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Challenges and Needs in Implementing Sexual Education for Deaf Students: A Case Study from Indonesia

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Abstract. The primary aim of sex education is to provide accurate information on handling risky sexual behavior. For deaf students, who may struggle with complex concepts, effective sex education is crucial to safeguard them against sexual assault and risky sexual behavior. This study examined the implementation of sex education in special schools for the deaf in Yogyakarta, Indonesia, focusing on the challenges faced by educators in delivering this sensitive content. Utilizing a case study and qualitative methodologies, this research gathered insights from school principals and teachers who took part in group discussions. Findings reveal that deaf students face significant challenges with sexual conduct, both individually and in their interactions with others. Despite incorporating sex education into science, religion, and self-development classes, teachers encounter difficulties in addressing sensitive topics and preventing age-inappropriate behaviors. Educators require specialized educational materials to address key topics such as body awareness, physical changes, reproductive health, relationships, pregnancy, and sensitive content. Such materials must be designed with clear visual aids and simple language to effectively meet the learning needs of deaf students. There is a pressing need for resources that facilitate understanding while preventing the imitation of inappropriate behaviors. To enhance sex education for deaf students, it is essential to develop and implement tailored educational resources that use visual aids and straightforward language. By addressing the unique needs of these students, educators can more effectively convey critical information, thereby reducing the risk of inappropriate behavior.

Keywords: sexual education; deaf student

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1. Introduction

Sexual education involves educating students about appropriate and healthy sexual behavior in order to avoid deviant sexual activity and help pupils comply with social norms. Many people still assume that talking about sex is taboo, particularly in educational contexts, where inappropriate explanations could cause misconceptions to arise in students. Teaching pupils about sex is crucial for both preventing sexual violence and arming them with knowledge. Wahyuni et al. (2023) discovered that threats from offenders and children's lack of knowledge about sexual violence are common reasons for the delayed management of incidents involving sexual assault.

According to the Women with Disabilities Advocacy Center's (SAPDA) annual report for 2022, there were 987 instances of violence against women in that year, with sexual assault being the most common type and people with disabilities being especially susceptible to sexual assault. The study included many cases involving people with mental problems (14 cases), intellectual disabilities (22 cases), and hearing impairments (31 cases). According to research by Cahyani et al. (2020), sexual assault against teenagers with hearing impairments occurs frequently in Indonesia and is typically committed by intimate friends or family members, as well as teachers. According to recorded occurrences and the collected statistics, people with impairments may be more susceptible to sexual assault. Sexual education is therefore essential for young people with specific needs, such as deaf children.

Deaf students may be more susceptible to violence because they have difficulty in grasping abstract and complicated ideas. They may be particularly negatively impacted by ignorance stemming from a lack of sexual education, particularly with regard to appropriate sexual conduct. Due to social isolation, dependence on others, communication challenges when reporting abuse, and inadequate sexual education, people with disabilities are more likely to experience sexual assault (Barron et al., 2019). Because of their physical, intellectual, and communicative difficulties, these students are more susceptible to sexual violence. According to Suntari (2022)'s research, deaf pupils have trouble understanding what other people are saying and finding it difficult to express their emotions and experiences owing to speech impairments. Sexual violence experienced by individuals with speech impairments can lead to psychological disturbances such as anxiety, fear, feelings of worthlessness, post-traumatic stress, and even depression (Marlina et al., 2022).

Furthermore, deaf students may suffer from a lack of self-awareness that can lead to harmful sexual activities, in addition to the risk of sexual harassment. Deaf people frequently engage in acts of physical affection, such as kissing and hugging, despite having low levels of sexual understanding, according to research by Ariantini et al. (2019). A Chinese study found that only 30% of participants had sufficiently thorough knowledge and ability to stop sexual harassment (Yu et al., 2017). Similarly, Mills (2020) found that deaf teenagers in Ghana performed badly in tests of sexual health awareness; furthermore, they were confused about the changes that come with puberty, and some had even engaged in coerced or consensual sexual intercourse.

