degree	17	21.8			
Language					
Afrikaans & English	12	15.4			
Afrikaans	48	61.5			
English	10	12.8			
IsiXhosa	6	7.7			
XiTsonga	2	2.6			
Grade Level Teaching					
Gr R (pre-school)	2	2.6			
Gr 1-3	8	10.3			
Gr 1-7	32	41.0			
Gr 1-12	2	2.6			
Gr 4-7	4	5.1			
Gr 4-12	10	12.8			
Gr 8-12	15	19.2			

continued

Table 1 *continued*

Years teaching			13.1	9.7	.2-38
1 month – 10 years	34	43.6			
10 years – 20 years	26	33.3			
20 years – 30 years	13	16.7			
30 years – 40 years	5	6.4			
Type of training					
General (pre-service)	54	69.3			
Regular (in-service)	11	14.1			
Intensive	8	10.3			
None	1	1.3			

Note: Sample size (n = 78) for demographic characteristics may not equal 78 due to missing data.

Key Informant Demographic Characteristics

Five key informants participated in this study. The key informants were selected from the schools that participated in the paper and pencil survey. Key informants were asked to provide demographic information including age, gender, race, marital status, educational qualification, language, grade level, years teaching and job title. Criteria for key informant inclusion in this study included: a) qualified teaching certificate, diploma or degree, b) being employed at a public Special Needs School in the Western Cape and c) be an HIV and AIDS curriculum or program coordinator.

Key informants were all females with the mean age of 47.4 ranging from 38 to 57 years of age. Regarding race, only one key informant was 'African' and one 'White' with the remaining three being 'Coloured'. The average years teaching for key informants were 20 years ranging from 16 to 31 years and two key informants had post degree educational qualifications. All five key informants' job title included the role of HIV Coordinator and the grade level range from grade 1 to 12.

Table 2
Demographic information of Key informants

Key informant	Age	Sex	Race	Marital status	Language	Educational qualification	Grade level	Years teaching	Job title
1	38	female	Coloured	married	Afrikaans	BEd Hons	Occupational phase	16	HIV Coordinator
2	41	female	Coloured	married	English	Bed Hons	1-10	17	Acting Principal
3	54	female	Coloured	divorced	Afrikaans	PTD III	School leaver phase	31	HIV Coordinator
4	57	female	White	married	Afrikaans	Diploma IV	Senior phase	13	Coordinator -Life Orientation
5	47	female	African	married	Xhosa	Diploma III	1-3	23	HIV Coordinator

Procedures

Following notice of Human Subjects Approval from the Michigan State University Institutional Review Board (IRB), written permission to conduct the study at the schools where participants' work was requested from the Department of Education in the Western Cape. Included in the email notification sent to all 50 schools was the notice of Human Subjects Approval from the Michigan State University Institutional Review Board (IRB) (Appendix A), the letter of permission from the Western Cape Department of Education (Appendix B), a formal letter of invitation and the IRB approved consent form (Appendix C).

Any ethical requirements the institution requested had been followed in addition to the Michigan State University Institutional Review Board requirements. The participants were treated in a professional, honest and ethical manner. Participants were provided written explanation, and in most cases verbal explanation via telephone and in person of the nature of the research prior to obtaining their verbal consent to participate. In addition, participants each received a copy of the informed consent document before data collection. The written explanation included a clear statement regarding the extent, nature and implications of their participation. Also, included was a clear indication that their participation is voluntary and that they may withdraw at any time or decline to answer any specific questions with no effect on their academic status or employment. Researcher information was included in the event of questions and concerns.

A follow-up phone call was made to the principal after the schools showed interest in participating to introduce the researcher and provide more details regarding the study. A suitable day and time was arranged with schools that agreed to participate in the

study. All schools chose to have the survey questionnaires dropped off at their schools and picked up two days thereafter, giving them more time to complete the survey outside of their official teaching time. Some schools requested a briefing session to all staff members that was done by the researcher on a specific agreed upon day and time. Data collection was done using a mixed-method approach (Creswell, 2009). A quantitative survey questionnaire and semi-structured individual interviews were conducted concurrently. The semi- structured individual interviews were done with the specific teacher in charge for overseeing the sexuality, HIV and AIDS program or coordinating the curriculum at the school that participated in the study. This interview was done to gain further insight and an in-depth understanding regarding this important topic. This process allowed the researcher to elaborate on or expand on the findings of one method with another method and further examine the constructs related the topic (Creswell, 2009).

The survey instrument, based on the WHO KABP questionnaire, was administered to participants and the survey questionnaire took approximately15-20 minutes to complete and the individual interview with the key informants was between 15-30 minutes in duration. The survey questionnaire and the key informant interviews were both completed in English.

All data collected had been treated as confidential and participants were not identified by name in reporting the data. The tapes, electronic copies, printed documents, memos and field notes will be retained for a minimum period of 7 years to be used for future research. All of this data will be stored in a secured and locked location in the office of the investigator. Any information entered onto a computer will be secured

through password identification, Norton Anti Virus, SpyBot, and Windows firewall protection.

Variables and Instruments

Survey questionnaire

The World Health Organization's (WHO) interview schedule that relates to AIDS-related knowledge, attitudes, beliefs and practices (KABP) (WHO, 1994), has been the premise of the present study's survey instrument, '*Teachers Views on HIV and AIDS Education Survey*'. Organized into four parts, this WHO measurement has been prepared to permit researchers to follow a standardized approach to this type of research and to generate information that will be adapted comparable and between countries (WHO, 1994). This original WHO measurement was developed in 1988 by research teams from 17 different countries to assess how to develop a broad, adaptable knowledge, attitudes, beliefs and practices survey and interview schedule for AIDS research. Therefore, survey constructs and variables have been directly adapted from the WHO manual and guidelines, to inform the '*Teachers Views on HIV and AIDS Education Survey'* designed by the Principle Investigator specifically for the purpose of this study. This instrument is attached as Appendix A.

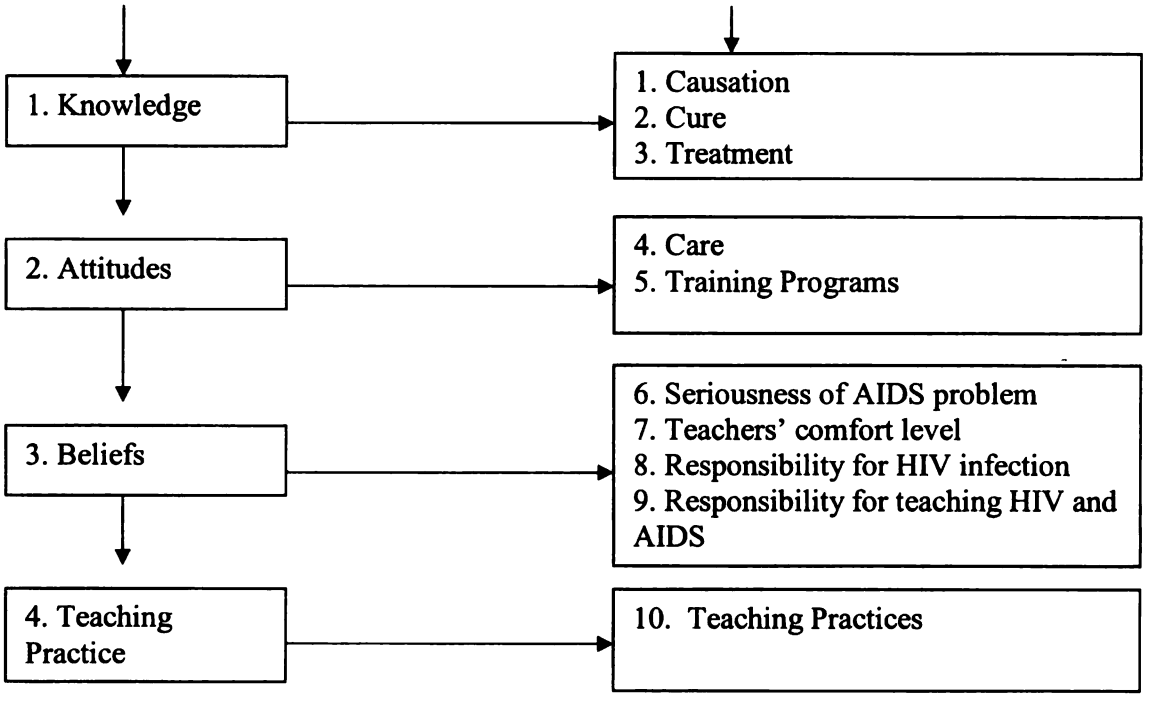
In addition, for the purpose of this study, individually selected items for the survey questionnaire had been selected from the South African National HIV Prevalence, Behaviour and Communication Survey (SABSSM II), also developed based on the WHO interview schedule. The Human Science Research Council (HSRC), a renowned research company in South Africa had been conducting this SABBSSM survey every alternative year since 2001 to investigate the overall HIV prevalence and incidence of the South

African population. The 'Teachers Views on HIV and AIDS Education Survey' items have further been adapted and modified to address specifically this study's topic of interest. The survey instrument was pre-tested for validity and consistency before being used for data collection. The pre-testing exercise was conducted by a team of 6 doctoral students in the Rehabilitation Counseling and Measurement and Quantitative Methods programs at Michigan State University. The pre-testing procedure provided information that was used in the finalization of the survey instrument. Comments from the six doctoral students were incorporated related to language, sentence construction and clarity.

The 'Teachers Views on HIV and AIDS Education Survey' comprised of five sections, the first section is on demographic characteristics and includes information on variables such as age, sex, language, race, marital status, academic qualification, grade level teaching and number of years of teaching experience. The additional four sections included the following sections: Knowledge of HIV and AIDS, Attitudes towards HIV and AIDS, Beliefs about HIV and AIDS and Teaching practices of HIV and AIDS programs. The four major constructs related to the four sections were defined as follows: the term knowledge in this study refers to a cognitive understanding of a fact or commonly expected research or clinical finding. Attitudes refer to a notion to respond in favor or not in favor to an object, person, institution or an event. Beliefs are viewed as intentions or behaviors related attitudes therefore beliefs are primarily determinants of attitudes (WHO, 1994). Teaching practices are viewed as those methods and techniques used to impart information related to sexuality, HIV and AIDS.

Ten variables were identified under the major constructs including Knowledge, Attitudes and Beliefs. (see Figure 3 below)

Figure 3
Four Major Study Constructs and Ten Study Variable



Except for the demographic section and question 4.1 under major construct Beliefs of HIV and AIDS, ten variables consist of Likert-scale responses ranging in values from to 5, with 1 meaning strongly disagree and 5 strongly agreed. Question 4.1 had a multiple response scale. In addition, the survey questionnaire included open-ended qualitative response questions related to teachers' or child-care providers' *experiences*, *challenges* and *needs* related to teaching sexuality, HIV and AIDS programs. The survey questionnaire was completed by teachers and child care providers at Special Needs Schools.

Key Informant Interview guide

The individual interviews comprised of open-ended qualitative questions that reflected the same qualitative questions of the survey questionnaire. The purpose of the key informant interviews questions were to further explore important constructs specifically related to teaching practices of HIV and AIDS programs in Special Needs Schools. The key informant interview guide provided an opportunity for key informants to address and expand on issues that may not have been taken up in the survey qualitative questions. The key informant interviews were conducted at the same schools that participated in the survey questionnaire. The necessary ethical steps in protecting both participants' confidentiality and anonymity had been taken. The key informant interviews were done with senior staff members at the schools who have the responsibility of coordinating or overseeing the sexuality, HIV and AIDS programs and curriculum at school.

Research Design

The research design took the form of a mixed-method approach. Mixed-method approaches use both quantitative and qualitative techniques within the same research project (Creswell, 2009; Patton, 1985). According to Creswell (2009), since all methods have limitations, the biases embedded in a single method could be neutralized or canceled by the other method. Research in social sciences largely depends on measurements and analysis and interpretation of numerical as well as non-numerical data.

