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Research Article

Teachers' and parents' perspectives on sexuality education for children with intellectual disabilities

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Abstract

This study was designed to quantitatively measure these three dimensions among 175 participants comprising parents and school-related professionals, including teachers, therapists, and caregivers working in care homes. Data was collected through structured questionnaires that assessed factual understanding, attitudinal orientations, and self-reported behavioral practices concerning sexuality education. The results indicated that while participants generally possessed adequate knowledge of sexuality education, negative or hesitant attitudes often constrained its effective implementation. These attitudes may stem from cultural taboos, personal discomfort, or lack of training in addressing sensitive issues with children who have intellectual disabilities. Nevertheless, the behavioral scores were relatively high, demonstrating that participants did make efforts to engage in sexual education, though they frequently encountered difficulties such as insufficient resources, challenges in simplifying abstract concepts, and uncertainties in applying appropriate teaching methods. Furthermore, the analysis revealed significant differences among participant groups in terms of knowledge and attitudes, suggesting variations in how different stakeholders perceive and approach sexuality education. However, no significant differences were observed in behavioral practices, indicating a shared commitment to implementation despite underlying disparities in knowledge and attitudes. These findings underscore the importance of addressing not only the informational aspect of sexual education but also the attitudinal and practical barriers faced by educators and caregivers. Strengthening training opportunities, enhancing access to resources, and fostering more open discussions about sexuality education could help ensure that children with intellectual disabilities receive consistent and effective support, thereby reducing their vulnerability and promoting healthier development.

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Introduction

Children with intellectual disabilities experience limitations in both intellectual functioning and adaptive functioning (American Psychiatric Association, 2017). These limitations affect their daily living skills, often requiring them to depend on others for assistance. In terms of physical development, however, children with intellectual disabilities do not differ from typically developing children. They reach sexual aturity at the same age as their peers (Isler et al., 2009). Hormonal changes during puberty lead to both physical and behavioral changes. These changes are influenced by estrogen in females and androgens in males (Santrock, 2016; Berk, 2014).

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The primary difference between typically developing children and children with intellectual disabilities in terms of sexual needs lies in their ability to regulate emotions and behaviors (Cheng & Urdy, 2005; Murphy & Young, 2005). The National Dissemination Center for Children with Disabilities (NICHCY) identifies two types of social difficulties common among children with intellectual disabilities: public-private errors and stranger-friend errors (Mandel et al., 2005). Public-private errors include behaviors such as touching or manipulating one's genitals in public, undressing in public, indiscriminately touching others, lifting skirts, or abruptly hugging others. Stranger-friend errors are characterized by inappropriate physical affection such as hugging or kissing unfamiliar individuals (Mandel et al., 2005).

Sexuality education for children with intellectual disabilities can be delivered in schools, homes, communities, hospitals, or intervention centers (Breuner & Matson, 2016). Information should be provided consistently and repeatedly to enhance understanding (Breuner & Matson, 2016). Sexuality education equips individuals with intellectual disabilities with essential knowledge about sexual and reproductive health, helping them adapt appropriately (Gibbon et al., 2022; Karakoç et al., 2023). Recent studies have demonstrated that structured and continuous sexuality education significantly improves self-protection skills and reduces inappropriate sexual behaviors among children with intellectual disabilities (Karakoç et al., 2023). This includes guidance on healthy and responsible sexual attitudes and behaviors, understanding gender roles, and learning how to interact with the opposite sex (Sari, 2017; Handayani et al., 2019). The overarching aim is to prevent them from becoming either victims or perpetrators of sexual abuse by fostering awareness of social norms and expected sexual behaviors (Astuti & Andanwerti, 2016; Sari, 2017; Handayani et al., 2019; Chou et al., 2022). Chou et al. (2022) further emphasize that individuals with intellectual disabilities often receive less comprehensive relationship and sex education, leading to limited awareness of consent and boundary-setting, which increases their vulnerability to abuse. Furthermore, sexuality education enables them to better understand changes in their own bodies and maintain sexual health (Astuti & Andanwerti, 2016; Rowe & Wright, 2017; Correa, Castro, & Gil-Llario, 2024). According to Correa, Castro, and Gil-Llario (2024), fostering positive attitudes among educators and caregivers toward the sexuality of individuals with intellectual disabilities is essential to ensure that sexual education is delivered with empathy and without stigma.