Job (2004) cited research by Joseph, Sawyer, and Desmond (1995) which indicates that students who are deaf often lack knowledge about sexual education, and those who have gone through puberty may find it difficult to comprehend these changes. Some of them have previously had intimate connections with people of the opposite sex, which contradicts their poor understanding of sexuality and the onset of puberty. In order to protect deaf people from sexual harassment and give them the tools they need for self-defense, sexual education is essential.

However, a lack of sexual education is not the only factor contributing to risky sexual behavior and sexual harassment among deaf students. Potentially risky sexual behaviors are also influenced by contemporary changes, such as technical breakthroughs that enable easy access to information. Adkins (2018) highlighted that social media platforms offer a variety of readily available information, from up-to-date fashion trends to sexual words and behaviors.

Based on teacher interviews and observations in this preliminary study, it was found that some deaf students engage in risky sexual behavior during adolescence, such as nude biting, kissing, and raising the other person's clothing. They may also start asking questions about marriage and having children. Protecting deaf students from sexual harassment is essential, but providing them with accurate and thorough information that can help them to navigate this critical developmental stage is equally crucial. Bekirogullari et al. (2011) reported that mainstream school curricula rarely include sexual education tailored for students with exceptional needs. Therefore, teachers must play a crucial role in addressing these needs by carefully assessing the unique conditions of their students, as there are significant differences in how sexual education should be delivered to students with special needs compared to their typically developing peers.

Various studies have previously documented that sexual education programs for students with intellectual and physical disabilities must be tailored to their unique needs, as they are more likely to witness sexual violence and engage in risky sexual behavior. The National Partnership for Women and Families (2021) suggests that these programs should be adjusted to meet the students' requirements, while Handayani (2019) emphasizes that sexual education materials should be educational, free from explicit or vulgar content, and should gradually progress from simpler to more complex issues. Retnawati (2017) supports using group-individual tactics, a form of direct learning, as an effective approach to teaching sexual education to children with special needs. Additionally, Mulyeni and Lianty (2021) stress the importance of considering the needs and characteristics of the students, recommending that materials for deaf students should use simple phrases and include visual information.

Teachers can deliver sexual education in various ways, but it is crucial that the material be explained precisely to avoid misconceptions among students. This study aims to answer the research question: How can sexual education be adapted and delivered effectively to deaf students to prevent risky sexual behavior, while ensuring that the content is appropriate, understandable, and does not unintentionally encourage risky sexual behavior? By addressing this question, the study seeks to identify strategies for effectively teaching sexual education to deaf students and thereby preventing problematic behaviors.

2. Methodologies

The analysis of the case approach, which stresses limited examination, is the research method used in this study to address current challenges through qualitative research. The case study design, which focuses on an in-depth investigation of a single case or numerous cases to obtain comprehensive information from various data sources, can be used to assess the efficacy of instructional materials (Cresswell, 2015). A case study technique was selected in order to present a realistic picture of the actual circumstances in which teachers plan to deal with sexually inappropriate behavior to prevent the sexual harassment of deaf students.

According to Sugiono (2016), case study research involves researchers delving deeply into a program, incidents that have already happened, a course of events, or activities involving one or more people. This approach enables an in-depth analysis of actual circumstances, offering fresh perspectives on the successful tactics as well as obstacles encountered, which can help in tackling the study question.

This research was conducted at one of the Special Schools for the Deaf in the Special Region of Yogyakarta. This school was selected because it is a formal school (not a religion-based school), in which male and female deaf students' study together. Also, this school has a dormitory which enables male and female deaf students to interact more intensively. The study's participants were the principal and teachers at the school. The researcher purposely selected respondents by considering particular qualities in accordance with the research focus. The criteria for the respondents were as follows: 1) educators who work with deaf students who use sign language or who teach children with speech impairments; and 2) those who have previously taught sexual education.