Quantitative research methods therefore focus on statistical approaches and qualitative methods are based on content analysis, comparative analysis, grounded theory, and interpretation (Creswell, 2009). Quantitative methods emphasize objective

measurements and numerical analysis of data collected through polls, questionnaires or surveys and qualitative research focuses on understanding social phenomena through interviews and personal comments (Patton, 1985). It has also been argued that an integrated approach, or mix-method approach to social analysis, could close the gap between quantitative and qualitative methods and both these methods could be used together for social research studies (Creswell, 2009).

For the purpose of this study, the strategy of inquiry was concurrent mixed-method procedure (Creswell, 2009; Lincoln & Guba, 1985). Thus, the study began with a quantitative method in which theories or concepts were tested. At the same time a qualitative method involving key informant interviews was conducted with key informant participants to further explore issues related to the topic. Given that the study aimed to understand teachers' and child-care providers' understanding of knowledge, attitudes, beliefs and teaching practices of HIV and AIDS at Special schools, it was determined that qualitative inquiry in addition to quantitative inquiry could best address the research questions. In order to understand and interpret the perceptions of teachers and child care providers with regards to teaching sexuality, HIV and AIDS to youth with disabilities, it is believed that qualitative research best provided a view of youth with disabilities as they interact with their social worlds and thus construct reality (Lincoln & Guba, 1985; Patton, 1985). It was believed that qualitative research involving teachers and child care providers teaching this topic to youth with disabilities would provide a revealing lens through which the social interactions of these youth with disabilities could be viewed.

Data Analysis

Survey instrument

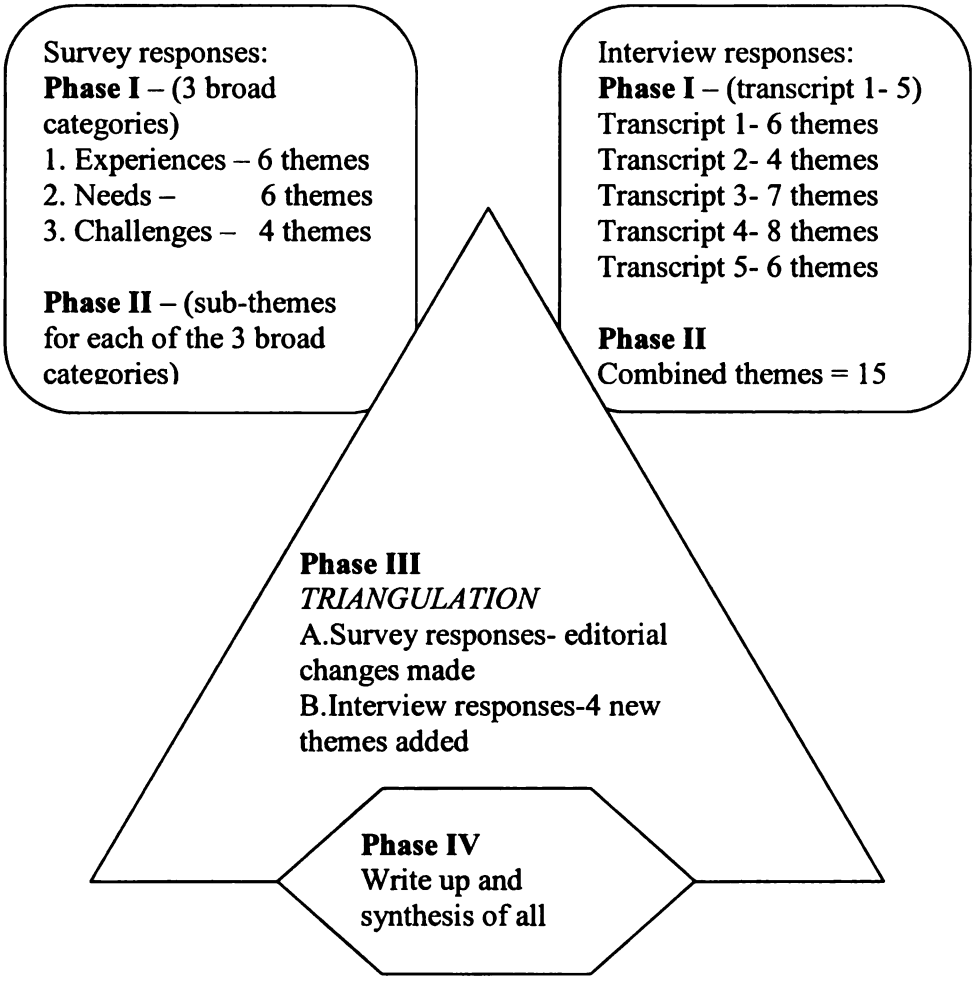
The survey questionnaire data was analyzed using the statistical software package SPSS. Descriptive and inferential statistics provided background of participants with regards to their age, sex, race and years teaching at the school. Descriptive statistics on the ten study variables and the four major study constructs are provided. In addition, a correlation matrix among ten study variables as well as the four major study constructs was conducted. The correlation is one of the most common and most useful statistics, a single number that describes the degree of relationship between two variables. The findings are presented in the form of graphs and tables to gain understanding of the data. In addition, a short summary has been written for each of the tables and graphs presented.

Qualitative questions

The analysis of interview transcripts and survey qualitative responses were based on an inductive approach geared to identifying patterns in the data by means of thematic quotes. Patterns, themes, and categories of analysis came from the data and they emerge out of the data rather than being imposed on them prior to data collection and analysis (Patton, 1985). Analysis began with an open-coding process, which included a line-by-line review of each transcript to identify words or phrases attributable to participant implications throughout the interviews and survey responses. An inductive analysis was used to group the emerging quotes into themes. The process of coding and conceptualizing the data is one of the most difficult and yet compelling aspects of the qualitative research process. The challenge is to stay true to the story that is being told ; (Lincoln & Guba, 1985)

A process of comparative analysis by two additional readers was used to establish triangulation and to confirm the reliability and the validity of the researcher's findings. This process included each reader to carefully review, examine and evaluate the initial coding and thematic analysis. Denzin (1978) suggested that triangulation could involve multiple data sources and researchers/evaluators to promote a better understanding of the data. In this study, triangulation was used to offset researcher bias and to establish reliability through consistency in the researcher's interpretations of the findings. After a thoughtful discussion amongst the researcher and two additional readers, an agreement was established regarding thematic quotes and themes that emerged from the data. Revisions made based on the triangulation data analysis process included the addition of several new themes and editorial changes to the wording of original themes (see Figure 5).

Figure 4
Analytic Steps for Thematic themes



CHAPTER 4

Results

The purpose of the current study was to examine teachers' and child care providers' views, experiences and beliefs in teaching sexuality, HIV and AIDS programs to learners in Special Needs Schools in South Africa. The high rate of HIV infection among youth in Africa has accorded both national and international attention (Gallant & Maticka-Tyndale, 2004). The critical role education plays is essential to the development of skills, knowledge and identity. Undoubtedly, without education it will lead to youth with disabilities being unable to participate in the social and economic mainstream of society (Chappell & Radebe, 2009). According to Magnani, MacIntyre, Mehyrar Karim, Brown, & Hutchinson (2004), school-based life skills education that include sexuality, HIV and AIDS programs, appear capable of communicating key information and helping youth develop skills relevant to reducing HIV risk. Given that youth with disabilities are at increased risk of HIV infection (Ballan, 2001; Ambrose, 2004; Groce, 2005; Chappell & Radebe, 2009), it is imperative that they receive and are exposed to education related to sexuality, HIV and AIDS education. This responsibility is often left to teachers and child care providers, therefore it becomes key to investigate their views about teaching sexuality, HIV and AIDS to learners with disabilities. The present study is guided by the following three research questions:

Quantitative data – Survey instrument

Research question 1: What are teachers' and child care providers' knowledge, attitudes, beliefs and teaching practices of sexuality, HIV and AIDS programs?

Qualitative data – Survey instrument

Research question 2: How do teachers and child care providers describe teaching experiences, challenges and needs of teaching sexuality, HIV and AIDS programs?

a. Describe in 2-4 sentences teachers' experiences in teaching sexuality, HIV and AIDS programs to their learners in Special Needs Schools?

b. What are the challenges and/or barriers teachers face when teaching sexuality, HIV and AIDS programs?

c. What are teachers' needs to improve on their teaching related to sexuality, HIV and AIDS programs?

Qualitative data – Key Informants

Research question 3: How do key informants describe experiences related to teaching sexuality, HIV and AIDS programs?

Interview guide:

a. Describe teachers' experiences in teaching sexuality and HIV and AIDS programs to their students in Special needs schools?

- What issues make teaching to be less comfortable for teachers or make them feel more at ease to teach sexuality, HIV and AIDS programs?

b. Describe the methods, techniques and approaches teachers are using in teaching sexuality, HIV and AIDS programs to their students?

-Describe the effectiveness of these techniques in imparting a positive view of sexuality and knowledge of HIV and AIDS to their students?

c. What are the challenges and/or barriers teachers face when teaching sexuality, HIV and AIDS programs?

-Describe how teachers and child care providers respond to cases where children engage in sexual activities such as kissing, fondling their private parts, etc.?

d. What are teachers' needs to improve on their teaching programs related to topics such as sexuality, HIV and AIDS?

-What guidance and additional assistance do teachers need to be effective in them teaching sexuality, HIV and AIDS education?

Below are the combined study data presented of responses from both teachers and child care providers at SNS.

Quantitative data - Survey instrument

Research Question 1

What are teachers' and child care providers' knowledge, attitudes, beliefs and teaching practices of sexuality, HIV and AIDS?

Research question 1 was addressed by collecting data with the survey instrument based on the WHO KABP guidelines (see Appendix D for Survey instrument). Responses on individual items for each of the ten variables were computed into a mean. Thereafter, the ten individual variables were computed to get a mean for each of the four major constructs. Item level data including mean, standard deviation and range for items that comprise the ten study variables is provided in Table 3. Descriptive statistics on for all ten variables (Table 4) as well as descriptive statistics for the four major constructs (Table 6) are provided and described below:

Table 3
Item level analysis

Major Constructs	Variables	Items	Mean	SD	Range
Knowledge	1. Causation	a Sharing injection needles	4.7	.79	1.00 - 5.00
		b Sharing a cigarette	4.2	.96	2.00 - 5.00
		c Oral sex	4.3	.98	1.00 - 5.00
		d Unprotected vaginal sex	4.8	.66	1.00 - 5.00
		e Sitting on the same toilet seat	4.4	.80	1.00 - 5.00
		f From a mother to her unborn child	4.5	.76	2.00 - 5.00
		g Drinking from the same cup	4.3	.97	1.00 - 5.00
		h Unprotected anal sex	4.7	.72	1.00 - 5.00
		i Contact with infected blood	4.7	.69	1.00 - 5.00
		j Touching someone who has HIV and AIDS	4.6	.69	1.00 - 5.00
	2. Cure	a There is a cure for AIDS	4.2	1.11	1.00 - 5.00
		b AIDS can be caused by witchcraft	4.5	.95	1.00 - 5.00
		c HIV causes AIDS	4.4	.98	1.00 - 5.00
		d HIV infection can be prevented by using condoms	4.3	.78	1.00 - 5.00
		e The risk of HIV can be reduced by having fewer sexual partners	3.4	1.65	1.00 - 5.00

Continued

Table 3 Continued

	3. Treatment	a	An HIV-infected person can transmit HIV to other people, when taking ARVs	3.9	1.25	1.00 - 5.00
		b	An infected person live longer when taking ARVs	4.2	.64	2.00 - 5.00
		c	ARVs can permanently cure HIV and AIDS	4.2	.79	2.00 - 5.00
		d	Traditional or complementary medicines can reduce the quantity of the virus of an infected person	1.93	1.05	2.00 - 4.00
		e	People with AIDS can be cured with traditional medicines	4.4	.94	1.00 - 5.00
Attitudes	4. Care	a	You are willing to take care of a family member with AIDS.	4.1	.88	1.00 - .500
		b	You would want to keep the HIV positive status of a close family member a secret.	2.5	1.23	1.00 - 5.00
		c	HIV positive children should be taken care of separate from non-HIV infected children.	3.8	1.23	1.00 - 5.00
		d	Any person with a disability, including children who are HIV positive, should get support from government to pursue treatment and care of their health.	4.5	.78	1.00 - 5.00

