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ORIGINAL PAPER

# Protect or Enable? Teachers' Beliefs and Practices Regarding Provision of Sexuality Education to Learners with Disability in KwaZulu-Natal, South Africa

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**Abstract** Literature argues that people with disabilities have heightened risk of exposure to sexually transmitted infections, including HIV due to lack of HIV knowledge, access to health services, and increased risk of sexual abuse and poverty. People with disabilities lack access to sexuality education. Teachers should be at the forefront to address this; however there is little understanding of the knowledge, attitudes, practices and needs of teachers of learners with disabilities in regards to sexuality/HIV education in Africa. A pilot study was conducted in ten special schools (eight urban, two rural) representing four types of disabilities in South Africa. Data was collected from 99 teachers using scales investigating beliefs and practice in teaching sexuality education, perceived subjective norms, self-efficacy, and materials/professional preparation. Frequencies, means, standard deviations and Cronbach's alphas were calculated for all scales. The data shows that overall teachers have positive attitudes towards teaching all elements of comprehensive sexuality education. However, they find it easier to discuss "soft topics" around relationships and personal skills (e.g., hygiene) than to talk about sexual behavior and functions. Teachers expressed confidence in their ability to teach sexuality education but indicated that their professional preparation and materials are not adequate to provide accessible sexuality education to their learners. The study highlights the need to develop appropriate materials and to build teachers' capacity to deliver sexuality and HIV education to learners with disabilities.

**Keywords** Disability · Sexuality · South Africa · Sexuality education · Learners · Teachers

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## Introduction

The heightened risk of exposure to HIV for people with disabilities in Africa has been highlighted in the literature [1, 2], acknowledged by key stakeholders [3, 4] and in some cases has led to the inclusion of people with disabilities in the list of key populations [5]. Literature argues that people with disabilities are at increased risk of exposure to sexually transmitted infections (STIs), including HIV due to a number of factors such as lack of HIV knowledge and access to education, lack of access to health services, increased risk of sexual abuse and poverty [2, 6–9]. A recent meta-analysis [10] on HIV prevalence among people with disabilities in Africa revealed that indeed HIV prevalence among certain groups of people with disabilities might be higher than that of the general population and that this specifically applied to women with disabilities. However, data is still only rudimentally available and methodologically weak [10].

Similarly, research investigating the HIV knowledge, attitudes and practices of people with disabilities in Africa indicates high risk related to a lack of knowledge, misconceptions and risk behaviour [1, 9, 11]. This also applies to learners with disabilities. For instance, a study in South Africa among students with mild learning disabilities showed these adolescents have misconceptions regarding HIV, its treatment or cure despite being exposed to HIV information in the media [12]. The same study also showed that students had low self-efficacy in sexual negotiation and decision-making skills in relation to condom use. Similarly, a study [13] undertaken in Nigeria suggests that young people with intellectual impairments are at heightened risk of HIV infection due to a number of factors. The study [13] revealed that these students have lower HIV transmission knowledge than those without disabilities, are more likely to report inconsistent condom use with boyfriends/girlfriends, casual sexual partners and non-use of condoms during last sexual activity than their able-bodied peers.

Literature also argues that myths and misconceptions about the sexuality of people with disabilities contribute to an increased risk of exposure to STIs, HIV and sexual abuse [14–17]. Systematic reviews and meta-analyses of prevalence and risk of violence against children and adults with disabilities indicated higher rates of violence, including sexual abuse, among children and adults with disabilities compared with non-disabled people [18, 19]. Evidence in Africa is scarce and more of qualitative nature [7, 20–22]. One of the few South African studies from Handicap International and Save the Children (2011) indicates that children with physical disabilities are three to four times and children with intellectual disabilities three to eight times more likely of being a victim of sexual abuse than their able bodied peers [23]. In addition, a study from Nigeria also documented that girls with intellectual disabilities were almost five times more likely to report history of sexual abuse than non-disabled girls [24]. Groce and Trasi's paper [16] reveals that people in some communities may have beliefs that sexual intercourse with a virgin might cure HIV. The same people may believe that people with disabilities are asexual and hence virgins. Not surprisingly, the paper reveals that some participants in this study claim that people with disabilities have become victims of the so-called 'sexual cleansing' practices including rape and exposure to HIV because of the violent nature of the intercourse as well as the fact that the perpetrator lives with HIV. However, sexual abuse is not only related to myths around cleansing. In fact, people with disabilities may be seen as easy targets as they may experience communication barriers, may be less likely to defend themselves or are simply seen as not being able to stand as a witness in court [17, 25, 26]. People with mental and intellectual disabilities have been reported to be particularly at risk [18, 19].

Contradicting myths may also occur in this context. Eastgate and Wazakili [27, 28] whose papers look at the population of learners with intellectual disabilities revealed two contradicting types of myths. They argue that in some communities it is believed that people with intellectual disability are either childlike or asexual and are unlikely to engage in sexual activity at all or are 'oversexed' and likely to become sex offenders. Both misconceptions can, however, lead to the same results. Either the belief that there is 'no need for HIV and sexuality education' or that HIV and sexuality education could 'wake sleeping dogs' and be rather dangerous [25] leads to the denial of sexuality education.