The methodology of purposeful sampling was employed in this study to select participants for Focus Group Discussions (FGDs), which served as a primary method for collecting information. FGDs are comprehensive interviews conducted with multiple participants simultaneously in one location, rather than individually, allowing the researcher to gather a range of perspectives in a single session (Afrizal, 2014). In addition to the FGD, the researchers also conducted individual interviews to obtain more comprehensive data to complement the FGD data. This approach was implemented from January to July 2024 to facilitate an in-depth exploration of the strategies teachers use to address risky sexual behavior for protecting deaf students from sexual harassment. The insights gained from this methodology enables a deeper understanding of the practical teaching methods employed in this context,

highlighting the importance of tailored approaches in preventing such behaviors.

3. Results

3.1. Sexual behavior issues

The majority of the sexual activities of students, as described by the participants, fell into the categories of being alone or involving other people. Sexual conduct is the term used to describe individual sexual behaviors that take place in private and without the involvement of others. Behavior that involves another person is referred to as behavior involving other individuals. A number of the participants in forum discussions revealed that they had witnessed various sexual practices among deaf pupils in classrooms. Students were reported as having indulged in the following individual behaviors:

"There is a ... child who has multiple disabilities - he has hearing disabilities autism, and intellectual disabilities - who [was] seen scratching his own genitals so the teacher needs to supervise the student's behavior." (Informant 3)

"[A] student in my class once lay on their stomachs in class and touched their genitals." (Informant 4)

"Students access sexual content from their cell phones." (Informant 1)

"Children don't know that showing their genitals is not allowed." (Informant 5)

Data from Informant 3 indicated that one student with numerous disabilities scratches their genitalia, requiring monitoring by the instructor to prevent the student from engaging in masturbatory activity. In a similar vein, Informant 4 mentioned that there have been incidents of students caressing their own genitalia while looking down in class. Additionally, Informant 5 stated that children who touch, scratch, or even show their genitalia appear to be ignorant of the inappropriateness of their actions. In addition, teachers received reports from parents of multiple incidents involving sexual activity among underage individuals or other people in the school setting. The teachers provided the following information:

"Children who are beginning to express interest in the opposite sex ... will attempt to hide it if it is found out. For instance, privately communicating with the opposite sex and hid[ing] the conversation history." (Informant 3)

"I happen to be in charge of the middle school and high school classes in the same class. Some of the students in my class show interest in the opposite sex and also approach their friends. They have also been found kissing their friends on the cheek. Actually, they don't know what actions they can and cannot take. There was a report from one of the student's parents: when his mother's friend was there, this child opened his mother's friend's skirt." (Informant 2)

"One of the student's cell phones was found to have been added to a pornographic group when we checked it. Investigation revealed that several students were involved, not just one. In order for them to include each other's friends in the group, the group administrator asks his friends to invite others to join using the link. The group members even wanted to show off their genitalia and exchanged pictures of them with one another." (Informant 1)

"Once, when I discovered a kid in the class who appeared to be in a relationship with someone of the opposite sex, the parents consulted the teacher. The elementary school students in my class were in the fourth, fifth, and sixth grades. However, one of the female students preferred to hang around with older, middle school students and refused to interact with students in her age group or younger peers." (Informant 5)

"One of the students at our school was dating someone who wasn't at boarding school; the partner attends a different school. He posted a video of his genitals that was taken in his home's bathroom. This youngster was once urged to record a video of his genitalia and transmit it to a person he liked by his male buddy." (Informant 6)

According to information gathered from teachers and the school principal, students typically express an interest in the opposite sex. Informant 3 noted that students take an interest in the other sex and communicate with each other on their phones, but typically do not share the contents of these messages with adults. Informant 2, a middle and high school teacher, also reported that her students are beginning to show an interest in, and make moves toward, the opposite sex; at one point, the instructor discovered a child kissing a classmate on the cheek. The teachers agreed that their students needed to develop their understanding of the difference between appropriate and inappropriate behavior. A parent reported to one teacher that their child had lifted the skirt of a friend.