Continued

Table 3 Continued

	5. Training	a	Most teachers' feel at ease to teach programmes related to sexuality, HIV and AIDS to youth with disabilities even if they have not received training.	3.1	1.34	1.00 - 5.00
		b	Most teachers' feel at ease to teach programmes related to sexuality, HIV and AIDS to youth with disabilities only after receiving training.	3.6	1.10	1.00 - 5.00
		c	Training programmes on how to teach sexuality, HIV and AIDS is essential to **ALL** teaching staff at Special needs schools.	4.5	.57	2.00 - 5.00
		d	Training programmes on how to teach sexuality, HIV and AIDS is essential ONLY to **those** teaching who are in charge of the curriculum.	4.2	.95	1.00 - 5.00
Beliefs	6. Serious AIDS problem	a	Youth with disabilities are at serious risk of getting infected with HIV and AIDS	4.1	1.23	1.00 - 5.00
		b	Young people with disabilities should be consulted and involved in training programmes to address the problem of HIV and AIDS.	4.5	.69	2.00 - 5.00

Continued

Table 3 Continued

7.Teachers' comfort level	a	I am comfortable with talking to at least one member of my family about HIV and AIDS	4.4	.65	2.00 - 5.00
	b	I am comfortable with talking to youth with disabilities about HIV and AIDS	4.3	.76	2.00 - 5.00
	c	I am comfortable asking questions to a health care workers or nurse about HIV and AIDS	4.4	.71	2.00 - 5.00
	d	I am comfortable asking questions to my colleagues about HIV and AIDS	4.3	.87	2.00 - 5.00
8. Responsibility for HIV infection	a	Yourself	4.9	.29	4.00 - 5.00
	b	Your partner	4.7	.63	2.00 - 5.00
	c	Employer	1.8	1.11	1.00 - 4.00
	d	Government	4.3	.95	2.00 - 5.00
	e	AIDS organisation/ Non Governmental Organization (NGO)	1.6	.91	1.00 - 4.00
9. Responsibility For teaching HIV/AIDS	a	Parents	4.7	.41	4.00 - 5.00
	b	Teachers	4.7	.50	3.00 - 5.00
	c	Department of Education	4.6	.47	4.00 - 5.00
	d	Government	1.4	.64	1.00 - 4.00
	e	AIDS organization/ Non Governmental Organization (NGO)	1.4	.61	1.00 - 4.00

Continued

Table 3 Continued

Teaching *P*ractices	10.Teaching Practices	a	If you find out a student in your class is HIV positive, you would prefer that the student be transferred to another class.	4.6	.66	1.00 - 5.00
		b	You would not have a problem teaching students who are HIV positive	4.4	1.06	1.00 - 5.00
		c	It is more challenging to teach youth with disabilities about HIV and AIDS than non-disabled youth.	3.6	1.23	1.00 - 5.00
		d	It is best to teach sexuality, HIV and AIDS programmes **ONLY** when youth with disabilities show an interest in the opposite sex.	4.2	.86	1.00 - 5.00

Descriptive statistics of 10 Study Variables

Table 4 depicts descriptive statistics for each study variable, including means, standard deviations, ranges, and alpha levels. The Cronbach's alphas for the study variables were all less than .70. Thus, all of the internal consistency reliability coefficients for the measures used in the study seem to be generally low, indicating that the measurement of study variables may not be stable. Researchers recommend internal consistency reliability coefficients for the measures used in a study to be above the .70 for reliability (Leedy & Ormrod, 2005). The variable causation as per Table 3 indicates the highest overall mean score of 4.5. The range of scores for causation in the present investigation was 2.60 to 5.00 (e.g., higher scores indicating a higher level of knowledge on causes of HIV and AIDS), indicative of a high level of knowledge on causes of HIV and AIDS. The second highest mean score is 4.4 for the variable teacher's comfort level. This is an indication of teachers who strongly agree being comfortable in talking about this topic of HIV and AIDS. The variables cure, seriousness of HIV and AIDS and teaching practices all have a mean of 4.2 indicating a high score on each of these items. This indicates a higher level of knowledge of cure for HIV and AIDS amongst participants, a high level of agreement of participants taking the problem HIV and AIDS serious and lastly, a high level of agreement of participants regarding teaching practices related to sexuality, HIV and AIDS as essential. The lowest mean scores were found for the variables responsibility for teaching HIV and AIDS (3.4), Care (3.5) and responsibility for HIV infection (3.6). These lower mean scores indicate participants' level of neutrality related to who should be responsible for teaching HIV and AIDS

programs, who should be responsible for taking care of the infected and lastly, who should be held responsible HIV infection.

Table 4
Descriptive statistics of 10 variables

Major Constructs	Variables	Mean	SD	Range	α
Knowledge	1. Causation	4.5	.43	2.60 – 5.00	.568
	2. Cure	4.2	.56	2.40 – 5.00	.541
	3. Treatment	3.8	.46	2.50 – 4.60	.554
Attitudes	4. Care	3.5	.71	1.67 – 5.00	.593
	5. Training	3.8	.62	2.00 – 5.00	.575
Beliefs	6. Serious AIDS problem	4.2	.80	2.00 – 5.00	.603
	7.Teachers' comfort level	4.4	.66	2.00 – 5.00	.576
	8. Responsibility for HIV infection	3.6	.50	3.00 – 5.00	.632
	9. Responsibility for Teaching HIV/AIDS	3.4	.49	1.00 – 5.00	.590
Teaching Practice	10.Teaching Practices	4.2	.61	2.25 – 5.00	.536

Correlation Matrix Among 10 Study Variables

The correlation matrix, as shown in Table 5 depicts statistically significant correlations between the variables of causation, cure, treatment, care, training, teachers' comfort level, responsibility for teaching HIV and AIDS and teaching practices. Teaching practices shared statistically significant relationships with a number of other variables of interest, but the strongest statistically significant correlations were with cure ($r = .37$, $p <$

.01) and seriousness about HIV and AIDS ($r = .35$, $p < .05$). This finding indicates an understanding of the cure for HIV and AIDS and taking HIV/AIDS seriously relates positively to a willingness to teach programs to learners with disabilities. The strongest statistically significant correlation was found amongst causation and cure ($r = .48$, $p < .01$), indicating knowledge on HIV and AIDS relates strongly to understanding the cure for HIV and AIDS. A few weaker positive relationships were found for responsibility of HIV infection with seriousness of AIDS ($r = .01$), causation ($r = .04$), treatment ($r = .05$), and training ($r = .05$), but these relationships were not statistical significant. It is important to note that a few negative relationships between variables were found but none of these relationships showed any statistical significance.

Table 5
Correlation Matrix Among 10 Study Variables

Major Constructs	Variables	1	2	3	4	5	6	7	8	9	10
Knowledge	1. Causation	--									
	2. Cure	.48**	--								
	3. Treatment	.40**	.27*	--							
Attitudes	4. Care	.13	.17	.28*	--						
	5. Training	.31**	.15	.15	.16	--					
Beliefs	6. Serious AIDS problem	-.08	.02	.11	.15	.10	--				
	7. Teachers' comfort level	.10	.24*	.20	.11	.12	.11	--			
	8. Responsibility for HIV infection	.04	.11	.05	-.09	.05	.01	-.19	--		
	9. Responsibility for Teaching HIV/AIDS	.18	.24*	.19	-.08	-.08	.07	.29**	.17	--	
Teaching Practice	10. Teaching Practices	.14	.37**	.08	.12	.24*	.35**	.30**	-.04	.09	--

**Correlation is significant at the $p < .01$ level
*Correlation is significant at the $p < .05$ level

Descriptive statistics of 4 major Study Constructs

Table 6 depicts descriptive statistics for each of the four major study constructs, including means, standard deviations, ranges, and alpha levels. The Cronbach's alphas for the major four constructs of knowledge, attitudes, beliefs and practices were all below .60. All of the internal consistency reliability coefficients for the measures used in the study regarded as low, indicating that the study measurement may not be stable.

The range of scores for the major study construct knowledge in the present investigation was 2.95 to 4.85 (e.g., higher scores indicating a higher level of knowledge) with an overall mean of 4.2 indicative of a high level of knowledge of HIV and AIDS. The major study construct teaching practices range from 2.25 to 5.00 with a mean score of 4.2 indicating a high level of agreement amongst participants related to the importance of teaching practices of sexuality, HIV and AIDS education. The constructs attitudes and beliefs both had an average mean score of 3.8 ranging from 2.00 to 4.75 and 3.00 to 5.00 respectively. Firstly, the mean score for the major study construct attitudes indicates participants' level of neutrality related towards taking care of the HIV infected and level of comfort and importance of training programs related to HIV and AIDS. Secondly, the mean score for the major study construct beliefs indicates participants' level of neutrality towards taking the problem of HIV and AIDS seriousness, teachers comfort level in terms of teaching HIV and AIDS programs and who should be responsible for teaching HIV and AIDS as well as who should be held responsible for HIV infection.

Table 6
Descriptive statistics of 4 major constructs

Constructs	Mean	SD	Range	α
1. Knowledge	4.2	.37	2.95 – 4.85	.439
2. Attitudes	3.8	.49	2.00 – 4.75	.486
3. Beliefs	3.8	.31	3.00 – 5.00	.540
4. Teaching Practices	4.2	.61	2.25 – 5.00	.496

Correlation Matrix Among 4 Major Study Constructs

The correlation matrix, as shown in Table 7, depicts statistically significant correlations between all four major constructs of attitudes, knowledge, beliefs and practices. Positive statistically significant correlations for teaching practices were found among all other constructs including beliefs ($r = .30$, $p < .01$), attitudes ($r = .26$, $p < .05$) and knowledge ($r = .24$, $p < .05$). The strongest statistically significant correlation was found among knowledge and attitudes ($r = .41$, $p < .01$). This indicates that knowledge of HIV and AIDS relates strongly to an individual's attitudes towards HIV and AIDS. A weak positive relationship was found between beliefs and attitudes ($r = .06$); this relationship was not statistically significant.

Table 7
Correlation Matrix Among 4 Major Study Constructs (Mean)

Constructs	1	2	3	4
1. Knowledge	--			
2. Attitudes	.41**	--		
3. Beliefs	.27*	.06	--	
4. Teaching Practices	.24*	.26*	.30**	--

**Correlation is significant at the $p < .01$ level
*Correlation is significant at the $p < .05$ level

Survey question 4.1 - Level of seriousness of HIV and AIDS under construct Beliefs

Participants were asked to select from a list of factors, the three factors that most influenced them to take the problem of HIV and AIDS seriously. The factors with the highest percentages and with the most influence were reading articles (67.9%, n = 53), HIV and AIDS statistics (43.6%, n = 34), knowing someone with HIV and AIDS (43.6%, n = 34), listening to radio and television (39.7%, n=31) and speaking to someone with HIV and AIDS (38.5%, n = 30). The factors with the least influence on participants regarding the level of seriousness about HIV and AIDS, were found to be signs and billboards (3.8%, n = 3), VCT (voluntary counseling and treatment) (5.1%, n = 4) and talking to friends (9.0%, n = 7). Only 3.8% (n = 3) of participants indicated that they were not concerned at all about the level of seriousness of HIV and AIDS.

Table 8
Survey question 4.1 - Level of seriousness of HIV and AIDS

Factors	Freq	%
Not concerned	3	3.8
Radio and Television	31	39.7
Articles	53	67.9
Workshops	29	37.2
Booklets	10	12.8
Signs & Billboards	3	3.8
Knowing someone with HIV/AIDS	34	43.6
Care for someone with HIV/AIDS	10	12.8
Speak to someone with HIV/AIDS	30	38.5
Statistics	34	43.6
Talk to Health Care Worker	9	11.5
VCT	4	5.1
Talk to friends	7	9.0

Qualitative data – Survey instrument

Research Question 2

How do teachers and child care providers describe teaching experiences, challenges and needs of teaching sexuality, HIV and AIDS programs?