This study was conducted in schools integrated with therapy centers and care facilities. In this context, "school staff" refers not only to teachers but also to therapists and caregivers. Initial interviews with therapy coordinators and caregivers revealed that sexuality education had not been provided, as staff perceived it as outside their responsibilities. When children displayed sexually inappropriate behaviors, the typical response was a verbal reprimand. Staff reported limited knowledge of alternative strategies for addressing such behaviors and had not received training on sexuality education, either through seminars or in staff orientation programs. Consequently, parents, teachers, therapists, and caregivers often lack adequate knowledge, hold varied attitudes, and display inconsistent practices regarding sexuality education. Effective implementation requires collaboration among these groups, with each fulfilling their respective roles, supporting one another, and sharing feedback to foster positive sexual development in children with intellectual disabilities (Gibbon et al., 2022; Strnadová, Loblinzk, & Danker, 2022; Pandia, Widyawati, Handayani, & Sutamto, 2024). Strnadová, Loblinzk, & Danker (2022) found that many teachers and caregivers still feel unprepared and lack institutional support to address sexuality education effectively, highlighting the need for joint training and policy guidance in special education settings.Behavioral implementation depends on knowledge, attitudes, subjective norms, and perceived behavioral control, consistent with the Theory of Planned Behavior (TPB) proposed by Fishbein and Ajzen (1991). Knowledge refers to the understanding of information, which shapes attitudes toward sexuality education. Attitudes reflect evaluations of values and social interactions. Positive attitudes contribute to positive sexual adjustment in children (Brown & Pirtle, 2016). Accordingly, positive attitudes toward sexuality education are likely to encourage consistent implementation. Both internal and external factors influence this process. Therefore, a comprehensive understanding of the knowledge, attitudes, and practices of parents, teachers, therapists, and caregivers is essential. Identifying differences across these groups is also crucial for developing effective interventions.

The purpose of this study is to describe the knowledge, attitudes, and practices of parents, teachers, therapists, and caregivers regarding sexuality education for children with intellectual disabilities, and to examine differences in these aspects among the four groups.

Problem of Study

Based on the description above, the research problem can be formulated as follows. Sexual education for children with intellectual disabilities remains a sensitive yet essential issue, as it plays a critical role in safeguarding children from potential abuse, fostering their physical and emotional well-being, and supporting their independence in daily life. Parents, teachers, therapists, and caregivers represent the key stakeholders who interact most directly with these children and who therefore significantly influence the success of sexual education. However, differences in educational background, professional training, cultural values, and personal experiences may lead to variations in the levels of knowledge, attitudes, and behaviors among these groups. Such disparities can potentially affect the consistency and effectiveness of sexual education provided to children with intellectual disabilities. This study seeks to explore the overall picture of knowledge, attitudes, and behaviors within each stakeholder group, while also examining whether significant differences exist among them. By addressing these questions, the research aims to provide a deeper understanding of the challenges and opportunities in implementing sexual education for children with intellectual disabilities, as well as to offer insights that may inform the development of more effective, comprehensive, and inclusive strategies in the future.

Method

This study employed a quantitative design, specifically a descriptive quantitative research design. Descriptive quantitative research is used to describe, examine, and explain the phenomena under study and to draw conclusions from observable data expressed numerically (Creswell, 2012). Quantitative data were obtained through questionnaires measuring three variables: knowledge, attitudes, and practices. A non-probability sampling technique was used, meaning that not all members of the population had an equal chance of being included in the study. Out of 180 participants, data from 175 participants were analyzed. Participants were divided into two groups: parents and school staff. The parent group consisted of 74 individuals (54 mothers and 17 fathers), while the school staff group consisted of 35 teachers, 20 therapists, and 46 caregivers, with educational backgrounds ranging from high school to undergraduate degrees. The questionnaires were administered either online via Google Forms or in paper- and-pencil format. The data were analyzed using descriptive analysis to identify trends and variations in scores across categories within the overall dataset (Creswell, 2012). To examine group differences, the Kruskal–Wallis test was employed. The data provided insights into the knowledge, attitudes, and practices of parents, teachers, therapists, and caregivers regarding sexuality education.