Informant 1 provided further details, revealing that several students had joined WhatsApp groups that disseminated inappropriate and sensitive content. In an effort to increase the number of members in the WhatsApp group, the group had attempted to recruit new members by reaching out to friends outside the group. In addition to sharing sensitive content, members of the group asked other members to expose their genitalia in the group.

3.2 Sexual education strategies in schools

Below are the insights provided by the class teachers and the school principal regarding the implementation of sexual health education at their school:

"Islamic education is used in our school. Islamic religious education courses that cover morality, genital hygiene, and what is acceptable and unacceptable to view are included in the curriculum. There is information on dealing with puberty and washing pads under the self-development section. Phase D included a science course on comprehending the human body, taking care of organs, and disorders related to reproduction. But occasionally, a child's wants and curiosity surpass the stage in which they should be. Additionally, we have worked with midwives to educate the public about acceptable and unacceptable sexual behavior." (Informant 6)

"There are moments when we hesitate to educate students about sexuality. Students have questioned the reasons behind human pregnancy. We are hesitant to provide an inaccurate response when asked how sperm and egg cells can combine to become a pregnancy, pointing out that this happens after they are already married. I lack the courage to go into greater detail at this time. I explain things, but I don't go into great detail about things like how sex works because I think kids might copy..." (Informant 2)

"I begin by outlining the improper behavior. For instance, students exhibiting wet dreams already demonstrate a mature side. I describe how and why fluids leak and why maintaining cleanliness is important. I explain to females that because egg cells are mature, they shouldn't kiss or engage in other activities that could result in pregnancy." (Informant 3)

"Mobile phone advertisements frequently feature guys [of] the same sex in intimate poses, so I consider ways to protect children from such content and teach them how to use the internet so they can understand what is appropriate and inappropriate to see. One approach is to keep phones closed so students cannot see, or to use YouTube Kids or Premium settings as an intervention to prevent exposure to material that could impact students." (Informant 4)

The remarks from the class teachers and school principal reveal their efforts to integrate sexual health education within their school's curriculum while aligning it with their religious and ethical values. Topics such as morality, hygiene, and appropriate behavior are covered through Islamic education and self-development courses. However, challenges arise in terms of addressing sensitive topics – such as human reproduction – with the necessary detail, due to concerns about appropriateness and potential misconceptions. Practical measures, including controlling digital content and collaborating with healthcare professionals, were mentioned by the participants, reflecting their proactive approach to protecting their students from inappropriate material and ensuring safe, age-appropriate learning about sexual health. Thus, their approach demonstrates a careful balance between providing comprehensive education and respecting cultural and developmental considerations.

Islamic beliefs form the basis of the school's ideology. Informant 6 clarified that Islamic Religious Education, Self-development, and Natural Sciences are used to teach sexual education in the curriculum. Students receive instruction in faith and values, personal cleanliness, and the boundaries of what is acceptable and unacceptable. Menstrual pads for females are among the subjects discussed to help students deal with adolescence. Furthermore, in natural sciences, students learn about the organs of the human body and how to take care of them, as well as studying disorders related to reproduction.

According to Informant 2, educators frequently experience anxiety when attempting to explain sexuality, particularly when answering questions from students regarding the process of conception. Teachers hesitate to go into detail regarding the process of sperm meeting egg cells during a marriage, but they do give basic explanations of how sperm and egg cells meet to create pregnancy. For deaf children, who learn best through visual aids and need specific explanations, this warning is especially pertinent.

Informant 3, who is also a teacher, explained that part of the sexual education curriculum encompasses knowledge of the stages of puberty and maturity that both males and females experience. In order to avoid unpleasant circumstances, teachers often stress the importance of maintaining good personal hygiene during puberty and the boundaries that both genders should respect.