Experiences

a. Describe in 2-4 sentences teachers' experiences in teaching sexuality, HIV and AIDS programs to their students in Special Needs Schools?

Six major themes were identified that relate to how teachers and child care providers experience teaching related to sexuality, HIV and AIDS programs. Most responses from participants related to the themes on learners' cognitive abilities (n = 23), teachers' level of comfort (n = 16) and approach to and importance of programs (n = 12). Only a few responses related to learners response, attitudes and reactions (n = 11), parents' input (n = 7) and positive experiences (n = 4). Below are the sub themes and selected quotes illustrating these six major themes. A narrative write up follows thereafter.

Theme 1: Learner's cognitive abilities a challenge

Sub theme 1A: Learners level of understanding very limited

It's difficult for low functioning learners to respond. Their understanding of the subject is limited.

Sub theme 1B: Adapted lessons to fit cognitive level of learners

We use mainstream programs but it is adapted for 'our' (Special Needs) students.

Theme 2: Teachers level of comfort

Sub theme 2A: Teachers uncomfortable and avoid topic

Some colleagues feel uncomfortable talking about sexuality (older teachers).

Teachers feel children shouldn't know too much.

Sub theme 2B: Teachers have limited training, experience and huge workload

I do not have any experience in teaching HIV and AIDS.

If there is no specific time-allocation for this program, teachers tend to not include the formal teaching of these topics, because of a full timetable.

Theme 3: Approach to and importance of programs and lesson materials

Sub theme 3A: Keep lessons practical, relevant and simple

Keep it simple, show what you are saying- demonstrate. Speak more after. Involve the students so that they know. Teach by example.

Sub theme 3B: Education on this topic essential

All the children have the right to know what HIV and AIDS are and how to get infected. Important to educate the children not to touch other children's wounds or when it is bleeding...

Theme 4: Learners response, attitudes and reactions

Sub theme 4A: Some learners embarrassed, others are curious and ask questions

Special need learners- Autism (Asperger) Cerebral palsy, Dyslexia & Physical disabled learners pay more attention to fact given & usually ask a lot of questions.

Sub theme 4B: Learners well informed on the topic and feel stigmatized

Learners feel that it is a stigma to be HIV and the stigma attached to HIV and AIDS stops some people from being tested or going for treatment. It is important not to stigmatize people living with AIDS.

Sub theme 4C: Information given leads to promiscuity and discipline problems

I taught in Special Needs Schools for 17 years, +/- 9 years was with mildly mentally handicapped and +/- 7 years with severely handicapped. Learners tend to be promiscuous and their understandability is low, it's difficult to teach them responsibility.

Can feel sometimes that those who are active sexually may influence those who are not to become sexually active.

Theme 5: Parents input

Firstly, the facts discussed on this topic are not re-inforced at home therefore it is easily forgotten. Sexuality is also not an open topic at home therefore it takes several lessons before coming to the real world.

Theme 6: Positive experiences

Learners are willing to listen, participate and share knowledge.

I enjoy teaching this subject, its surprising how open children are.

Participants reported that their learners' cognitive abilities in understanding the topic of sexuality, HIV and AIDS have been a challenge. Specifically, learner's lower level of functioning causes them to not grasp the material and lessons taught to them well. Participants further indicated that they use curriculum content and booklets utilized in mainstream schools and adapt those lessons to their special needs learners' level of functioning. Participants reported that not all teachers are comfortable teaching this topic. Older teachers have a difficult time accepting that their learners are ready to receive this information. Participants also noted that they do not have much experience related to teaching sexuality, HIV and AIDS. Some teachers would even avoid teaching this topic especially when their workload becomes too much.

Some participants do believe that it is important that their learners should receive this information on sexuality, HIV and AIDS. They noted that it is important to keep the content of the lessons very simple and practical, to involve students and demonstrate the difficult concepts. Participants mentioned that learner's reactions to this information either provoke some curiosity in asking many questions or they get embarrassed and shy away. Other learners though, are very well informed on the topic and feel stigmatized against. Apart from poverty and discrimination, stigma has been found to be one of the

major socio-economic problems faced by persons with disabilities (Mulindwa, 2003). Participants noted that at home, their learners are not exposed to this topic of sexuality, HIV and AIDS and mentioned that parents are not willing to discuss this topic openly with their children. In spite of some of the difficulties participants' experience, some participants indicate that they do have positive experiences and find that their learners are very eager to learn and participate in class.

Challenges

b. What are the challenges and/or barriers teachers face when teaching sexuality, HIV and AIDS programs?

Altogether six themes have been highlighted related to challenges teachers face in teaching sexuality, HIV and AIDS programs. Most responses related to themes on learners' cognitive abilities, reactions and insecurities (n = 21), teaching on this topic and teachers' level of comfort (n = 19) and insufficient training programs, material and resources (n = 12). Only a few responses related to learners' personal circumstance and environmental conditions (n = 7), parents input (n = 5) and myths and cultural differences (n = 4). Below are the sub themes and selected quotes illustrating the six major themes. A narrative write up follows for research question 2b on challenges related to teaching sexuality, HIV and AIDS programs.

Theme 1: Insufficient training programs, materials and resources

Sub theme 1A: Lack of proper training

Teachers not having had sufficient training on teaching sexuality, HIV and AIDS

Not being able to reach students who are to a greater extent mentally challenged.

Sub theme 1B:Lack of resources and adapted lessons

WCED does not provide appropriate training for teaching staff (for special needs schools). Not enough resources and teaching aids.

Theme 2: Learners cognitive abilities, reactions and insecurities

Sub theme 2A: Learners level of cognitive understanding

The fact that most of them cannot read, their ability to understand the information that you give them is low, some of them are still very immature, their self esteem is very low, they feel great when opposite sex is interested in them.

Sub theme 2B: Learners specific disability or impairment

Some learners have Down Syndrome, FAS, Intellectually Challenged, Non Verbal (Deaf) learners and they come from poor economic backgrounds where their perception around sexuality is totally different from what teachers tries to instill in them. Another barrier is the non-verbal (Deaf) learners.

Sub theme 2C: Learners hormones, attitudes, perceptions

Most special need learners take you for a joke if you mention any sexual body part. Thereafter you have your hands full as learners become sexually aroused. I suggest special need learners will respect a guest speaker like a nursing sister (not at school) more. They will feel free to ask questions of need.

Theme 3: Teaching on this topic and teachers level of comfort

Sub theme 3A: Content of lessons

A challenge is bringing the learning material to the level of the children with intellectual disabilities.

Sub theme 3B:Teachers knowledge, approach and level of comfort

Feel embarrassed, uncomfortable with self (the teacher). Don't feel children should know certain things it's too much. Prejudices and own beliefs e.g. prudish, anti-homosexuality (of teachers). It is sensitive material and needs to be dealt with sensitively. Don't want to over share information i.e. age appropriate information, older children may ask more detailed questions.

Theme 4: Myths and cultural differences

A lot of kids have all kinds of misconceptions surrounding sexuality and HIV because some parents are not comfortable talking to their kids about it and accept the school to take their duty over as a parent. This is wrong it is both parties responsibility.

As a therapist the main challenges are language barrier and cultural differences.

Theme 5: Parents' input

Other parents do not want teachers to teach their children about HIV and AIDS.

Theme 6: Learners' personal circumstances and environmental conditions

The children we teach are exposed to terrible things at home. We cannot prevent that but we can try to teach them what to do in these circumstances.

One of the biggest challenges participants indicated is the insufficient training related to sexuality, HIV and AIDS programs. Even though the Western Cape Education Department does provide training, participants noted that training is not specifically focused on their learners needs related to their disabilities. Training focuses mainly on mainstream learners abilities, thus they adapt the lessons to their learner's level of functioning. Another challenge participants struggle with is learners' cognitive functioning and ability to grasp the information. They mentioned that learners' tend to be

immature and some have a very low self-esteem, making them vulnerable to the opposite sex. Further, participants reported that learner's specific disability or impairment pose a challenge and in addition, these learners come from poor economic backgrounds with poor value systems.

On receiving this new information, participants reported that their learners tend to react in a humorous way or either, they become sexually aroused, therefore participants expressed a need for experts to come in as guest speakers to assist in teaching this topic. Participants also noted that it is important for teachers to feel comfortable with themselves as individuals and acknowledge their own prejudices and beliefs when teaching on this topic, especially given that this is such a sensitive topic. Addressing misconceptions and myths related to this topic is a challenge particularly because participants noted that parents do not feel comfortable or are against talking about this topic at home thus leaving the responsibility to the teacher to address this issue. According to Wazakili (2009), cultural beliefs have been highlighted as one of the reasons parents are not in favor of sexuality, HIV and AIDS education thus, preventing youth from asking the right questions to develop knowledge and a positive sexual identity. Participants mentioned that some parents even object to them teaching on this topic. Participants further noted that their learners are exposed to very difficult situations at home but they do believe that they are in a position to teach their learners how to protect themselves.

Needs

c. What are teachers' needs to improve on their teaching related to sexuality, HIV and AIDS programs?

Four main themes were identified related to teachers' needs regarding teaching sexuality, HIV and AIDS to learners with special needs in South Africa. The majority of responses related to the themes on training and/or workshops (n = 41) and suitable learning material and apparatus (n = 23). Only a few responses related to the themes on teacher's knowledge and comfort level (n = 5) and parent and expert involvement (n = 3).

Theme 1: Training and/or Workshops

Sub theme 1A: Updated, on-going and relevant workshops and training

Ongoing refresher workshops

Updated workshops on HIV/AIDS

Constantly staying informed

Sub theme 1B: Specific training focused on knowledge, teaching methods and dealing with learners

More workshops about HIV and AIDS. To know each learner as an individual.

Correct knowledge and terminology- regular workshops. Better and refined guidelines in the curriculum for teaching sexuality, HIV and AIDS programs.

Sub theme 1C: General training

Training and resources.

Teachers need more training and more help from the department of education.

More training programs.

Theme 2: Suitable learning material and apparatus

Sub theme 2A: Practical apparatus and visual aids

Simplified pictures (some too difficult) on the developmental level of the child e.g. photo's (colour) and not line drawings. Support sick learners (infected with

HIV and AIDS), make them aware that they have it (HIV and AIDS) and to be very careful when others help them. Updated information & visuals (pictures, posters, photos of HIV/AIDS)

Sub theme 2B: Age appropriate programs including responsibility and values.

Suitable learning material- facts must be uncomplicated and age related. Prevention must be age related. Emphasis must be on a good value system, in other words, teach our learners what a value system is i.e. honesty, trustworthy, etc. Apply that value system to inform them and make informed decision.

Theme 3: Teachers knowledge and level of comfort

Teachers need to first feel comfortable with their own sexuality before embarking on teaching learners.

Theme 4: Parent and expert involvement

Need parent involvement

Get more professional 'outsiders' to lecture the learners (and also demonstrations). According to Gonzalez-Acquaro (2009), many teachers report feeling ill prepared during their teacher education programs and receiving little, if any, professional development related to this topic and how to answer questions that could be raised during class. Apart from the general training, participants highlighted that they need specialized training on how to deal with their learners, especially the learners infected with HIV and AIDS. In addition, participants reported that they need more current, updated, ongoing and relevant training and workshops to stay informed on new information related to teaching sexuality, HIV and AIDS. Sweeney (2007) noted that educational institutions need to recognize that comprehensive human sexuality education is needed which is 'more than

the sum of facts about body parts and biology' (p6. Rather, important goals of any human sexuality education program should include promoting a positive self-image, as well as developing competence and confidence in social abilities (Sweeney, 2007).