Result

Based on the data, the mean (M) and standard deviation (SD) were calculated for each measurement instrument across all participants. For the knowledge scale, the results were M = 15.5, SD = 3.25; for the attitude scale, M = 67, SD = 6.5; and for the practice scale, M = 64, SD = 12.9. The mean and standard deviation were used as the basis for categorizing participants into groups for each scale. The categorization results showed the distribution of participants across different levels. On the knowledge scale, the majority of participants fell within the medium category, accounting for 40.57%. This indicates that most participants possessed a moderate level of knowledge. On the attitude scale, the majority of participants were in the low category, with a proportion of 36%. This finding suggests that participants generally demonstrated low attitudes toward sexuality education for children with intellectual disabilities. On the practice scale, most participants were distributed between the high and medium categories, with 34.29% in the high category and 33.14% in the medium category. This suggests that the majority of participants demonstrated practices related to sexuality education at moderate to high levels.

Table 1. Overview of participant group score categorization

Pariticipant	Category	Knowledge		Attitude		Behavior	
		f	%	f	%	f	%
Parent	Very high	-	-	6	8.1	2	2.7
(n=74)	High	13	17.5	13	17.5	22	29.7
	Middle	30	40.5	18	24.3	22	29.7
	Low	16	21	34	45.9	15	20.3
	Very low	15	20.2	3	4.05	13	17.5
Teacher	Very high	-	-	2	5.7	2	5.7
(n=35)	High	11	31.4	7	20	16	45.7
	Middle	20	57.1	12	34.3	10	28.5
	Low	3	8.6	9	25.7	7	20
	Very low	1	2.9	5	14.3	-	-
Therapist	Very high	-	-	-	-	1	5
(n=20)	High	16	80	11	55	5	25
	Middle	3	15	8	40	12	60
	Low	-	-	1	5	2	10
	Very low	1	5	-	-	-	-
Caregiver	Very high	-	-	-	-	-	-
(n=46)	High	19	41.3	10	21.7	18	39.1
	Middle	18	39.1	9	19.6	13	28.2
	Low	6	13	19	41.3	7	15.2
	Very low	2	4.3	-		7	15.2

In the parent group, most parents demonstrated relatively low attitudes toward sexuality education for children with intellectual disabilities. In terms of knowledge and behavior, the proportion of parents who fell into the low to very low categories was higher compared to those in the high to very high categories. In the teacher group, most participants scored in the medium to high range across all three measures. However, on the attitude scale, the percentage of teachers in the low to very low category was greater than those in the high to very high category. Among therapists, the majority scored in the medium to high range across all three measures, indicating adequate knowledge, positive attitudes, and high levels of behavior in implementing sexuality education. For caregivers, most scored in the high category on knowledge and behavior. Nevertheless, caregivers were in the low category for attitudes toward sexuality education for children with intellectual disabilities. This suggests that caregivers had adequate knowledge and high behavioral engagement but held more negative attitudes.

Despite high behavioral scores, participants reported difficulties in implementing sexuality education. Open-ended responses revealed several challenges. Most parents indicated that their primary difficulty was not knowing the appropriate way to teach sexuality education to children with intellectual disabilities. Most teachers reported difficulties due to the children's cognitive limitations. Similarly, therapists described challenges in teaching sexuality education because of the children's intellectual disabilities. Caregivers expressed the same concerns, stating that they struggled both due to the children's cognitive limitations and their own uncertainty about appropriate teaching methods for sexuality education. A Kruskal-Wallis's test was conducted to examine whether there were differences among participant groups on each measure. This test was used because the data were not normally distributed. The results showed significant differences in knowledge scores across participant groups regarding sexuality education for children with intellectual disabilities ($H = 33.041$, $p < .001$). Similar results were found for attitudes, with significant differences across groups ($H = 11.832$, $p = .008$). However, for behavior in implementing sexuality education, no significant group differences were observed ($H = 6.684$, $p = .098$). Further analysis was conducted using post hoc Dunn's tests to determine which participant groups differed significantly from one another on knowledge, attitudes, and behavior related to sexuality education for children with intellectual disabilities.