Furthermore, Informant 4 described having stopped students from watching sensitive videos, particularly when advertisements that are deemed offensive, such as those featuring homosexual or heterosexual people acting inappropriately, appeared on their phones. The teacher's strategy involved adjusting the YouTube settings and shutting down the phone's screen when offensive material appeared.

3.3. *Methods of learning*

The data revealed that teachers used a variety of instructional strategies to teach sexual education to children with special needs.

"I give self-care advice in my lectures, and occasionally we have conversations in response to inquiries from the students concerning sex, including how individuals become pregnant." (Informant 4)

"I use cheers and role-playing in class with materials on what can and cannot be touched." (Informant 2)

"We frequently demonstrate, use sign language with pictures and movies, and maintain good personal cleanliness. We serve as the kids' interpreters in sign language when there is a video without sign language."

Informant 4 reported that they addressed sexual education through talks and classes. When the teacher noticed any improper behavior, the students received instruction. In order to address student concerns and cover instructional content, questions concerning sex were also addressed in lectures and in-class discussions. As an additional educator, Informant 2 used icebreakers such as cheering and role-playing to identify and clarify acceptable and unacceptable conduct as well as setting limits with fellow students. A number of educators discussed the different approaches they use in the classroom to teach sexual education, including role-playing, practice sessions, and visual aids such as images and films. When showing videos in class, the teachers include sign language in the content. If no sign language is provided, they interpret the film by adding sign language.

3.4. *Subject of sexual education*

Furthermore, the respondents emphasized a number of particular subjects that deaf children should learn in terms of sexuality:

"Students should be exposed to information on physiological changes, puberty, recognizing their own bodies, and preserving reproductive health. As such, marital education serves as a prelude to teaching children about utilizing blankets and sleeping in separate rooms. Researchers should also stress that homosexuality should be discussed [with] youngsters so that they do not infer that touching between people of the same sex is forbidden, as well as touching between people of different sexes. Thank God, none of the children have displayed signs of marital trauma as a result of their parents' divorce." (Informant 6)

"They should be aware of boundaries, even when they are buddies. They must also be able to defend themselves on social media, as well as understand the reproductive process, how pregnancy occurs, its symptoms, and its aftereffects." (Informant 4 and Informant 2)

Based on Informant 6's recommendations for the subjects children should study, it is clear that students need to learn about their own bodies, bodily changes, puberty, reproductive health, and life after marriage. In order to help students to better grasp what behaviors are acceptable or unacceptable when it comes to sexual education, Informant 6 also included a note for researchers on the subject, pertaining to both heterosexual and homosexual relationships. Students need to recognize personal limits with others and on social media, according to several informants, including Informants 4 and 2. In addition, students must understand self-defense, the reproductive process, and pregnancy, including its symptoms and aftereffects.

3.5. *The development of sexual education*

Teachers must take into account the specific learning styles and demands of deaf students when selecting their teaching techniques, as these children have distinct learning requirements from other students. A number of informants offered recommendations for the creation of sexual education programs for students who are deaf, such as the following:

"The understanding can be visualized for deaf students. Guidelines for teaching the content should go hand in hand with this, making sure explanations are clear and refraining from overly literal portrayals of visuals to deter students from copying." (Informant 6)

"It's best to distinguish between the anatomy of men and women when describing the body. Additionally, the message ought to discuss the dangers of engaging in risky sexual behavior." (Informant 4)

The participants supported the provision of easy explanations in visual format for deaf students, together with advice on how to present the content, all based on the information that Informant 6 shared. In order to prevent children from copying what they are shown, the educators emphasized the importance of avoiding highly sensitive imagery. Similarly, to discourage pupils from participating in risky sexual activities, Informant 4 highlighted the necessity of giving separate anatomical explanations for males and females.