Participants noted that they need suitable learning material that includes practical apparatus and visual aids related to sexuality, HIV and AIDS. Participants further noted that the focus related to teaching HIV and AIDS should be on suitable age appropriate programs that include topics on prevention as well as an emphasis on a good value system. Another need participants mentioned relates to their own level of comfort with their sexuality before teaching this topic to their learners. Participants further expressed a need to include parents and experts to help them teaching on this topic.

Qualitative data – Key Informants

Research Question 3

How do key informants describe experiences related to teaching sexuality, HIV and AIDS programs?

Research question 3 included a key informant questionnaire with four main questions and one probing question for each of the four questions. Eight major themes were identified from interviews with the five key informants:

- learner's cognitive abilities, adaptations and Modifications to material/ curriculum
- training from the national Department of Education and additional resources
- teachers' experiences, challenges and needs
- student behavior and need to feel accepted
- environmental conditions and personal circumstances
- parents' role

- positive attitudes

Theme 1: Learner's cognitive abilities

Participants reported that learner's cognitive abilities and level of functioning impacts heavily on learner's understanding and processing of knowledge relate to the topic of sexuality, HIV and AIDS programs. Therefore, Sweeney (2007) suggested that information be given in small blocks with some modifications required for activities and tasks given. In addition, participants highlighted that teachers need to be creative in how they present the material to their learners', as the booklet does not always include information on how to deal of lower functioning learners.

> TR (transcript) 1: It depends on the level of functioning so you have to first assess what is their level of functioning and if they understand what is happening to them.
>
> TR 4: The booklet for your high or low cognitive functioning learners will be fine but whenever you go to your lower functioning learner you have to improvise.

Theme 2: Adaptations and Modifications to material/ curriculum

There seems to be no urgency when it comes to sexuality education for youth with disabilities (Wazakili et al, 2009). This theme was emphasized by participants repeatedly mentioning that the Department of Education does not provide sexuality programs that are tailored to the needs of their learners. Instead, the onus is on them to become creative in adapting the information aimed at mainstream learners to address the level of functioning of learners in Special Needs Schools. Participants noted that they sometimes are compelled to develop and design lessons based on each learner's individual background and that sometimes poses a huge challenge. Participants also indicated that

they make use of posters, puzzles, pictures, DVD's and dolls to teach on the topic of sexuality, HIV and AIDS. Also, participants indicated that they make sure that the information they give is age appropriate given the specific phase learners are divided in. Participants suggested an additional topic that should be included in the curriculum, which is a focus on living with HIV and AIDS.

> TR 4: That is the main problem, you sit with a lot of children in front of you and everyone comes from a different background, now you have to design a lesson to suit every child, that's your first problem.
>
> TR 3: We make use of posters, we have books and practical examples, with pictures and then we do site reading like for instance when we read we have the picture right next to it but mostly we rely on the posters that are handed out and the books that they give to the children with puzzles in and sketches in.
>
> TR 2: I think the focus should be more on living with it (HIV and AIDS), that is more the need.

Theme 3: Training from the national Department of Education and additional resources

The majority of participants noted that they have received training from the Department of Education. Participants noted though, that the training is only based on learners in the mainstream schools. Participants noted that even though in some cases the whole staff will receive training, the majority of schools only select a few teachers from the staff to receive training. These teachers then have to report back to their staff members who did not attend the training. Participants mentioned that they also seek out additional training and resources with private institutions to assist them with teaching this topic specifically with the focus on how to work with learners with disabilities.

TR 1: The department of education does give training with regards to HIV and AIDS but only based on mainstream therefore we get trained by the Cape Metro Health Association.

TR 5: I (interviewer): And how did your school decided on which teachers to send to these workshops?

KI (key informant): For instance two years back, they asked for two teachers, the HIV/AIDS members because we got a HIV/AIDS committee here at school and I am the coordinator of it. ....and it is there that we got the CD and two big dolls, a boy and a girl and a booklet. So we then gather all the staff and we show them and give a report back.

TR 4: different schools make contact with private institutions and in our school's case we have a program from Dr John Bushwill and he comes to talk to the different phase groups separately and workshop with the teachers and the parents.

Theme 4: Teachers' experiences, challenges and needs

Some participants indicate that teachers are tired of teaching this topic as a result of having to do this repeatedly. Some participants further noted that they stand in for those teachers who are not comfortable teaching on this topic. For a variety of reasons, both parents as well as teachers frequently find human sexuality education a daunting task (Sweeney, 2007), therefore their responses to finding learners engaging in sexual activity at school also differ depending on how comfortable they are with teaching this topic. Participants noted that for some of them, they have an educational talk or chat with the learners but other teachers who find this topic intimidating, reprimand or discipline their learners when they find their learners engaging in sexual activity at school. In fact,

learners need guidance how to develop healthy social skills (NICHCY, 1992). According to the NICHCY (1992), public-private errors are one of the common social mistakes identified on the part of youth with disabilities.

Some participants reported that some learners are very well informed on this topic related to HIV and AIDS. In addition, participants reported that reviewing and analyzing teachers' own inhibitions and prejudices is also important. Participants noted that a bigger challenge though, is their learner's difficult personal circumstance and socio economic conditions.

> TR 2: Soft giggle, to be honest, very honest to you, teachers...uhm, it is a bit of a teacher's joke in corridors when teachers say 'do I have to do it again?' So it may seem that teachers are becoming a bit tired about the topic.
>
> TR 3: There are some teachers that tell us, and it is not a secret, they say that they are not as comfortable and ... I took the first lesson for him.
>
> TR 1: ....I tell them this is a private matter and we take it where it is private. Do not do it (masturbate) in the public ...some teachers will actually go out and discipline them more and put them in detention and take away privileges
>
> TR 3: You really have to have hair on your teeth if you work with children if they are so streetwise that you find that the information that you give them they already know.
>
> TR 2: I think teachers will opt for more extensive training...
>
> TR 1: I think for me, you have to deal with your own inhibitions; .... and prejudices if I may add.

Theme 5: Student behavior and need to feel accepted

Participants mentioned that their learners suffer from low self-esteem and insecurities and this allows them to become vulnerable to sexual assault. Thus, knowledge and information related to sexuality, HIV and AIDS are crucial as it has been noted that knowledge increases self-esteem and decreases fear of sex-related activities SIECUS (2009). SIECUS (2009) states that one of the purposes of sexuality education in particular is to provide young people with information and skills about taking care of their sexual health and particularly to help them acquire skills to make informed decisions. Participants also have to deal with learners not taking the topic of HIV and AIDS seriously.

> TR 3: The other thing that I have experienced is that our children wants to be accepted so if somebody, let me say it like this that if someone wants their body its like they feel proud.
>
> TR 2: You have the challenge that kids in that age group did not find anything very serious, they tend to make jokes out of anything you tell them, so that was a challenge I remember.

Theme 6: Environmental conditions and personal circumstances

Participants expressed huge concern related to learner's environmental conditions and personal circumstances that make it difficult to address the topic of sexuality, HIV and AIDS. Some learners come to school hungry or from overcrowded and abused home or they are exposed to potential sexual assault in their communities. Other learners stay in areas where there is a high rate of crime and gangster activity and where the value system has deteriorated very badly.

TR 3: You know these children come here hungry, we have morning bread or breakfast bread...now we have a nurse here and she is very helpful when we find that girls are sexually abused ...

TR 4: We have a lot of kids that come from areas where there is crime and gangster environment and everything that you try and bring across in your teaching are brought down by those negative influences.

TR 4: ...like for instance on the value system and its maybe not part of their family or the community's value system then you teach something that they are not use to or not believe in.

TR 5: So they are young, the people they give them money, and then they get use to that money and after that they will do some sex with you. And after that they will tell you, do not tell anyone, you see?

TR 4: The main challenge is to teach the child coming from the difficult background, circumstances and social economic environment where the children stay.

Theme 7: Parents role

Parents' attitude and role in their children's schooling is very important to participants. As such, participants mentioned that some parents do not feel comfortable with this topic of sexuality, HIV and AIDS being taught to their kids. They also noted that parents themselves find it difficult to talk to their own children because of how they as parents have been brought up to deal with this topic. Perhaps parents do not realize that they always communicate their feelings and beliefs about sexuality continuously both verbally and nonverbally, through praise and punishment, in the interactions they have with their

child, in the tasks they give the child to do, and in the expectations they hold for the child (NICHCY, 1992). Thus, getting parents involved and making them aware of the impact they have on their children is imperative. Therefore participants emphasized their concern related to parents' little involvement in encouraging and supporting their children.

> TR 3: I have a mother that is from the 'old school', I mean if it was not for me being comfortable and clued up ...
>
> TR 3: I (interviewer): So that could possibly be a barrier or challenge that parents are not on board with this?
>
> KI (key informant): They are not comfortable and it is the way we are raised, the sex subject is taboo, what about HIV and AIDS.
>
> TR 5: They (parents) are so scared they say their children are too young to talk about it
>
> TR 4: Then another challenge is little or no involvement from parents, whatever knowledge or skills kids have is not encourage from parents.

Theme 8: Positive attitudes

Some participants mentioned that they are very positive about teaching on this topic. Participants believe the HIV and AIDS education empowers their children and that it is important that their learners are informed. Participants also noted that since some of their learners are already sexually active, the school is sometimes the safest place where they can express their sexual relationships because they come from poor and crime ridden social economic backgrounds. As noted by Wazakili (2009), these poor environmental conditions may result in youth with disabilities being denied access to sexual and reproductive health. As a result, the school becomes the best place where they can access

services related to reproductive health and information on sexual relationships through their teachers and child care providers. Other schools also managed to get their parents involved by inviting them to the workshops at school and thus far, these participants reported that they have been receiving very positive responses from these parents. According to the National Information Center for Children and Youth with disabilities (NICHCY) (1992), both parents and the school system assume responsibility for teaching children and youth about appropriate behavior, social skills, and the development of sexuality. A great deal of education about socialization and sexuality takes place in settings outside the home. The school setting is probably the most important, not only because most students take classes in sexuality education, but also because it is there that children and youth encounter the most extensive opportunities to socialize and mix with their peers (NICHCY, 1992).

> TR 4: ...most teachers are very positive about the education of HIV and AIDS, especially with the conditions in the Western Cape. We feel that we empower our children with the necessary skills and information on HIV and AIDS.
>
> TR 5: .....the fact that they are sexually active and this (the school), is the only place here at school that you can see your partner because the other one stay in Langa, the other one is in Gugulethu or in Khayelitsha and you are disable, so you are not able to walk to Langa.
>
> TR 4: I (interviewer): That sounds really good that they include the parents as well. Is this the case that the school is making sure that the parents are always involved?

KI (key informant): Well, this is the second year that the school is doing this and we have got a very positive response from the parents. That was after the workshop with the parents last year that they asked for it again this year.

In conclusion, this section summarized the findings for all three research questions of the present study.

CHAPTER 5

Discussion

The purpose of this study was to investigate teachers' and child care providers' views related to teaching sexuality, HIV and AIDS programs to learners with disabilities. According to Lamorey (2010), sexuality education including a focus on HIV and AIDS for learners with disabilities is a controversial and difficult issue. Education stakeholders, specifically teachers and child care providers at Special Needs Schools, often are left with the responsibility to provide learners with disabilities with this important information. Adding to the complexity of this sensitive topic, are learners specific disabilities and cultural adjustments that need to be addressed when imparting information about sexuality, HIV and AIDS programs as well as to the necessity of taking into account a student's social-emotional maturity and developmental levels (Lamorey, 2010). To better understand and subsequently address the needs of learners with disabilities, one place to start is with investigating teachers' and care providers experiences, challenges and needs related to teaching sexuality, HIV and AIDS programs to learners with disabilities.
To accomplish this task, the following three research questions were addressed in this present study:

Research question 1: What are teachers' and child care providers' knowledge, attitudes, beliefs and teaching practices of sexuality, HIV and AIDS?

Research question 2: How do teachers and child care providers describe teaching experiences, challenges and needs of teaching sexuality, HIV and AIDS programs

Research question 3: How do key informants describe experiences related to teaching sexuality, HIV and AIDS programs?