Table 2. Post hoc test of participant groups

Participant Group Comparison	Knowledge (Mean)	p	Attitude (Mean)	p	Behavior (Mean)	p
Teacher –Parent	2.747	.003*	-0.102	.459	2.450	.007*
Teacher –Caregiver	-0.327	.372	-1.111	.133	1.780	.038*
Teacher –Therapist	-2.788	.003*	-2.985	.001*	0.913	.181
Parent –Caregiver	-3.392	<.001*	-1.216	.112	-0.550	.291
Parent –Therapist	-5.337	<.001*	-3.327	<.001*	-0.979	.164
Caregiver –Therapist	-2.644	.004*	-2.193	.014*	-0.536	.296

*$p<0,05$

On the knowledge scale, the groups that showed significant mean differences were teachers and parents, teachers and therapists, parents and caregivers, caregivers and therapists, and parents and therapists ($p < .05$). The largest difference was observed between parents and therapists, with a mean difference of – 5.337 and significance level of $p < .001$. On the attitude scale toward sexuality education, significant differences were found between teachers and therapists, parents and therapists, and caregivers and therapists. The largest difference occurred between parents and therapists, with a mean difference of –3.327 and significance level of $p < .001$. On the final measure, behavior in providing sexuality education for children with intellectual disabilities, significant differences were found between teachers and parents and between teachers and caregivers. The largest difference was between teachers and parents, with a mean difference of 2.450 and significance level of $p = .007$.

Discussion

Overall, the research participants demonstrated knowledge that mostly fell within the medium category, while most of their behavior scores ranged from medium to high. Regarding attitudes toward sexuality education, most participants were categorized as medium. However, findings from Indonesia indicate that although attitudes toward sexuality education tend to be positive, there remains internal resistance rooted in discomfort and cultural values that hinder optimal implementation (Putu Suariyani et al., 2025). These findings suggest that parents, teachers, therapists, and caregivers possess adequate knowledge and display positive behavior, yet continue to hold negative attitudes toward sexuality education for children with intellectual disabilities. Although participants' behavior scores were in the medium to high range, the majority still reported difficulties in delivering sexuality education to children with intellectual disabilities.

Knowledge can be understood as the comprehension of information that enables individuals to form perceptions and meaning. The fact that most participants demonstrated adequate knowledge indicates that those closest to children with intellectual disabilities possess some understanding of sexuality. This suggests that educators are reasonably knowledgeable about topics such as bodily changes, maturation, social skills, romantic relationships, and risks of physical or sexual abuse. Adequate knowledge of sexuality reflects a level of awareness sufficient to support children with intellectual disabilities in their sexual development. However, this knowledge still requires strengthening, as those closest to the child remain their primary source of information. In a mixed-methods study in Bali, more than 50% of mothers were found to have good knowledge of reproductive health, yet their discussions were often limited to puberty- related topics, while issues such as sexually transmitted infections were rarely addressed (Putu Suariyani et al., 2025). If the knowledge of these individuals is insufficient, it directly affects the child's own understanding of sexuality (Ellis et al., 2020; Kurt. & Kürtüncü, 2024).

Several factors may contribute to the relatively limited knowledge among participants. Many educators perceive sexuality education as less important for children with intellectual disabilities; while prevailing social structures and moral values make access to accurate information on sexuality more difficult (Handayani et al., 2019). Qualitative findings further highlight that communication barriers due to children's cognitive limitations and cultural sensitivity are major challenges faced by mothers when providing comprehensive sexuality education at home (Putu Suariyani et al., 2025). These combined factors restrict the ability of parents and educators to acquire sufficient knowledge. Yet knowledge is the

foundation of sexuality education. Without it, parents and educators may not know when or how to appropriately guide children with intellectual disabilities.

Among parents, knowledge was generally categorized as medium. However, the proportion of parents in the low to very low categories was higher compared to those in the high to very high categories, indicating insufficient understanding overall. When analyzed by demographic factors such as age and gender, most subgroups still fell within the medium category. In contrast, educational attainment produced differences: parents with only elementary to junior high school education were predominantly in the low to very low categories, whereas those with higher education levels (undergraduate or postgraduate) were more likely to fall into the medium category. These findings align with previous research indicating that social structure influences knowledge. Parents with higher levels of education are more likely to seek additional information on sexuality education for their children, while those with less education are less attentive to the issue (Gibbon et al., 2022). A study in a special school in Bantul, Indonesia, also found that parental education on sexuality positively correlates with parents' confidence in discussing topics such as puberty and anatomy, although feelings of embarrassment or fear of being judged persist (Widyaningrum & Siwi, 2023).