4. Discussion

Student sexual behavior usually falls into two categories: solitary sexual behavior, which is defined as sexual behavior that takes place by oneself without the involvement of others; and that involving other persons, which is defined as sexual behavior that involves other people or has an impact on other people (Chamidah, et al. 2021). According to the findings of the focus group discussion (FGD), deaf children at the school engaged in solitary behaviors such as holding, scratching, and exposing their genitalia to others. Masturbation was performed in a variety of ways. In Gomez's (2011) research, the majority of deaf students who engaged in masturbation reported feeling aroused after watching pornographic videos, suggesting that such activities provided them with satisfaction. This finding is reflected in the observations of the present study, in which similar sexual behaviors were noted among deaf students. Educators reported that students often engage in solitary sexual behaviors, such as touching their genitalia inappropriately during class, and added that the students have accessed sexual content through their phones. Informants also mentioned that some students are unaware of the inappropriateness of their actions, indicating a need for improved sexual education and guidance to address these behaviors and prevent the consumption of explicit material.

According to the research findings, deaf students also exhibit sexual behavior involving others, including showing an interest in the opposite sex, eagerness to make friends with older people, and engaging in affectionate physical contact with others, including kissing and opening clothing. Any conduct that promotes sexual aberrations linked to one's reproductive health is considered sexual behavior. Additionally, students utilized WhatsApp groups to exchange explicit or sensitive images and videos with one another. According to the teacher, children act in this way because they are still unsure of what is and is not permissible when interacting with others. Interestingly, students' behavior appears to be greatly influenced by their surroundings. Parents, the surrounding environment, peers, and exposure to the PIK-R program are all significant factors that impact on children's sexual behavior (Amaylia et al., 2020).

Many deaf people have a large social network of peers. They enjoy forming friendships, particularly with other deaf individuals. In their community, deaf teenagers engage in more interactions with other deaf individuals since they can communicate with one other and because not everybody knows sign language (Solikhatun & Yanuar, 2013). Aside from the real world, deaf people often form friendships virtually, through social media platforms such as WhatsApp. The school subsequently disclosed that it had discovered that multiple deaf pupils were part of a WhatsApp group that exchanged explicit content. According to Mobility International USA (2019), teenagers – including those who are deaf – use WhatsApp more frequently than any other app.

Research by Adigun (2020) indicates that the majority of deaf communication takes place on WhatsApp, a platform enjoyed by deaf teenagers, who find it simplifies the exchange of intimate photographs with their friends. Ensuring that deaf pupils are able to discern between what they can and cannot see, do, and hear is achieved via constant monitoring from all of the adults involved. Effective communication about sexuality and risky sexual behavior resulting from risky sexual conduct is crucial, and teachers and families play a significant role in this regard. It is imperative that sexual education be implemented in order to curb the increasing prevalence of sexual assault, discourage aberrant sexual conduct, and emphasize the value of reproductive health. It is the right of all children to receive thorough sexual education from educated and experienced educators. This corresponds with the findings of Low's (2019) study, which showed that inadequate sexual education raises the risk of violence and sexual exploitation, especially for children with disabilities, whose knowledge and comprehension of sexual conduct may be limited. Therefore, teachers play a crucial role in ensuring that students receive and understand information concerning their rights and reproductive health through school-based sexual education (Haas & Hutter, 2020).

Correspondingly, the results of the study clearly show that educators have attempted to educate their students about sexuality. The subjects from the school curricula, such as Natural Sciences, Islamic Religious Education, and Self-Development, have indeed been taught. In order to apply sexual education correctly and successfully, it must be delivered progressively to children, based on their age and comprehension level (Oktarina & Novitasari, 2019). The educators teach deaf pupils about puberty, diseases, self-awareness, self-care, and morals. This supports Nasution's theory that there is currently a dearth of understanding regarding teenage reproductive health and self-defense (Yarza, 2019).