The sections that follow discuss firstly, a narrative summary of the results, Secondly, the implications of these findings for sexuality, HIV and AIDS education in Special Needs Schools are discussed. Thirdly, a summary of the findings in relation to the ICF biopsychosocial model of disability and to previous research will be described. Fourthly, limitations of this study will then be addressed and finally, the chapter conclude with recommendations for future research on teaching sexuality, HIV and AIDS programs as teaching processes and methods relate to policy, practice and training.

Narrative summary of results

The following section presents on the major findings related to Research question 1 to 3.

Research question 1: Survey findings

The present investigation yielded a number of high overall mean scores for the study variables, with the highest overall mean scores for the variables causation 4.5 on a five-point Likert scale (neutral=3, agree=4, strongly agree=5), teachers' comfort level (4.4), seriousness of HIV and AIDS (4.2) and teaching practices (4.2). Given the level of educational qualification of this sample with more than half (55.1)% having a teaching diploma or certificate and more than 40% with a degree (19.2% with a BA degree and 21.8% with a post degree qualification), it is expected that they will score high on the variable causation. Therefore, the findings indicate that participants are knowledgeable on what causes HIV and AIDS, the cure for HIV and AIDS and treatment methods for individuals infected with HIV and AIDS. According to Malindwa (2003), educational level is strongly associated with one's knowledge and perceptions on a particular topic. Focusing on the topic of sexuality education however, Romeo and Kelley (2009) warned that sexuality education is often reduced to biological and or values-based approaches,

disregarding the essence of relationships, observing, developing, and practicing appropriate social and sexual behavior (NICHCY, 1992). James et al, (2006), in their study confirmed this notion with teachers reporting more comfort with teaching a more fact based rather than skill based curriculum (James, et al, 2006).

As the findings further indicate, it is evident that participant's do take the problem of HIV and AIDS very seriously. The high mean score on the seriousness of HIV and AIDS variable also strongly relates to the factors that participants indicated most influenced them to take this problem seriously. Participants indicated that these factors include reading specific articles about this topic (67.9%), HIV and AIDS statistics (43.6%) and knowing someone with HIV and AIDS (43.6%).

The high mean score on teachers' comfort level relates to teachers being comfortable in talking to family members, colleagues and learners with disabilities about sexuality, HIV and AIDS. This level of comfort is further emphasized by the high mean score related to teaching practices that include teachers and child care providers' willingness and open-mindedness to teach sexuality, HIV and AIDS programs to learners with disabilities as well as to those learners who are HIV infected. These findings related to high levels of comfort in teaching sexuality education are similar to an exploratory study done most recently focusing on teacher's experiences, coverage of topics, comfort levels and views about professional practice (Ninomyia, 2010).

Further, a significant number of correlations among the study variables were found. However the strongest correlation among all the study variables was between cure and causation ($r = .48$, $p < .01$). The finding indicate a strong association between participants knowledge of HIV and AIDS and the cure for HIV and AIDS.

In addition, the four major study constructs provide additional description and understanding to participants views related to teaching sexuality, HIV and AIDS programs to learners with disabilities. Both constructs of knowledge and teaching practices had a high mean score of 4.2, with the remaining two constructs of attitudes and beliefs having a moderately average mean score of 3.8.

All four constructs had statistically significant correlations amongst each other with the strongest correlation found between attitudes and knowledge ($r = 41$, $p < .01$). According to Gallant et al, (2004), both attitudes and knowledge are viewed as important goal to behavior change specifically with how teachers and child care providers treat learners infected with HIV and AIDS.

Research question 2: Participant Survey Responses Results

In the present study, teachers and child care providers were asked to respond to three qualitative questions about their experiences, challenges and needs related to teaching sexuality, HIV and AIDS programs to learners with disabilities. These topics were chosen based on a pragmatic need to understand the future directions in which sexuality, HIV and AIDS education research and policy efforts might proceed. This sample of teachers and child care providers provided responses that were rich and varied in their perspectives and attitudes. In terms of experiences, participants highlighted several important issues related to their day-to-day experiences teaching this topic.

Cognitive disabilities. The majority of participants' noted one topic in specific, which was the cognitive abilities and level of functioning of their learners. This participants' mentioned was a challenge since their learners have difficulty in understanding what the subject matter is as well as the responsibility that comes with

applying the information to their lives. Lamorey (2010) found in her study that respondents report that written materials were not modified for students with reading disabilities. In another respect, information had not been modified in terms of content that would be relevant for students who have certain physical disabilities and health impairments who are sexually active. Respondents in this study emphasized that these students would need additional content to learn about ways they could be intimate with a partner given their limitations (Lamorey, 2010). Participants in the present study reported adapting their lessons to the level of functioning of their learners in an attempt to impart knowledge and skills related to sexuality, HIV and AIDS.

Level of comfort. Embedded in participant responses is the notion that their level of comfort in teaching this topic is impacted by specific topics they have to teach (Ninomyia, 2010) and the quality of training they received. Even though the majority of teachers (69.3%) indicated that they receive some form of general training from the DOE, this training appears to lack application in working with learners with disabilities as well as a focus on teacher's level of preparedness and comfort to teach this topic. In addition, the majority of the current sample were married (71.8) females (84.6) with a mean age of 45.6 and average amount of teaching experiences of 13 years. These demographic characteristics are perhaps an indication of teachers who are very qualified and responsible individuals to teach a sensitive topic as sexuality, HIV and AIDS education. Yet, they noted that they feel embarrassed and uncomfortable with themselves in relation to teaching this topic. Given that this sample has individuals that are older in age and coming from a predominantly conservative Afrikaans speaking (61.5%) background, they most likely grew up viewing this topic as a taboo subject.

Student behavior. Participants noted that learner's responses varied from either negative or positive reactions. Some learners are very well informed on the topic and are keen to learn more therefore they will ask many questions related to the topic. Other learners act immature and cause discipline problems in class. Lamorey (2010) noted that student preferences regarding their preferred source of information would make a significant difference in the receptivity of students to the information. Including student input into program development would also improve their willingness to participate in a curriculum that was meaningful to them and presented by professionals whom they respect (Lamorey, 2010). Other participants reported that providing these lessons to their learners leads to promiscuous behavior.

With regard to the challenges participants face, they mentioned amongst other issues are parents' involvement, learners specific disability, and myths and cultural differences.

Parent involvement. As noted in the literature review, the qualitative data analysis in the present study also revealed that parents were not addressing these topics at home (Wazakili, 2009) due to them not feeling comfortable about discussing this topic with their children. This participants mentioned is a barrier in teaching this topic. They noted that parents at home are not validating the information they teach at school. Although school-based life skills education is a key component of the Government of South Africa's HIV/AIDS prevention strategy, existing research indicates only marginal success of school programs in influencing sexual risk-taking and health-seeking behaviors among youth (Speizer, Magnani & Colvin, 2003). Most likely there is a lack on the "range of sensory, cognitive, language, reading, and cultural modifications" that need to be

addressed when imparting information on this topic (Lamorey, 2010, p.88).

Misconceptions, cultural beliefs and language. According to Wazakili (2009), cultural beliefs also prohibit parents from discussing sexuality matters with their children because it is taboo to do so. Thus young people with disability often have misconceptions and misleading information related to this topic. In their study, conducting in-depth interviews with sixteen young people with disabilities, Wazakili (2009) found that participants alleged that parents, in collaboration with teachers and medical workers routinely place women with disabilities on contraceptives without any knowledge of sexual and reproductive health. Thus women and more often learners with disabilities are dependent on sources such as the media, their peers and potentially conflicting information from their parents and teachers to gain understanding of their own sexual health. This is problematic as both parents and teachers are the primary role players in imparting knowledge on this topic. In addition, participants also noted that in addition to myths and cultural beliefs, language also creates a barrier in effectively communicating information on this topic. With schools now accessible to all learners from all racial backgrounds in South Africa since the country's democracy, many learners speak one of the nine ethnic languages as their first language. Only a small percentage of the sample (10.3%) spoke two of the nine official ethnic languages in South Africa, with the majority of the sample speaking either Afrikaans or English.

The most pertinent needs according to participants relates to the effectiveness of training and suitable learning material that is age appropriate.

Training. Participants highlighted that they do receive training related to sexuality, HIV and AIDS programs from the Department of Education. The training was

reported to be insufficient to the needs of their learners since it is based on mainstream learners in public schools. Participants expressed a need for more current and updated training that includes relevant topics. Ninomyia (2010) conducted a study with junior high teachers in Canada and focused on teachers' views and experiences with specific topics in the curriculum. This study confirms teachers' need for updating training that include new approaches and teaching strategies. The sexuality education literature has long noted the importance of educators being well-prepared for teaching sexuality education in public schools (Greenberg, 1989), this means providing learners with disabilities with a comprehensive sexuality education.

Research question 3: Key informant Interview results

Five key informants participated in a 15 to 20 minute interview with all of them either in charge of the HIV and AIDS program or an HIV and AIDS coordinator. The interview questions addressed four topics that included experiences, teaching methods, challenges and needs related to teaching sexuality, HIV and AIDS to learners with disabilities. The themes identified from the key informant transcripts are very similar to the themes highlighted and expressed by teachers and child care providers who responded to the qualitative questions in the survey questionnaire. For some of the themes, the focus and degree of emphasis differ as in the cases of the themes on the impact on environmental and personal conditions, training and teacher's response to student behavior.

Environmental and personal conditions. Participants noted on numerous accounts both in the qualitative survey responses and from the key informant transcripts, how learners are affected by their environmental conditions. Particularly, key informants elaborated on their learner's level of vulnerability. This situation, participants noted

seriously impacts on the safety of learners as some of them are subjected to sexual abuse in pursue of acceptance, love and care. Among the deepest human needs are being accepted and liked, displaying and receiving affection, and feeling that we are worthwhile individuals are intimately connected with out sexuality. The danger for learners with disabilities is that they have often become frequent targets of physical and sexual attack in communities outside of institution settings like the school environment (Groce & Trasi, 2004) because of their low levels of self-esteem.

Training. Training efforts can be improved upon by inviting experts in the field of sexuality, HIV and AIDS. This approach, key informants highlight, provides valuable information on how to deal with their learners in teaching this topic. However, participants noted that most of the time only the HIV and AIDS coordinators are exposed to this intensive and more detailed training sessions with experts in the field. This key informant's confirmed but mentioned that as HIV and AIDS coordinators they then give feedback and inform the rest of their staff members on the new knowledge they gained.

Teachers' response to student behavior. Study survey participants focused more on student behavior related to receiving information on this topic while key informants further added description on how teachers' respond to finding student's engaging in sexual activity at school. Some of the teachers are reported to take a disciplinary approach and other teachers engage in conversation to educate their learners about appropriate behavior and privacy. Ninomyia (2010) noted that teachers are less comfortable to address sensitive topics that include masturbation and sexual pleasure.

A common theme from all participants relates to them having had positive experiences related to teaching on this topic as well. These positive experiences relate to

learners' acceptance and participation with regards to this topic, empowering their learners in how to protect themselves and the school becoming a safe haven for learners to openly express their feelings for the opposite sex. As a result, teachers become a confidant to learners who are willing to discuss intimate issues freely and they act as advocates for their learners with disabilities towards a positive sexuality development.

Implications of Study Findings for Special Needs Schools

In examining the implications of the present findings, comparisons and contrasts are made across all responses for Research Question 1 - 3. In addition, two major implications are noted which relates to accountability of disability and exclusion from educational opportunities.