These misconceptions also influence educators. Within the mainstream setting and response to HIV, schools and teachers are considered to be one of the best entry point to provide the right information to all learners [29, 30]. While several publications have focused on sexuality/HIV education and teachers in mainstream schools in Africa [29, 30] there is little available literature that also includes schools for learners with disabilities. Most of the studies including teachers in special schools come from higher income countries [31]. For instance, Wilkenfeld's interviews [32] with five school teachers and five instructors in an adult day services program at an educational facility for individuals with intellectual disabilities showed that both groups expressed fear of discussing sexuality with people with intellectual disability. They revealed that they were afraid that these discussions would contribute to their learners either being abused or becoming sex offenders. Howard-Barr et al.'s study with 494 teachers in the US showed that although teachers of pupils with disabilities believed in the importance of sexuality education they provided only a moderate amount of content and many felt inadequately prepared [33].

Similarly, one pilot study with teachers in special schools in South Africa indicates that although educators view sexuality as a basic human right, they still express concerns about providing sexuality education and access to sexual expression for learners with disabilities [34, 35]. In South Africa, HIV and sexuality education has been incorporated into the Integrated School Health Policy (ISHP) and Basic Education Integrated Strategy on HIV, STIs and TB 2012–2016 [36]. This is covered in the health education and promotion in the Life Orientation curriculum [37]. The areas covered in the Life Orientation curriculum are health promotion, social development, personal development, physical development and movement and orientation to work and the learning outcomes are structured differently from Grades R to 12 [37]. The ISHP Health Education package covers a range of health issues: Grades R—6 covers abuse, puberty and substance abuse; further sexuality related topics in Grades 7–12 include abuse, menstruation, sexual and reproductive health (SRH), contraception, STIs and HIV, teen pregnancy and terminations, prevention of mother-to-child transmission, HIV counseling and testing (HCT), stigma and substance abuse [36].

The Rohleders et al. papers provide some insight into the challenges that teachers experience in South African special schools while trying to implement elements of sexuality education in their Life Orientation lessons [15, 38–41]. A survey conducted in the Western Cape South Africa explored the extent to which young people with disabilities receive HIV education and the challenges that teachers face in the provision of HIV prevention knowledge. The study indicates that teachers experience challenges in providing sexuality education to young people with disabilities. In addition, studies show that schools lack educational materials that have been adjusted to accommodate learners with disability, have a high variety of subject delivery and implementation across special schools and depend on what the educator feels comfortable with [40, 42].

Literature suggests that teachers lack skills and materials for providing sexuality education to learners with disabilities. However, there is insufficient knowledge of the challenges they face during their lessons. Their professional and institutional preparation for

these lessons is not understood or it is possible that cultural barriers provide constrains to provide comprehensive sexuality education. Comprehensive sexuality education includes a number of factors that address biological, psychological and social elements of young people's development [43]. Although there is some qualitative and descriptive work available there is little understanding of the knowledge, attitudes, teaching practices and needs of teachers of learners with disabilities with regards to sexuality and HIV education in South Africa. Although there have been some investigations into mainstream teachers' HIV-knowledge, attitudes and practice, there are none focusing on teachers of learners with disabilities [29].

This paper emanates from a study which investigated knowledge, attitudes and practice of teachers of learners with disabilities in KwaZulu-Natal, with regards to delivery of sexuality education. It presents findings on educators' beliefs and attitudes, perceived subjective norms, self-efficacy, materials/professional preparation and practices in the provision of sexuality and HIV education to learners.

## Methodology

### Study Design

The study utilized a mixed-method approach including qualitative (focus group discussions) and quantitative (survey questionnaire) methods of inquiry. This paper presents data from the quantitative part and data from the other elements is presented elsewhere [44]. A survey including a structured questionnaire was developed using the adapted theory of planned behavior (TPB) as a theoretical framework [45]. A purposively selected sample of educators was drawn in cooperation with the KwaZulu-Natal Department of Education consisting of 99 educators of learners with disabilities from ten public schools in the province. This represented four different types of special schools which often target one particular disability type and one school which catered for a variety of impairments. In some cases, schools accommodated more than one impairment type. Eight of the schools were in urban or semi-urban areas and two schools were in rural areas (see Table 1). All 99 teachers were interviewed using a survey instrument which was also fully validated during the course of the study [44].

#### *Theoretical Framework*

The study was structured and analyzed using the integrated/adapted TPB [45]. This model assumes that behavior is determined by a number of factors. It assumes that knowledge, attitudes, self-efficacy and subjective norms, skills and environmental constraints shape behavioral intention, and with this predict actual behavior (Fig. 1).

Thus, the model assumes that in order for a person to perform a certain type of behavior (e.g. teaching sexuality education), he/she has to have sufficient knowledge and skills, hold a positive attitude towards the outcome of the behavior, believe that significant others approve of his/her performing the behavior and believes that he/she is confident to be able to perform this behavior and that the environmental conditions allow for this behavior to be practised. In order to investigate educators teaching behavior concerning sexuality and HIV education to learners with disability, we investigated their knowledge (knowledge that teachers have on various subjects' relevant to disability, HIV and sexuality), teaching beliefs/attitudes (beliefs of what should be taught) as well as their actual teaching practices.