Furthermore, teachers endeavor to prevent students from seeing the pornography that is sometimes featured in social media marketing by defining acceptable content. Because of their intense curiosity, students frequently raise questions that go beyond the scope of the curriculum, even when the curriculum is linked with the students' age-appropriate milestones. According to Dewi (2015), deaf toddlers pick up visual cues about their environment, which can heighten their egocentrism and spark intense interest. When answering questions from youngsters about sensitive subjects, including how pregnancy occurs, teachers may find themselves confused or needing to exercise caution due to fears that the students may imitate behavior that is inappropriate for their age. As deaf children are visual learners who need precise and detailed explanations, this concern is particularly pressing for this group. This is supported by Sunesni et al.'s (2022) findings, which show that age, experience, and education level affect how well teachers retain sexual education material.

In order to effectively teach sexual education to deaf students, teachers should use a variety of tailored techniques. Visual aids such as detailed diagrams, charts, and sign language videos are crucial for explaining anatomical concepts, reproductive health, and personal boundaries. Incorporating role-playing, simulation games, and hands-on activities such as model demonstrations helps students to engage with the material in a practical and interactive way. Also, customized chants, mnemonic devices, and thematic songs can aid memory retention and reinforce key concepts.

In view of the students' need for sexual education, teaching strategies must be tailored to their ability and comprehension levels to ensure that students retain the information. The teachers at the deaf schools involved in this study have used a variety of approaches and techniques to educate their pupils on sexuality, such as role-playing, lectures, practice sessions, and the projection of images and films. Additionally, the teachers explain the concepts to their deaf pupils in sign language. This is consistent with the findings of Kholis and Pranoto (2022), who demonstrated that learning apps with teacher guidance, puzzle games, and illustrated narratives offer effective means by which to increase student engagement while delivering sexual education. According to Mutiarani et al. (2022), media such as books, comics, photographs, and films utilized to prevent child sexual abuse. Flashcards portray a realistic picture and can also be used to help students comprehend, according to Rahmawati et al. (2020). In summary, instructors must use simple and easily understandable teaching strategies in addition to lectures to effectively transfer knowledge and encourage students to engage in sexual education.

Furthermore, effective communication with students is also essential to delivering sexual education. For example, students should be taught to cover up those body parts that are not permitted to be touched or seen (Hidayati & Nurhafiza, 2022). In order to help parents to monitor their children's behavior, teachers should encourage students to be more open with one another, fostering good communication between them. When dealing with sexual harassment or deviant actions, it is important for deaf students to know appropriate communication techniques because they might otherwise struggle to express their feelings and experiences.

Teachers in this study reported that the framework for sexual education was adapted to cater to the skills and knowledge of the children, and parents and teachers have worked together to ensure that the material is appropriate for the students' developmental stage and that it facilitates clear communication. According to Rakhmawati et al. (2020), parents and teachers should both teach the children about changing their clothes and taking care of their bodies, as this will help them to learn about reproductive health. Discussions on human reproductive health and the avoidance of risky sexual behavior should be included in sexual education materials (Astuti et al., 2017; Aiffah & Religia, 2020; Laoli et al., 2024). However, giving information about gender-specific body parts and teaching pupils not to act inappropriately in front of others are equally important as education on reproductive health and the prevention of risky sexual behavior (Hidayati & Nurhafizah, 2022).

Including these elements in sexual education decreases the probability of aberrant behaviors by ensuring that the knowledge and understanding that pupils have gained are in line with their abilities and developmental stages. Zubaedah (2016) recommends a sexual education approach that teaches children about the human anatomy in plain language, encourages healthy habits, emphasizes the value of safeguarding bodily parts, and provides guidance on early gender-appropriate wardrobe alterations. It is essential that educators modify sexual education materials based on the mental ages and knowledge levels of their students. Moreover, teachers must also improve the ways in which the materials are delivered in order to help students to comprehend the goals of sexual education and absorb the necessary information. When designing sexual education programs, educators should include the use of interactive media that engages students and meets the needs of deaf students, in addition to selecting appropriate content and instructional strategies. This will assist students in comprehending and applying the information taught while fostering the development of self-defense, reproductive health, and risky sexual behavior prevention strategies. In addition, in order to deter pupils from imitating what they see, teachers should also create visual materials such as photographs, although caution should be used when displaying sensitive imagery. Pamungkas et al. (2023) explain that, in order to better meet the educational needs of deaf students, it is important to improve the strategies used in teaching, by tailoring them specifically to their unique needs. One effective method is the application of visualization principles in teaching. Because deaf students naturally process information visually, there is an urgent need for appropriate visual learning materials that can help these students to understand abstract concepts, ideally using realistic illustrations.