Level of comfort. Participants responding to the quantitative questions in the survey instrument, ascribed a high level of comfort related to talking about and teaching sexuality, HIV and AIDS programs to learners with disabilities, but this was different when the same participants had to answered the qualitative questions. Therefore, the use of a mixed-methods approach that allows for further explanation and elaboration on important points (Patton, 1985; Creswell, 2009) was essential for the present study. Participants qualitative responses suggested that in fact they are not comfortable teaching on this topic. Participants highlighted the reason for this is that they feel learners may not be ready yet to receive information on this topic. Murphy and Callaghan (2004) describe this as a denial of sexuality. Further, the danger may be that teachers and child care providers may underestimate the risk factors if learners with disabilities are viewed as asexual (Di Giulio, 2003) or not ready to hear the information. Researchers have emphasized that the risk factors for HIV/AIDS, poverty, illiteracy, stigma, and

marginalization are identical between the general population and individuals with disabilities (Groce, 2005, Sweeney, 2007). Thus, while learners with disability are at equal risk of HIV infection, such a fact has not been recognized by many AIDS advocacy groups (Chappell & Radebe, 2009). Therefore, the concern is huge when studies such as the one conducted by Lamorey and Leigh (1996) report findings on special education teachers who report not addressing risk issues either "not at all" or "to a very limited extent". This issue is also validated by a study conducted with 88 college-age students with specific learning disabilities, who reported that most of the information that they were exposed to in high school regarding risk issues was either through the media or through peers (Blanchett, 2000) and not from lessons taught in school.

Training. There seems to be a discrepancy in responses regarding training for teachers and child care providers on this topic. Survey quantitative responses indicate general training for close to 70% of the current sample, however the qualitative responses indicated a lack of training in this area. In this study the lack of training refers to updated, ongoing and relevant sessions with a specific focus on teaching methods and dealing with learners with disabilities. Many teachers feel unsure and uncomfortable about how to handle specific questions. Another form of training to consider is online training that would include all teaching staff members. Given that most schools in South Africa now have updated computer facilities at school for all teaching stuff, this may prove to be a very beneficial tool related to training. Gonzalez-Acquaro (2009) conducted a study focusing on assessing the impact of an online workshop on teachers' knowledge, attitudes, and self-efficacy beliefs toward sexuality education and intellectual disabilities (Gonzalez-Acquaro, 2009). Results of this study indicated that providing training for

teachers in topics related to sexuality education and intellectual disabilities can increase not only their knowledge toward the topic but also their attitudes and their feelings related to self-efficacy.

Modifications and adaptation of lessons. A common message from participants was adapting and modifying lessons to suit the level of functioning of their learners. In an attempt to adapt lesson material based on individual teachers' judgment, it may be that teachers impose their personal views on their learners. Wolfe and Blanchett (2000) pointed out that "personnel delivering socio-sexual information should be aware of their personal values related to sexuality and persons with disabilities and actively guard against imposing their values on others" (p.6). This is an awareness that should be highlighted continuously as teachers' develop the best teaching strategies and approaches to teach on this topic.

Knowledge and attitudes. The strong association between knowledge and attitudes from quantitative data is an illustrating of the relationship between relevant and accurate information on the viewpoints and approaches of participants. This is further emphasized by the positive experiences noted by participants in both the survey qualitative and key informant responses. This information should be a guide to the DOE to invest in more current and updated training efforts for all teaching staff members.

Accountability for disability. Based on responses from participants in this study, there appeared to be no accountability for disability in sexuality, HIV and AIDS programs. Decisions on the type of sexuality education programs, curriculum and standards that should or should not be provided in schools are often left to the local provincial level and typically include abstinence based, abstinence only, abstinence only

until marriage, and fear based programs (Gonzalez-Acquaro, 2009). There is no specific focus on disability, given that programs are based on the needs of learners in mainstream schools and not on the needs of learners in Special Needs Schools. In addition, many of these types of programs are often developed to add to or expand on the information that students presumably receive at home (SIECUS, 2001, p.2). Based on participant's responses it is clear that learners get information on this topic primarily at school and on a limited basis form parents at home. Collaboration between parents of learners with disabilities, community leaders and members from disability advocacy groups should be considered as a strategy and a way forward to develop sexuality programs that include a focus on disability.

Exclusion from educational opportunities. A noteworthy contribution made by the new South African democratic government was to introduce HIV and AIDS education in all public schools. Even though the government's response to the HIV and AIDS epidemic overall has been inconsistent, this major effort to implement mandatory life skills-HIV and acquired immunodeficiency syndrome (AIDS) education (Mangani et al, 2005) has been very important. Consequently, the curriculum was informed by the classic cognitive and social learning theoretical frameworks that contributed to knew knowledge gained by learners on this topic. But literature indicates that a significant number of learners with disabilities have been left out of formal education opportunities (Schneiner, 2000; Peters, 2003; Watermeyer et al, 2006). Peters (2003) further noted that exclusion, poverty and disability are in fact linked.

On the basis of the data gathered, participant responses clearly indicated, poverty in particular has a huge impact on the lives of learners' with disabilities. Key informants

described in detail how their learners are affected by poverty and as a result they come to school at times not having eaten anything. Some schools do provide sandwiches to learners but as participants indicated, this may be the only meal they have for that particular day. One of the key informants became very emotional when explaining how this impacts their learners on a daily bases. Gonzalez-Acquaro (2009) noted that some teachers are often left with the difficult situation of understanding and dealing with social and personal issues impacting their learners. As such, the role of teachers becomes more cumbersome and challenging and they need help and guidance in how to effectively assist their learners.

Relationship of Findings to Theoretical Framework

Studying disability provides an opportunity to explore the ICF biospychosocial model of disability and confirm that the ICF is increasingly affecting the practice of particular professions and clinical interventions (Bruyere & Looy, 2005). According to the World Health Organization (2002) the ICF makes it possible to collect vital data related to the function of health planning and management purposes based on levels of functioning and disability as put forward in the ICF framework. The relation of the ICF to the present study findings can be linked to the interplay between functioning and contextual factors, its relevance to the education profession and educational training paradigms related to sexuality, HIV and AIDS education as described below:

Interplay between functioning and contextual factors. It was possible in the present study to examine how teachers reflect and view their learner's interaction between their functioning related sexual health and their contextual factors. The ICF biospychosocial model depicts disability and functioning as outcomes of interactions

between health conditions (diseases, disorders and injuries) and contextual factors (environmental and personal factors) (WHO, 2002). The present study findings suggest disturbing interactions between the sexual health and the environmental and personal factors impacting learners with disabilities where learners with disabilities become targets of sexual misconduct. According to (Simeonsson et al., 2003), this creates restrictions and a barrier to their functioning and as a result, learners with disabilities are not able to experience the development of a positive sexuality.

Relevance to the education profession. The ICF's relevance as a conceptual framework for the education profession has the potential to increase teachers and child care providers understanding of disability and so enhance educational practices. In evaluating the ICF's relevance for the nursing profession, Kearney and Pryor (2004) concluded that it has the potential to expand professional's thinking and practice by increasing awareness of the social, political, and cultural dimensions of disability. The nursing profession had been conceptualizing disability from largely medical and individual perspectives that do not consider its social dimensions thus disability is often still addressed and viewed as a medical care concern (Groce, 2005). As Smart (2005) noted, while there are medical and biological aspects of disability, disability no longer need to be defined only in medical terms. Watermeyer et al (2007) noted that in the past, the South African view of disability has been one of a charity point of view, progressing to currently changing views based on new policy and legislation that relates to a human rights-based inclusion of all citizens.

Yet, the present study findings confirm that some teachers and child care providers still have a limited understanding of learners with disabilities participation as

sexual beings in society. Participants noted their learners are not ready to receive information related to sexuality, HIV and AIDS information. Thus the ICF framework may assist the teachers and child care providers in moving away from the previous focus on impairment and broaden the focus of including the social as well as physical dimensions in the experience of learners with disabilities, especially for older teachers who still struggles with accepting their learners as sexual beings. Therefore, relevance of the ICF for the education profession also applies, as it contribute to the enhancement of teachers and child care providers thinking and practice by accepting all learners with disabilities as complete people and active participants in society negotiating their own sexual identity.

Training paradigms. The study findings strongly affirmed that current training models are insufficient because it does not address the needs of learners with disabilities. Instead, training is focused on learners in mainstream schools. Including mandatory knowledge on disability as put forward in the ICF is imperative to create a transformation in sexuality, HIV and AIDS education training that the present study participants advocate for.

A few researchers have highlighted selected strengths and weaknesses of the ICF (Moller, 2003, Simeonsson et al., 2003, Battaglia et al., 2004), but as Petersen and Kosciulek (2005) noted there are important developmental factors to consider that are not present when working with adults. Battaglia et al. (2004) described the application of the ICF in a cohort of children with cognitive, motor, and complex disabilities, having studied its correlation with well-established measures of function already in use. They found the ICF to be applicable, reliable, and strongly correlated with established scales.

However, they also pointed out that several components do not fully capture the developmental nature of many abilities in children. Therefore, Simeonsson et al. (2003) proposed the need for a common language and classification of functioning and disability for children. The development of the ICF Children and Youth version (ICF-CY) published in 2007 will serve to be very beneficial and valuable given the differences between the nature and type of functioning between children compared to adults (McAnaney, 2007).

Limitations of the Study

Reliability and validity. The first and most significant limitation of the study relates to reliability and validity of the data. Due to the first time use of a modified version of the "Teacher and child care provider views of sexuality and HIV and AIDS education questionnaire', there is an absence of reliability and validity data in relation to measuring the variables in this present study. This reflects the need for further construct validity in each item to ....the instrument.

Sampling Procedure. Prior to the discussion of suggestions for future research, limitations of the present study are noted. The second limitation relate to the sampling procedure. In this study the sample was a convenient volunteer sample with the selection of schools made based on those names of schools that appeared only on the DOE website. There are other Special Needs Schools that are not listed on the website that were excluded. Therefore the sample is biased and does not represent the population of all teachers teaching at Special Needs Schools. As such, there was no way to guarantee that each characteristic of the population was representative in the sample (e.g., race/ethnicity, age, gender, teaching experience, etc.) (Leedy & Ormrod, 2005).

Sample Size. A third limitation in the study relates to sample size. A sample size of 78 (N = 78) was used in the present investigation. While significant relationships were found among knowledge, attitudes, beliefs and teaching practices of teachers and child care providers, findings should be interpreted with caution due to the small sample size relative to the number of study variables and constructs. Additionally, the size of the sample was also likely a factor in the lack of overall significant findings.

Response Rate. A fourth limitation in the study relates to response rate. It was not possible to establish the participant response rate for the study but 22% of schools representing all four regions of the Western Cape Province responded and participated in the study. While attempts via email notification, letters of invitation and follow-up phone calls were conducted as ways to increase potential response rate, other methods such as including offering incentives were not conducted which may have potentially increased response rate. Therefore, the data in the present study may not accurately reflect the attitudes, knowledge and beliefs of a more complete and representative sample of teachers and child care providers.

Participant Bias. A fifth limitation in the study relates to potential participant bias. The study relied on participants self-report on a very sensitive topic related to sexuality and HIV and AIDS and it may be too optimistic or too positive. It is difficult to estimate the authenticity because of the uniqueness of the study and given that it is an exploratory study.

Representativeness. A sixth limitation in the study relates to sample representativeness. Many of the participants were older 'white' 'Afrikaans' speaking females. In addition, the proposed study collected information only in one province of

South Africa excluding eight other provinces in the country. Also, the Western Cape Province is one of the most popular provinces where research is conducted and it has some of the most resourceful schools given the interventions done after data collection at many Special Needs Schools. This province is also known to receive various educational and health related interventions both from local and international institutions for the purpose of research. Therefore, learners with disabilities in other parts of the country may be at a disadvantage posing more challenges that they may have to deal with than youth in the Western Cape Province.

Collecting data on an important and sensitive topic such as sexuality and HIV and AIDS education is crucial and excluding parents of youth with disabilities creates a huge gap in the literature. More importantly, not collecting data from the learners and youth themselves may result in missing out on important information needed to develop intervention strategies to effectively assist youth with developing a positive sexuality and diminish risk factors in transmitting HIV and AIDS.

Credibility. A seventh limitation relates to credibility of the data. Credibility was addressed through the use of two additional readers, one a masters student and the other the student advisor who reviewed all of the researcher's transcripts and initial thematic analysis to provide feedback to the researcher regarding themes and concepts. Ideally, the best means of establishing credibility would be through the participants themselves (Lincoln & Guba, 1985).