For school-based participants—teachers, therapists, and caregivers—the data largely clustered in the medium-to-high range. Across age, gender, educational background, and years of experience, no significant differences were found. This pattern aligns with previous research, which found that such demographic variables do not strongly influence knowledge among school staff. This may be explained by the educational requirements for employment in schools, which ensure that staff possess a foundational knowledge base (Shuib et al., 2022). Group comparison analyses revealed significant differences between parents and teachers, which may be attributed to higher levels of education among teachers, therapists, and caregivers compared to parents, providing them with a stronger knowledge base and better understanding of sexuality education.

Another key dimension in sexuality education is attitude. According to the KAP (Knowledge, Attitude, Practice) model, attitudes reflect positive or negative evaluations that influence behavior. In this context, attitudes encompass beliefs, values, and perspectives that shape how individuals approach education on sexual behavior and expression for children with intellectual disabilities (Povilaitiene & Radzeviciene, 2015). The finding that most participants held negative attitudes suggests that their beliefs and perspectives remain unfavorable toward sexuality in this population. This is consistent with survey results in Indonesia showing that while many teachers and community leaders support reproductive health education, they continue to reject discussions of sexual behavior due to cultural norms (Gunawan et al., 2023). The strongest factor shaping these negative attitudes is the cultural taboo surrounding sexuality in Indonesia. In many Asian societies, sexuality remains a highly sensitive topic and is rarely discussed openly. Consequently, participants' attitudes are influenced by social norms and limited access to accurate information. This taboo also contributes to negative perceptions of marriage, pregnancy, and parenting among individuals with intellectual disabilities (Wilkenfeld & Ballan, 2011).

Parents and caregivers expressed negative attitudes toward sexuality education for children with intellectual disabilities, consistent with prior research emphasizing how sexuality remains taboo in this context. Such negative attitudes often stem from insufficient knowledge. Although most parents in this study were in the medium knowledge category, many still scored low. Since knowledge forms the foundation for attitude (Wilkenfeld & Ballan, 2011), insufficient knowledge combined with cultural taboos leads to negative parental attitudes toward sexuality education. Interestingly, no significant differences in attitude were found across age, gender, or educational level, suggesting that cultural norms have a stronger influence than demographic factors in shaping these views.

In contrast, teachers and therapists displayed more positive attitudes toward sexuality education, likely due to their higher knowledge levels compared to parents and caregivers. Group comparisons confirmed significant differences, particularly between teachers and parents, with teachers reporting more positive attitudes. These findings differ from earlier studies that found no significant differences among parents, teachers, therapists, and caregivers (Cuskelly & Bryde, 2004). Such discrepancies can affect the implementation of sexuality education for children with intellectual disabilities. To ensure effectiveness, collaboration among all stakeholders—parents, teachers, therapists, and caregivers—is essential (Brown & Pretile, 2008). Without shared perspectives, inconsistencies in education and guidance

are likely to occur.

The final dimension examined was behavior, where most participants scored within the medium to high categories, indicating that parents, teachers, therapists, and caregivers had engaged in sexuality education practices with children with intellectual disabilities. However, more than half reported difficulties in delivering such education. A study by Md Sharif et al. (2022) found that beyond knowledge limitations, cultural and family norms further reinforce feelings of shame when discussing sexuality. These findings are consistent with earlier studies showing that children's cognitive limitations require adapted curricula, teaching aids, and innovative instructional methods (McDaniels & Fleming, 2016). Moreover, because sexuality remains taboo, educators often struggle to find appropriate language and may feel uncomfortable addressing the topic directly (Murphy & Young, 2005).

Knowledge, attitudes, and behavior are interconnected dimensions that collectively shape the learning process. Each influence and reinforces the others, and none can stand alone. The findings of this study reveal significant correlations among knowledge, attitudes, and behavior. Although participants had begun implementing sexuality education, their reported difficulties suggest that the process remains ineffective. Thus, targeted interventions are needed to strengthen these three components to improve the quality and impact of sexuality education.