Educational resources are utilized to enhance students' understanding by creating educational materials that incorporate words, pictures, videos, and anatomy. This is essential for preventing abnormal sexual practices. Playing educational games that highlight human body parts can help students to identify their parts of their own bodies, which is one of the educational media tools used for sexual education among these pupils (Hirnandin, 2018). The objectives of sexual education - which include protecting reproductive health, discouraging risky sexual behavior and conduct, and lowering the prevalence of sexual assault as a form of self-defense - cannot be met without the use of instructional media. Interactive media and appropriate methods are essential to accomplish this purpose.

5. Conclusion

This paper addressed the critical issue of how sexual education can be effectively delivered to deaf students to prevent risky sexual behavior and ensure that they receive accurate and age-appropriate information about sensitive topics. Through classroom instruction and the use of tailored educational resources, teachers aim to prevent risky sexual behavior by covering essential topics such as proper morals, personal boundaries, puberty, body awareness, self-care, and sexually transmitted diseases. Despite these efforts, however, concerns remain regarding the potential for misunderstanding and the imitation of inappropriate behaviors, particularly when discussing relationships with the opposite sex.

There is a significant need for educational materials that cater specifically to the needs of deaf students, ensuring that they understand complex topics without being exposed to content that could lead to imitative behaviors. Accessible sexual education resources for deaf students must be visually engaging, using clear and simple explanations to address sensitive topics. This includes the use of images, sign language films, role-playing, and custom chants. By addressing the unique needs of these students and using specialized resources, educators can foster a safe and informative learning environment. The development and implementation of specialized educational materials and training programs that address the specific needs of deaf students are essential for the future. Educators should continue to refine their approaches and collaborate with experts to enhance the effectiveness of sexual education, ensuring that it is both appropriate and impactful. Pilot programs and feedback loops will be crucial in optimizing these strategies and expanding their reach.

6. Recommendations

Based on the study, it was found that teaching sex education to deaf students involves direct instruction and the use of specialized, engaging learning resources. However, the effectiveness of these methods in addressing sensitive topics and preventing misconceptions requires further examination. The study highlights a lack of comprehensive, accessible materials tailored to meet the needs of deaf students, and insufficient integration of professional input from both education and sexuality fields. Additionally, the feasibility of implementing these recommendations within current educational frameworks remains unclear. To enhance sex education for deaf students, it is crucial to develop and utilize media and materials that are both easy to understand and specifically designed for deaf learners. Collaboration between experts in special education and in sexuality will ensure these resources are accurate, relevant, and effective.

A task force should be created to develop a curriculum that includes the following: visual aids, interactive tools, and simplified language tailored to meet the needs of deaf students; collaboration between specialists to review and adapt content; and training for teachers on how to use these resources effectively. Furthermore, pilot programs should be implemented in a limited number of schools to test the new materials and methods, gathering feedback to refine the approach. It is important that an appropriate budget is specifically allocated for these resources and that adequate support is provided for teachers. However, the immediate focus should be on creating and testing these educational materials and training programs. Once these are refined and have proven effective, their use can be expanded across more schools, integrating the feedback from the pilot programs to support its broader implementation. Further research should be carried out to complement the findings of this study by inviting deaf respondents to share their experiences so that more holistic data can be obtained.

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