**Table 1** Types of schools surveyed

| School type[a] | Number of schools | Teachers surveyed n (%) |
|---|---|---|
| DHH (deaf and hard hearing) | 3 | 18 (18.2) |
| BVI (blind and visually impaired) | 1 | 9 (9.1) |
| SMH (severe mentally handicapped) | 4 | 52 (52.5) |
| NICP (neurally impaired and cerebral palsied) | 1 | 10 (10.1) |
| Schools catering for a combination of disabilities | 1 | 10 (10.1) |

[a] KwaZulu-Natal special schools classifications

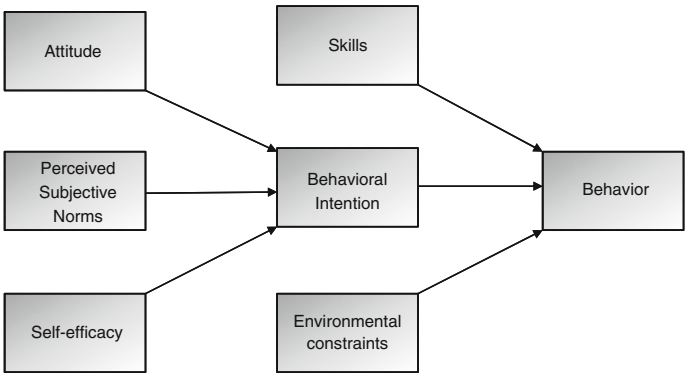


**Fig. 1** Adapted version of the TPB—U.S. department of Health and Human Services, National Institutes of Health 2005

Perceived subjective norms (teachers' perceptions about what significant others expect of them in delivery of sexuality education), self-efficacy (teachers' confidence or ability to discuss sexuality education with learners with disabilities) and environmental constraints (availability of appropriate educational materials and professional preparation) were also prompted.

*Instrument*

In order to investigate these concepts, a survey tool (questionnaire) was developed using scales from pre-existing questionnaires, self-developed scales for all the main constructs and checklist for the professional preparation. The questionnaire elicited information on teachers' demographics, knowledge using George et al. [46] self-developed scale, beliefs and teaching practices in regards to comprehensive sexuality education were guided by Howard-Barr et al. [31], perceived subjective norms and self-efficacy/confidence using Mathews et al. scale [47], and materials and professional preparation were measured using a self-developed checklist (see Table 2 below).

Teachers' beliefs and practice were each measured using Howard-Barr et al.'s five sub-scales—human development, relationships, personal skills, sexual behaviors, and sexual health—made up of 29 items [33]. Participants' beliefs about sexuality education of learners with disabilities were scored using a 5-point scale (1 = strongly disagree to

**Table 2** Overview of scales included in the questionnaire

| Variable | Number of items | Source | α previous/ this study | Sample item | Response format[a] |
|---|---|---|---|---|---|
| Teachers' knowledge (6 subscales) | | | | | |
| HIV clinical diagnosis and characteristics | 7 | KAP Questionnaire for educators and administrators | 0.06/0.17 | A saliva test can show whether someone has HIV/AIDS | 1 |
| HIV transmission | 6 | KAP Questionnaire for educators and administrators | 0.46/0.47 | One can get HIV from sitting on toilet seats | 1 |
| Condoms | 7 | KAP Questionnaire for educators and administrators | 0.58/0.65 | Condoms are too small | 1 |
| HIV spread and care | 5 | KAP Questionnaire for educators and administrators | 0.30/0.36 | HIV/AIDS can be cured with medication | 1 |
| HIV prevention | 4 | KAP Questionnaire for educators and administrators | 0.41/-0.11 | One can prevent getting infected with HIV by having sex with a virgin | 1 |
| Disability and sexuality | 6 | Self -designed | n.a/0.41 | People with a disability are virgins or asexual | 1 |
| Sexuality of PWD compared to people without disabilities | 5 | Self- designed | n.a/0.04 | The likelihood of children with disabilities to be sexually abused compared to children without a disability is | 2 |
| Beliefs and practices in teaching sexuality education (5 subscales) | | | | | |
| Beliefs | | | | | |
| Human development | 5 | Howard-Barr et al. [31, 33] | 0.52/0.85 | Please indicate if you think the topic puberty and adolescent sexuality should be taught top your learners | 3 |
| Relationships | 6 | Howard-Barr et al. [31, 33] | 0.62/0.84 | Please indicate if you think the topic dating should be taught top your learners | 3 |
| Personal skills | 6 | Howard-Barr et al. [31, 33] | 0.06/0.84 | Please indicate if you think the topic communication should be taught top your learners | 3 |
| Sexual behavior | 7 | Howard-Barr et al. [31, 33] | 0.41/0.86 | Please indicate if you think the topic masturbation should be taught top your learners | 3 |

**Table 2** continued

| Variable | Number of items | Source | α previous/ this study | Sample item | Response format[a] |
|---|---|---|---|---|---|
| Sexual health | 5 | Howard-Barr et al. [31, 33] | 0.66/0.72 | Please indicate if you think the topic sexual abuse should be taught top your learners | 3 |
| Practises | | | | | |
| Human development | 5 | Howard-Barr et al. [31, 33] | 0.92/0.86 | Do you teach this subject to your learners? | 3 |
| Relationships | 6 | Howard-Barr et al. [31, 33] | 0.96/0.80 | Do you teach this subject to your learners? | 3 |
| Personal skills | 5 | Howard-Barr et al. [31, 33] | 0.98/0.80 | Do you teach this subject to your learners? | 3 |
| Sexual behavior | 7 | Howard-Barr et al. [31, 33] | 0.96/0.86 | Do you teach this subject to your learners? | 3 |
| Sexual health | 5 | Howard-Barr et al. [31, 33] | 0.96/0.80 | Do you teach this subject to your learners? | 3 |
| Perceived subjective norms | 5 | Mathews et al. [47] | 0.52/0.84 | Do you think the learners expect you to conduct sexuality education | 3 |
| Self-efficacy and confidence | 14 | Mathews et al. [47] | 0.92/0.91 | As an educator I will be able to give clear and open description of safe and unsafe sexual activities in the classroom. | 3 |