According to the Theory of Planned Behavior (Ajzen, 1991), perceived behavioral control also plays an important role in shaping the provision of sexuality education for children with intellectual disabilities. While participants' behavior scores were relatively high, they still reported challenges in implementation. These challenges reflect limitations in behavioral control, shaped by both internal and external factors. Internal factors include teaching ability and understanding of the child's cognitive limitations, while external factors—particularly cultural taboos—further restrict behavior.

Despite its contributions, this study has several limitations that should be addressed in future research. Future studies should pay greater attention to the age of children with intellectual disabilities, particularly focusing on parents of children approaching or undergoing puberty, as parental perspectives differ between early childhood and adolescence. Additionally, the classification and level of intellectual functioning should be considered, as they may influence how parents, teachers, and caregivers perceive and implement sexuality education. Focusing on specific subgroups in future research may provide more targeted insights for developing effective educational interventions.

Conclusion

Based on the data obtained, the results regarding knowledge, attitudes, and behavior toward sexuality education were varied. In terms of knowledge about sexuality education for students with intellectual disabilities, most participant groups demonstrated knowledge at the medium level. This contrasts with attitudes, where most participants still held negative views toward sexuality education for children with intellectual disabilities. Unlike attitudes, however, the behavioral measures showed that most participants fell within the medium-to-high category. Thus, it can be concluded that participants' attitudes remain lower compared to their knowledge and behavior toward sexuality education for children with intellectual disabilities. The comparative analysis revealed that, in terms of knowledge and attitudes, there were significant differences among parents, teachers, therapists, and caregivers. However, no significant differences were found in the domain of behavior. This indicates that there is still a lack of synergy in implementing sexuality education for children with intellectual disabilities.

From a theoretical perspective, future studies would benefit from adopting a qualitative approach to further explore knowledge, attitudes, and behavior. Such an approach could provide deeper insights into how educators acquire their knowledge about sexuality education and the reasons they seek out such information. From a methodological perspective, it would be advisable to incorporate behavioral observation methods in future research. Observational data on sexuality education practices carried out by participants could provide a clearer picture of the effectiveness of teaching implemented by parents, teachers, therapists, and caregivers, relative to their levels of knowledge, attitudes, and behavior. From a practical perspective, the findings of this study can serve as a reference for conducting research in other special schools (SLB). These data may serve as a foundation for future studies by showing that even in schools with integrated

elements of education, therapy, and boarding facilities, knowledge and behavior are not yet optimal, and attitudes toward sexuality education remain negative. Future research could compare knowledge, attitudes, and behavior in sexuality education between integrated and non-integrated special schools to provide broader insights.

Recommendations

From a theoretical standpoint, future studies would benefit from adopting a qualitative approach to further explore knowledge, attitudes, and behaviors related to sexuality education, as this would provide a deeper understanding of how educators acquire information, the reasons they seek it, and the values and backgrounds that shape their attitudes, while also uncovering the barriers and difficulties they experience in practice. Methodologically, it is recommended that future research include observational methods to directly examine the sexuality education practices carried out by parents, teachers, therapists, and caregivers, since observational data could yield more accurate insights into the actual effectiveness of teaching compared to relying solely on self-reported measures of knowledge, attitudes, and behaviors. From a practical perspective, the findings of this study can serve as a valuable reference for researchers conducting studies in other special schools, whether integrated or non-integrated, as the present results suggest that even within integrated schools, knowledge and behavior remain at a moderate level and attitudes toward sexuality education are still relatively low; thus, future research may extend this comparison to other educational settings to better capture similarities and differences in knowledge, attitudes, and behaviors across various school contexts, thereby generating broader and more comprehensive insights that can inform the development of more effective strategies and interventions in sexuality education for children with intellectual disabilities.

Limitations of Study

This study has several limitations that should be considered when interpreting the findings. First, the research relied solely on quantitative self-reported data, which may not fully capture the underlying reasons, values, and personal experiences shaping participants' knowledge, attitudes, and behaviors regarding sexuality education. Second, no observational methods were employed to directly examine participants' actual teaching practices, thereby limiting the accuracy of behavioral assessment. Third, the study was conducted in a single type of integrated special school, which restricts the generalizability of the results to other educational contexts, such as non-integrated schools or different regions. Lastly, the study focused exclusively on knowledge, attitudes, and behaviors, without examining other potential influencing factors such as school culture, policy support, or community involvement.

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