Researcher bias. Finally, in qualitative terms, the researcher is the participant-observer and subjectivity and reflexivity are expected elements of the qualitative process. Data analysis literally involves a dialogue between the researcher and data in which the

researchers' own views have important effects (Patton, 1985). The most important aspect for a qualitative researcher to maintain is to remain close and true to the phenomenon. Researcher bias during this study has been documented through notes, meetings with research partners, additional readings, a university masters student and the student advisor. Using the two additional readers provided triangulation by making segments of the raw data available for other parties to analyze the researcher's to interpretation of the findings (Lincoln & Guba, 1985).

Suggestions for future research and practice

Policy: More studies needs to be conducted on the impact of policy related to inclusion of all people with disabilities into society. Disability in South Africa is addressed nationally and officially through an Office in the Presidency (known as the Office on the Status of Disabled Persons, or, OSDP) and in an outstanding document (White Paper on an Integrated National Disability Strategy, or, INDS), both of which work toward the inclusion and integration of the needs and participation of the disabled in all government departments. Yet, limited empirical data exists regarding how the implementation process is monitored and more importantly its success in making a difference in the lives of people with disabilities.

Practice: The present study highlights the need for measures that will keep track of accountability for disability in all Special Needs Schools specifically related to sexuality, HIV and AIDS programs. This is reflected in participants responses related to sexuality, HIV and AIDS programs not tailored to the needs of their learners with different disabilities. In addition, to advocate for a pro-active approach, where teachers, parents, advocates, rehabilitation professional and community support groups who know

or work with learners with cognitive, intellectual and developmental disabilities can provide essential education about sex, relationships and appropriate sexual expression (Sweeney, 2007).

Training. Another suggestion for the future relates to a new design and implementation of educational material that are specifically tailored to the needs of youth with disabilities instead of teachers having to adapt and modify programs designed for mainstream schools. In addition, training programs should include all teachers and child care providers at Special Needs Schools and include topics on how to be at ease and comfortable with their own sexuality; information, education and communication related to how to teach effectively to learners with disabilities; and sensitization of parents and/ or guardians, family members and the entire community about the plight of learners with disabilities, in order to curtail stigma and discrimination.

Participatory Action Research. Recommendations for future research should include Participatory Action Research (PAR) that involves collaborating with parents, disability activists and the community as a way of helping to create awareness about the development of a positive sexuality for all learners with disabilities. PAR focuses on effecting change within individuals, as well as the communities and cultures to which they belong (McTaggart, 1991). It is recommended that researchers work closely with the Department of Education as they are the main stakeholders to create opportunities for collaboration as well as impact on how learners receive information related to sexuality, HIV and AIDS. Additionally, it is imperative to build and maintain good working relationships with teachers and child care providers to conduct high quality research and enhance potential response rate.

Replication. While the present investigation yielded useful findings in relation to teachers and child care providers views of teaching sexuality, HIV and AIDS to learners with disabilities, the study was conducted in just one of the nine provinces of South Africa. As a way of building upon the findings in the present investigation, the next study should be one of replication in one of the other provinces, including a more representative sample and a larger sample size. Replication affords numerous benefits. For example, replication of the present investigation via a larger sample size would not only increase the likelihood of obtaining a more diverse sample in relation to demographic characteristics, but would also allow findings to be scrutinized under different circumstances, thereby increasing the validity and reliability of results. Replication research within more provinces would expand the parameters of generalizability and help exclude the role of confounding variables.

APPENDIX

Teacher and child care provider views of sexuality, HIV and AIDS education questionnaire

1. DEMOGRAPHIC DATA

1.1
How old were you at your last birthday? (*Age of the respondent*)

1.2 Sex

Male	Female

1.3 What is your race group?

African	White	Coloured	Indian	Other (specify)

1.4 What is your current marital status?

Single (never been married)	
Married	
Divorced	
Widowed/Widower	

1.5 What is your home language?

Afrikaans		Sesotho sa borwa	
English		Sepedi	
Isindebele		Setswana	
Isiswati		Tshivenda	
Isixhosa		Xitsonga	
Isizulu		Other specify:	

1.6 What is your highest educational qualification?

Std 8/ Gr 10	
Std 9/ Gr 11	
Std 10/ Gr 12/ Matric	
Certificate or Diploma with Std 10 or Gr 12	
Bachelors Degree (BA)	
Post-graduate degree (Hons/Masters/Phd)	
Other, please specify	

1.7 What grade level(s) are you currently teaching?

Foundation phase (grade 1 -3)	
Intermediate phase (grade 4 – 7)	
Senior phase (grade 8 – 12)	

1.8 How many years and months have you been teaching at special needs schools including at the current school?

1.9 What is your current position at this school?

1.10 What level/ type of training did you receive related to sexuality, HIV and AIDS education?

General training as a student teacher	
General training as a full time teacher/ child care provider	
Regular training as a full time teacher/ child care provider	
Intensive training as a full time teacher/ child care provider	
Other, please specify	

1.11 Indicate the different types of disabilities students have at your school?

Deafness	
Blindness	
Autism	
Traumatic Brain Injury	
Attention Deficit Hyperactivity Disorder	
Mental Retardation	
Physical Disorders	
Epilepsy	
Cerebral Palsy	
Specific Learning Disabilities	
Spinal Cord Injury	
Other, please specify	

NOTE: The following sections of the questions include statements related to *Knowledge, Attitudes, Beliefs and Teaching Practices* of sexuality, HIV and AIDS education. Please rate the extent to which you agree or disagree with the statements using the 5-point Likert scale provided next to each statement:

1=Strongly disagree
2=Disagree
3=Neutral
4=Agree
5=Strongly agree

2. KNOWLEDGE of HIV and AIDS

a CAUSATION: It is possible to transmit HIV by means of the following:	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
k Sharing injection needles					
l Sharing a cigarette					
m Oral sex					
n Unprotected vaginal sex					
o Sitting on the same toilet seat					
p From a mother to her unborn child					
q Drinking from the same cup					
r Unprotected anal sex					
s Contact with infected blood					
t Touching someone who has HIV and AIDS					

b CURE: Please respond to the following statements related to cure of AIDS:	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
f There is a cure for AIDS					
g AIDS can be caused by witchcraft					
h HIV causes AIDS					
i HIV infection can be prevented by using condoms					
j The risk of HIV can be reduced by having fewer sexual partners					

c TREATMENT: Please respond to the following statements related to antiretroviral treatment (ARVs):	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
f An HIV-infected person can transmit HIV to other people, when taking ARVs					
g An infected person live longer when taking ARVs					
h ARVs can permanently cure HIV and AIDS					
i Traditional or complementary medicines can reduce the quantity of the virus of an infected person					
j People with AIDS can be cured with traditional medicines					

3. ATTITUDES TOWARDS HIV and AIDS

3.1 CARE of the HIV Infected: Please respond to the following statements regarding taking care of those infected by HIV and AIDS	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
e You are willing to take care of a family member with AIDS.					
f You would want to keep the HIV positive status of a close family member a secret.					
g HIV positive children should be taken care of separate from non-HIV infected children.					
h Any person with a disability, including children who are HIV positive, should get support from government to pursue treatment and care of their health.					

3.2 TRAINING PROGRAMMES: Please respond to the following statements related to sexuality, HIV and AIDS training programmes.	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
e Most teachers' feel at ease to teach programmes related to sexuality, HIV and AIDS to youth with disabilities even if they have not received training.					
f Most teachers' feel at ease to teach programmes related to sexuality, HIV and AIDS to youth with disabilities only after receiving training.					
g Training programmes on how to teach sexuality, HIV and AIDS is essential to **ALL** teaching staff at Special needs schools.					
h Training programmes on how to teach sexuality, HIV and AIDS is essential ONLY to **those** teaching who are in charge of the curriculum.					

4. BELIEFS ABOUT HIV and AIDS

4.1 Level of SERIOUSNESS of HIV and AIDS: Please indicate from the list below ONLY 3 (three) items that has most influence you to take the problem of HIV and AIDS serious:

a	Not very concerned about HIV and AIDS	
b	Radio and television programmes	
c	Newspaper articles/ Magazine articles	
d	A workshop or training programmes	
e	Leaflets/ booklets/ posters	
f	Signs or billboards	
g	Knowing someone with HIV and AIDS	
h	Caring for a person with AIDS	
i	Speaking and knowing a person with HIV and AIDS	
j	AIDS statistics	
k	Talking to a health care worker/ nurse	
l	Having VCT (voluntary counseling and testing)	
m	Talking to friends and family members	
n	Other (specify): _____	

4.2 Respond to the following statement related to the SERIOUSNESS of the problem of HIV and AIDS:	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
c Youth with disabilities are at serious risk of getting infected with HIV and AIDS					
d Young people with disabilities should be consulted and involved in training programmes to address the problem of HIV and AIDS.					

4.3 COMFORT LEVEL: Indicate your comfort level in talking about HIV and AIDS:	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
e I am comfortable with talking to at least one member of my family about HIV and AIDS					
f I am comfortable with talking to youth with disabilities about HIV and AIDS					
g I am comfortable asking questions to a health care workers or nurse about HIV and AIDS					
h I am comfortable asking questions to my colleagues about HIV and AIDS					

4.44.4 RESPONSIBILITY: Among the following people, indicate who should be responsible for preventing new HIV infections?	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
f Yourself					
g Your partner					
h Employer					
i Government					
j AIDS organisation/ Non Governmental Organization (NGO)					

4.5 RESPONSIBILITY: Among the following people, who should be responsible in teaching youth with disabilities about sexuality, HIV and AIDS programmes?	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
f Parents					
g Teachers					
h Department of Education					
i Government					
j AIDS organization/ Non Governmental Organization (NGO)					

5. TEACHING PRACTICES OF HIV and AIDS PROGRAMMES

5.1 TEACHING PRACTICES: Please indicate	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
e If you find out a student in your class is HIV positive, you would prefer that the student be transferred to another class.					
f You would not have a problem teaching students who are HIV positive					
g It is more challenging to teach youth with disabilities about HIV and AIDS than non-disabled youth.					
h It is best to teach sexuality, HIV and AIDS programmes **ONLY** when youth with disabilities show an interest in the opposite sex.					

NOTE: The following three questions are open-ended questions and require your to responses in short sentences.

5.2 Describe in 2-4 sentences teachers' experiences in teaching sexuality, HIV and AIDS programmes to their students in Special needs schools?

5.3 What are the challenges and/or barriers teachers face when teaching sexuality, HIV and AIDS programmes?

5.4 What are teachers' needs to improve on their teaching related to sexuality, HIV and AIDS programmes?

THANKS YOU VERY MUCH FOR AGREEING TO PARTICIPATE IN THIS

RESEARCH PROJECT

Key informant views of sexuality, HIV and AIDS education individual interview schedule

Demographic characteristics:

Age - _____

Sex - _____

Race – _____

Marital status – _____

Language - _____

Educational Qualification - _____

Grade level teaching - _____

Years of teaching experience – _____

Job title - _____

Open-ended questions:

1.Describe teachers' experiences in teaching sexuality and HIV and AIDS programmes to their students in Special needs schools?

- What issues make teaching to be less comfortable for teachers or make them feel more at ease to teach sexuality, HIV and AIDS programmes?

2. Describe the methods, techniques and approaches teachers are using in teaching sexuality, HIV and AIDS programmes to their students?

-Describe the effectiveness of these techniques in imparting a positive view of sexuality and knowledge of HIV and AIDS to their students?

3. What are the challenges and/or barriers teachers face when teaching sexuality, HIV and AIDS programmes?

-Describe how teachers and child care providers respond to cases where children engage in sexual activities such as kissing, fondling their private parts, etc.?

4.What are teachers' needs to improve on their teaching programmes related to topics such as sexuality, HIV and AIDS?

-What guidance and additional assistance do teachers need to be effective in them teaching sexuality, HIV and AIDS education?

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