[a] Response formats

1. 3 point scale (1 = disagree, 2 = agree, 0 = don't know)
2. 3 point scale (1 = less, 2 = the same, 3 = more)
3. 5 point scale (1 = strongly disagree to 5 = strongly agree)

5 = strongly agree), while teaching practises were scored on a 3-point scale (1 = no, 2 = sometimes, 3 = yes).

Cronbach's alpha ($\alpha_{belief}$; $\alpha_{practise}$) was calculated for teachers' beliefs and practice on each of the sub-scales. *Human development* ($\alpha = 0.845$; 0.858) sub-scale consisted of five items investigating teachers a) beliefs and b) practise in regards to reproductive anatomy and physiology, human reproduction, puberty and adolescent development, body image and changes and sexual identity and orientation (see Table 2). The sub-scale on *Relationships* ($\alpha = 0.844$; 0.800) included six items related to teachers' beliefs and practice in regards to topics such as families, friendship, love, dating, marriage and lifetime commitments and raising children (see Table 2). The *Personal skills* sub-scale ($\alpha = 0.843$; 0.797) consisted six items investigating teachers' beliefs and practise in regards to teaching values, decision making, communication, assertiveness, negotiation and looking for help (see Table 2). Additionally, the sub-scale on *Sexual behaviors* ($\alpha = 0.857$; 0.860) included seven items assessing educators' beliefs and practices about sexuality throughout the lifespan, masturbation, shared sexual behavior, abstinence, human sexual response, fantasy and sexual dysfunction (see Table 2). The sub-scale on *Sexual health* ($\alpha = 0.722$; 0.803) included five items measuring the beliefs and practice with regards discussing contraception, abortion, sexually transmitted diseases and HIV, sexual abuse and reproductive health in the classroom (see Table 2).

Teachers' perceived subjective norms regarding the beliefs of other people that teachers should or should not teach sexuality education were measured using Mathews et al.'s [47] 5 item scale ($\alpha = 0.84$). Items related to whether teachers thought learners, school governing body, educators teaching the same subject, educators teaching another subject and education experts expected them to conduct sexuality education. Responses were scored using a 5-point scale (1 = strongly disagree to 5 = strongly agree). (See Table 2). Teachers' self-efficacy and confidence was measured using a scale developed by Mathews et al. [47] ($\alpha = 0.92$; 0.91) and included 14 questions relating to their ability to teach/deliver sexuality education (see Table 3). Items were scored using a 5-point scale (1 = strongly disagree to 5 = strongly agree). The last variable, materials and professional preparation, consisted of 10 questions relating to the sexuality education services available at the school (response format—Yes, No or Somewhat). The questions related to whether teachers had materials to teach the subject, whether they adapted the material for their learners' needs and whether they offered other additional services such as counseling for sexual abuse. (See Table 7).

As only one of the scales (knowledge of HIV) had previously been used in South Africa the reliability of all scales was culturally validated and tested (see Table 3), which has been reported elsewhere [44]. The questionnaire was administered in English as the cultural validation revealed that this was the preferred language of the participating teachers.

### *Ethical Considerations*

Ethics approval for the study was given by the University of KwaZulu-Natal Human and Social Sciences Research Ethics Committee. Participation in the study was voluntary and participants were fully informed about their rights and choice of participation. Informed consent was signed by all participants and data was kept confidential with no names of schools or individuals attached.

**Table 3** Demographics

| Variables | n (%) |
|---|---|
| Age[a] | |
| 20–30 years | 18 (18.2) |
| 31–40 years | 29 (29.3) |
| 41–50 years | 25 (25.3) |
| 51–60 years | 21 (21.2) |
| 60 years and above | 4 (4.0) |
| Gender | |
| Male | 17 (17.2) |
| Female | 82 (82.8) |
| Religion | |
| Christian | 60 (60.6) |
| Hindu | 31 (31.3) |
| Islamic | 6 (6.1) |
| Other | 1 (1.0) |
| None | 1 (1.0) |
| Years of teaching | |
| <1 year | 3 (3.0) |
| 1–3 years | 8 (8.1) |
| 4–10 years | 31 (31.3) |
| 10+ years | 57 (57.6) |
| Formal training in Life Orientation | |
| No | 48 (48.5) |
| Yes | 34 (34.3) |

N = 99

[a] Mean = 42 years

## Data Collection

Data was collected between April and July 2012. Questionnaires were self-administered after instructions from the researchers including one IsiZulu-speaking fieldworker. Participants were purposively selected. They had to be educators at a public special school in KwaZulu-Natal and teach learners with disabilities some form of informal or formal (Life Orientation) sexuality education either currently or in recent years. The study also approached teachers from different types of special schools and from rural and urban areas.

### *Data Processing and Analysis*

Quantitative data entry and statistical analysis were performed using IBM SPSS Statistics 21. The results presented in this paper are based on the descriptive analysis of the data. Cronbach's alpha ($\alpha$) were developed to determine the scales' reliabilities [44]. Frequencies, means and standard deviations were calculated for the Howard-Barr scales on beliefs/attitudes and practice and also for scales relating to perceived subjective norms and self-efficacy/confidence. Frequencies were generated for the items relating to materials and professional preparation, as this was only a checklist and not a scale as such.

## Results

### Participants' Demographics

The sample comprised 82 female (82.8 %) and 17 male (17.2 %) teachers. The mean age was 42.5 years (range 24–63). About two-thirds, 60 (60.6 %), of the teachers were Christians, 31 (31.3 %) were Hindus, while the rest practised other religions. Over half, 57 (57.6 %), of the teachers had more than 10 years of teaching experience. Eighty-two teachers (82.8 %) formally taught the Life Orientation curriculum at the time of the study, out of which only 34 (41.5 %) reported previous formal training in the Life Orientation curriculum. (See Table 3). Over 50 % of the teachers taught in schools for learners with intellectual impairments, as this is the most common special school in KwaZulu-Natal (see Table 1).

### Teachers' Beliefs and Practice

Mean scores and standard deviations were calculated for each of the 29 items related to beliefs and practice about teaching sexuality education (see Table 4). The data revealed an overall positive attitude towards teaching most topics relevant to sexuality education believing that these need to be taught in special schools. The mean score for all the items on the beliefs scales was 4.2 on a scale of 1 (strongly disagree) to 5 (strongly agree). The practise scale prompted the same items on a 3 point Likert scale with an average of 2.25.

However, there were some differences between sub-scales/themes. While items under the themes of relationships and personal skills scored relatively high, the items summarised under sexual behaviors scored lower (see Table 4), indicating that teachers were less inclined to discuss topics related to sexual activity, sexual responses and dysfunctions. However, the results indicate a high agreement with teaching, for instance, personal skills in relation to values, decision making, communication and looking for help. Similarly, the data revealed differences in items within one scale. For instance, in the relationships sub-theme, items such as family, friendship and love scored slightly higher than dating, marriage and raising children. Similarly, in the sexual behaviors the sub-theme abstinence scored much higher than other topics on the belief scale such as sexuality through the lifespan, masturbation, sexual fantasy and dysfunction, indicating that educators were more hesitant to discuss the latter issues with their learners. Also, under the sexual health sub-theme, teachers were more likely to discuss topics such as STIs and sexual abuse than others (see Table 4), while they would not discuss contraception or abortion with the learners.

The results from the teaching practice scores mirror the results from the teaching beliefs scores in most cases. Table 4 shows that for teachers' beliefs (4.48–4.79) and practice (2.44–2.88) mean scores were the highest for items under *Personal skills*, and lowest for certain items under *Sexual behavior* (masturbation, shared sexual behavior and sexual fantasy) and *Sexual health* (abortion, contraception and reproductive health). Teachers' beliefs and practice mean scores were high on other items such as sexual abstinence (4.52; 2.46) on the *Sexual behaviors* sub-scale and *Sexual abuse* (4.79; 2.74) and STIs (4.69; 2.63) on the *Sexual health* sub-scale.

In addition, there were noticeable drops in teachers' teaching practice in comparison to their beliefs for some topics. For instance, the mean score (belief; practice) ranges for dating, marriage and raising children (4.10–4.14; 1.96–2.05) indicate that although the teachers agreed that topics such as dating, marriage and raising children should be

**Table 4** Teachers' beliefs and practices on key sexuality education concepts

| Topic/concept | Belief n (SD)[a] | Practice n (SD)[b] |
|---|---|---|
| Human development | | |
| Reproductive anatomy | 4.10 (1.00) | 1.97 (0.87) |
| Reproduction | 4.19 (0.87) | 2.07 (0.87) |
| Puberty | 4.41 (0.85) | 2.41 (0.80) |
| Image | 4.56 (0.63) | 2.67 (0.59) |
| Identity | 4.51 (0.69) | 2.37 (0.77) |
| Relationships | | |
| Families | 4.66 (0.66) | 2.72 (0.61) |
| Friendship | 4.65 (0.59) | 2.82 (0.48) |
| Love | 4.64 (0.65) | 2.60 (0.65) |
| Dating | 4.10 (1.17) | 1.96 (0.85) |
| Marriage | 4.14 (1.10) | 1.96 (0.84) |
| Raising children | 4.14 (1.08) | 2.05 (0.81) |
| Personal skills | | |
| Values | 4.70 (0.60) | 2.85 (4.17) |
| Decision | 4.74 (0.44) | 2.80 (0.45) |
| Communication | 4.77 (0.42) | 2.88 (0.33) |
| Assertiveness | 4.48 (0.77) | 2.54 (0.66) |
| Negotiation | 4.51 (0.68) | 2.44 (0.71) |
| Looking for help | 4.79 (0.41) | 2.86 (0.43) |
| Sexual behaviors | | |
| Sexuality through lifespan | 3.87 (1.12) | 1.78 (0.83) |
| Masturbation | 3.45 (1.28) | 1.52 (0.78) |
| Shared sexual behavior | 3.40 (1.32) | 1.59 (0.80) |
| Abstinence | 4.52 (0.72) | 2.46 (0.79) |
| Human sexual response | 4.04 (0.98) | 1.93 (0.86) |
| Sexual fantasy | 3.36 (1.27) | 1.55 (0.79) |
| Sexual dysfunction | 3.54 (1.22) | 1.47 (0.72) |
| Sexual health | | |
| Contraception | 4.05 (1.20) | 1.94 (0.90) |
| Abortion | 3.35 (1.48) | 1.62 (0.85) |
| Sexually transmitted infections | 4.69 (0.51) | 2.63 (0.65) |
| Sexual abuse | 4.79 (0.44) | 2.74 (0.60) |
| Reproductive health | 4.42 (0.74) | 2.11 (0.85) |

[a] Mean score and standard deviation on a 5-point scale (1 = strongly disagree to 5 = strongly agree)

[b] Mean score and standard deviation on a 3-point scale (1 = no, 2 = sometimes, 3 = yes)

discussed with their learners they were not likely to do so in practice (about 2). A similar situation occurred in topics such as contraception (4.05, 1.94) and human sexual response (4.04; 1.93). Topics that had received a low score on the belief scale scored even lower on the behavior scale. The data indicates that topics such as dating, marriage, and contraception are less likely to be discussed in the classrooms. Topics such as sexuality through the lifespan, masturbation, human sexual responses, fantasy, sexual dysfunction and

**Table 5** Perceived subjective norms regarding delivery of sexuality education

| Significant others | n (SD)[a] |
|---|---|
| Learners | 3.95 (0.90) |
| Governing body | 3.77 (0.97) |
| Educators teaching the same subject | 4.17 (0.69) |
| Educators teaching another subject | 3.86 (0.86) |
| External school/education experts | 4.07 (0.92) |

[a] Mean score and standard deviation on a 5-point scale (1 = strongly disagree to 5 = strongly agree)

abortion are absent from classroom or individual discussions at school. On the contrary, topics such as families, friendships, values, decision making, assertiveness, looking for help, STIs and sexual abuse were very likely to be discussed in the classrooms.

### Perceived Subjective Norms

In general, participants had high mean scores of about four on a 1–5 point Likert scale (strongly disagree to strongly agree), indicating their moderate perception that learners, school governing body, other educators teaching Life Orientation, and external school or education experts expected them to teach the subject (see Table 5). They perceived that more expectations in regards to teaching Life Orientation were conveyed by other educators teaching the subject which had the highest mean score of about 4.17. Expectation to teach sexuality and HIV education from the governing body, other educators and learners themselves, scored slightly similar mean scores of 3.77, 3.86 and 3.95 respectively.

### Self-efficacy and Confidence

The items in this scale related to teachers' capability and confidence to teach sexuality education. With a mean score of 4.26 and a score range of 4.55–3.71 on all items, the teachers exhibited moderately high self-efficacy/confidence to teach sexuality education. The items with the highest scores were teachers' confidence relating to professional development, the ability to facilitate sessions and create a supportive atmosphere and safe spaces (see items 1, 4 and 5 in Table 6). Lower rated items were related to teachers' confidence regarding the ability to give practical assignments to make learners acquainted with the diversity of sexual choices and dispositions (3.71) and to stimulate learners to think of solutions to foreseeable problems in negotiating with a partner about condom use by using a role play (3.90).

### Environmental Constraints: Teaching Materials and Professional Preparation

Most of the educators (90.9 %) expressed the need for more materials to teach sexuality/HIV education in special schools (Table 7). Twenty one (21.2 %) teachers reported that they did not have any teaching materials for sexuality education available at their schools, while 47 (47.5 %) teachers found the materials available at their school to be unsuitable for their learners. In the absence of suitable materials to aid discussion of sexuality/HIV education topics with learners with disabilities, only 21 (21.2 %) participants reported that they were able to develop customized materials to suit their purpose. Almost half (48;

**Table 6** Self-efficacy/confidence to deliver sexuality education

| Items | n (SD)[a] |
|---|---|
| 1. Participate in courses or read literature about developments in HIV education | 4.55 (0.70) |
| 2. Give a clear and open description of safe and unsafe sexual activities in the classroom | 4.35 (0.83) |
| 3. Formulate words for sexuality related issues together with the learners by using a brainstorming session | 4.20 (0.94) |
| 4. Take care of learners with personal questions or problems regarding relationships and sexuality both in and out of class | 4.49 (0.59) |
| 5. Create a comfortable atmosphere to make learners feel safe to talk about relationships and sexuality | 4.51 (0.66) |
| 6. Recognize the influence of different morals and values on social processes to prevent discrimination (because of cultural -or sexual nature meaning)at all times) | 4.42 (0.65) |
| 7. Commit learners not to talk about the personal experiences of their classmates outside the classroom | 4.16 (1.09) |
| 8. Facilitate discussion groups about HIV/AIDS such that they are not unacceptably disturbed by the attitudes or behavior of one or two learners | 4.33 (0.72) |
| 9. Be able to guide a group discussion in such a manner that learners listen with respect to each other's opinions and ideas about relationships and sexuality | 4.42 (0.68) |
| 10. Stimulate learners to think of solutions to expected problems in negotiating with a partner about condom use by using a role play | 3.90 (0.95) |
| 11. Lead a group discussion in a way that learners will share their views and opinions about relationships and sexuality by asking each other questions | 4.22 (0.73) |
| 12. Give practical assignments to make learners acquainted with the diversity of sexual choices and dispositions | 3.71 (1.10) |
| 13. Conduct role play where learners practice how to tell a friend that they might be infected with an STD and that they should go to be tested | 4.22 (0.75) |
| 14. Get learners to discuss in small groups possible solutions to expected problems in practicing safe sexual behavior | 4.19 (0.81) |

[a] Mean score and standard deviation on a 5-point scale (1 = strongly disagree to 5 = strongly agree)

**Table 7** Environmental constraints: Teaching materials and professional preparation

| Items | No % | Somewhat % | Yes % |
|---|---|---|---|
| Teaching material for SE available at school | 21.2 | 33.3 | 45.5 |
| Suitable teaching material available for SE/LO | 47.5 | 35.4 | 16.2 |
| Developed customized material for SE/LO | 50.5 | 28.3 | 21.2 |
| Need more materials for SE | 2.0 | 7.1 | 90.9 |
| Make condoms available for higher grades | 67.7 | 99.1 | 22.2 |
| School offers counseling that accommodates learners | 48.5 | 26.3 | 24.2 |
| School offers counseling services including sexual abuse | 28.3 | 23.2 | 48.5 |
| Included in public HIV campaigns/programs | 53.5 | 20.2 | 26.3 |
| Connected counseling service to child protection services to address sexual abuse | 55.6 | 18.2 | 26.3 |
| Involve parents and caretakers in sexuality and HIV education of learners | 59.6 | 14.1 | 26.3 |

N = 99

*SE* sexuality education, *LO* Life Orientation

48.5 %) of the educators indicated that counseling services in their schools were not available in formats accessible to their learners. Less than half (48; 48.5 %) of the teachers reported that their schools offered or was connected to counseling services on sexual abuse. And in the special schools where 55 (55.6 %) teachers worked, counseling services were reportedly not connected to child protection services to address sexual abuse. Additionally only 26 (26.3 %) participants indicated that they involved parents/caregivers in sexuality and HIV education of their learners.

## Discussion

This paper discusses the findings of a study that assessed the beliefs, perceived subjective norms, self-efficacy, materials/professional preparation and practice of teachers providing sexuality and HIV education to learners with disabilities in KwaZulu-Natal, South Africa. The findings indicate that teachers have an overall positive attitude towards comprehensive sexuality education giving importance to all aspects of sexuality education including sexual behaviour and practise. However in the classroom teachers are more likely to discuss "soft topics" such as relationships and personal skills and are less likely to discuss sexual behaviour and practise. In addition, the results imply that teachers are more comfortable discussing topics on life-skills such as assertiveness and protection of sexual abuse rather than topics that include sexual practise such as masturbation and connote sexual activities. Similar to the focus group discussions in the same study [48] teachers seem to focus on risk factors and protection of their learners rather than preparing their learners for a healthy and fulfilling sexual life and relationship once they leave school. Some of the findings also suggest that restrictive attitudes (beliefs) towards certain topics of sexuality education may produce weak teaching practice in the classrooms, emphasising the importance of addressing beliefs and values in order to enable teachers to provide comprehensive sexuality education.

Findings from the study indicate a lack of appropriate materials for facilitating discussions on sexuality and HIV education by teachers of learners with disabilities in KwaZulu-Natal. The teachers were also limited in the development of such materials for classroom use. It is also interesting to note that teachers in this study perceived that learners and stakeholders in the education sector, particularly those teaching the Life Orientation curriculum, expected them to provide sexuality education to learners. However, other findings of this study show low involvement of parents in the current delivery of sexuality education to learners with disabilities, and weak linkages to supportive services such as counseling and sexual abuse services [48]. There is no research available in South Africa that investigates the involvement of parents of learners with disabilities in the sexuality education neither of their children nor on counseling services for these learners. These findings, therefore, call for more research to investigate the collaboration of relevant stakeholders in the design, implementation and dissemination of suitable materials in this context, as well as ensuring adequate linkages/referrals to relevant services.

The data is also a pointer to an urgent need to build educators' capacity to provide accessible sexuality education to their learners, and to collaborate with parents and relevant service providers in doing so. Similarly, interventions may have to target the perceived subjective norms construct of the TPB [45] in order to ensure that relevant stakeholders support the provision of sexuality and HIV education to learners with disabilities by educators.

Educators expressed relatively high self-efficacy to provide sexuality and HIV education to learners with disabilities. This is consistent with the findings of a qualitative study among teachers of learners with intellectual disabilities in Nigeria [49]; however it is contrary to qualitative results from the Rohleder et al. [35] study in South Africa which indicated that teachers felt ambivalent about providing sexuality education to learners with disabilities because they saw "on the one hand the need for sex education" but on the other hand experienced "anxiety about the potential to cause harm" assuming that providing sexuality education could "lead to inappropriate sexual behavior". However in the focus group discussions of this study educators did indicate that they felt unsure as to how and when to include which types of topics [48].

Teachers in the present study were slightly less confident to discuss issues on condom negotiation and sexual identity/orientation with their learners. This is similar to Rohleder's later study in which teachers indicated that they experienced discomfort about issues of sexuality and disability. The same study also found that teachers disagreed about what is appropriate content for sexual health education [40]. Again his study highlighted teachers' fear that certain topics would promote sexual activity [40]. While it is an element of lack of skills in this regard, these are sensitive issues which may be highly influenced by teachers' personal values/attitudes, perceived subjective norms and policy. Therefore, it is necessary to address values and beliefs in order to build teachers' understanding of comprehensive sexuality education and confidence to discuss topics related to condom use and sexual identity/orientation by interventions laying more emphasis on them in the relevant constructs of the TPB [45], and by addressing these topics in the national or provincial education sector's HIV and AIDS and/or sexuality-related policies.

Results also show that teachers in these special schools in KwaZulu-Natal mostly discussed topics that seem to be culturally acceptable such as family, friendship and love under the relationship sub-theme while dating, marriage and raising children were less likely to be discussed. This is similar to a finding of a Nigerian study that suggests that teachers perceived learners with intellectual disabilities to be incapable of intimate relationships [49]. They were also more inclined to discuss topics such as values in decision making, communication and looking for help under the personal skills theme. Most teachers, therefore, were comfortable discussing topics that aim to protect learners with disabilities from SRH problems, while exhibiting restrictive attitudes towards topics that could enhance learners' sexual expressions and fulfilment. Consistent with some of the findings from other studies [32, 33, 40] topics related to sexual behaviour, such as masturbation, sexual fantasy, shared sexual behaviour and sexual dysfunction, were little discussed. This supports the finding that topics that picture a life without sexuality, partnership and parenthood are more likely to be taught by teachers of learners with disabilities. It could be argued that this reflects a perception of people with disabilities as asexual and not in need of sexuality education [13].

Irrespective of disability, adults experience major socio-cultural inhibitions in discussing sexuality and HIV education topics with young people [42, 50–52]. However, adolescents with disabilities are often socially isolated, and may be more limited in obtaining information on sexuality than their non-disabled peers. Therefore, school may be their only source of reliable and accessible sexuality information and education [38–40]. Additionally, sexuality education for learners with disabilities needs to consider impairment specific issues [53]. For instance, certain impairments are associated with different degrees of sexual functioning. It is possible for adolescents with disabilities to be unaware of the implication of the extent of their impairments on their sexuality. They might experience uncertainties and have increased needs to be guided by a well-informed adult.

Similarly, masturbation is a safe way for adolescents with disabilities to release 'sexual pressure' overcoming sanctions on sexual relationships and expressions. Some groups of learners with disabilities might also benefit from discussions of where and when what types of sexual expression are appropriate.

For instance, some individuals with intellectual disabilities may find it challenging to distinguish between public and private sexual behaviour, and may display private sexual behaviour in public [54], thereby, fuelling the myth of hypersexuality [55]. In literature, the fear that sexuality education will make young people with intellectual disabilities more promiscuous has been documented as a reason for withholding sexuality education from this group of individuals [17, 39]. Yet young people with physical disabilities might have questions around sexual functioning, condom use and if sexual intercourse and partnership is possible for them. In short, learners with disabilities have a number of questions and only very few services are geared to answer them. In the light of this, school-based sexuality education is of utmost importance to learners with disabilities. Similar to the mainstream sector, schools and educators are the basis to a successful sexuality and HIV education, and it is important therefore to promote interventions in special schools as well [42].

The main limitation of this study is its small sample size, which makes it not generalizable to South Africa. However, the sample represents participants who have taught the Life Orientation curriculum in different types of special schools in KwaZulu-Natal including a rural and urban divide. Another weakness of this study is the perceived subjective norms scale, adapted from another study by Mathews et al. [47], which does not include parents and society/community as significant others. This makes it difficult to assess the extent to which teachers in this study are influenced by parents in providing sexuality and HIV education to learners. Whilst the paper did not particularly focus on the role of parents, and family members in sexuality education we acknowledge the importance the role of family and parents in providing information on sexuality and the relationship between family education and school education. More research is needed to assess parent's experience of sexuality education.

Despite all this, the findings of the study are consistent with what is in the literature on the topic, and confirms the conceptual framework on which it is based. The instrument, though mostly based on scales developed for teachers in other contexts, went through a rigorous validation process in the local context. Furthermore, the scales' reliability values (Cronbach's alphas) were within the acceptable range.

## Conclusion

Relating the findings to other studies in mainstream settings, this research emphasizes the importance of school-based sexuality education in shaping the sexual experience and expression of learners with disabilities. This study indicates a willingness and positive attitude towards sexuality education of learners with disability but an absence of the knowledge how to do it. It also indicates teachers' inclination to discuss life-skills topics that aim at protecting the learner from sexual activities are perceived as culturally acceptable at the expense of topics that could enrich their sexual experiences and fulfilment. Sensitization around beliefs and values are therefore of utmost importance in order to improve delivery of sexuality education to learners with disabilities.

The study further shows the need to develop appropriate teaching materials, and to build teacher's capacity to improve their attitudes, skills, self-efficacy, and perceived subjective norms in relation to delivery of sexuality and HIV education. This suggests the need for a

targeted training and resource pack that enables teachers to provide sexuality education in suitable formats to learners with different types of disabilities. Such an intervention needs to be evaluated possibly with a larger sample size.

The evaluation of such an intervention could use the adapted survey questionnaire of this study. However, the scale prompting subjective norms of important others should include parents in order to assess their influence on teachers' provision of sexuality education to learners with disabilities.

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