

## GENDER DIFFERENCES IN KNOWLEDGE AND ATTITUDES TOWARD SCHOOL-BASED SEXUAL HEALTH EDUCATION IN VOCATIONAL STUDENTS

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### ABSTRACT

*Comprehensive sex education (CSE) is a foundational element for promoting gender equity, sexual autonomy, and reproductive health among adolescents. However, sociocultural taboos and limited institutional support often hinder its effective delivery, particularly in contexts marked by gendered power imbalances. This study aimed to explore female adolescents' perceptions of sex education in a vocational high school setting, assess the extent of their knowledge, and examine how these perceptions are shaped by broader gender norms and institutional factors. A cross-sectional descriptive study was conducted among 30 tenth-grade female students at Taruna Tekno Nusantara Vocational High School in Deli Serdang, North Sumatra, Indonesia. Data were collected using a validated structured questionnaire focusing on knowledge levels, attitudes toward sex education, and opinions on its delivery through schools. Descriptive analysis was conducted using JASP version 19. Findings reveal that 66.7% of students were only somewhat knowledgeable about sex education, and an identical proportion deemed it unimportant. However, 73.3% recognized its critical role in enhancing reproductive health literacy and shaping respectful gender interactions. While 53.3% supported school-based sex education, 46.7% remained opposed, reflecting persistent sociocultural resistance. The study highlights a disjunction between adolescents' knowledge and the recognized importance of sex education, underscoring how internalized gender norms and inadequate institutional engagement perpetuate informational and empowerment gaps. Embedding CSE within rights-based, participatory, and gender-transformative frameworks is vital for promoting health equity and fostering adolescent agency.*

**Keywords:** *Comprehensive Sex Education; Adolescent Girls; Gender Norms; Reproductive Health; Educational Policy.*

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### Introduction

A comprehensive understanding of sexual education can significantly aid children in avoiding sexual deviance by imparting knowledge about gender roles, appropriate behaviors for both boys and girls, and effective interaction with

individuals of the opposite sex (Gili et al., 2022). Children who receive sex education are less likely to fall victim to sexual abuse, as they are equipped with the knowledge to identify inappropriate behaviors (Goldfarb, 2021).

Ideally, parents should initiate sex education in the home environment.

However, not all parents are prepared to engage in candid discussions about sexual matters with their children (Muarifah, 2019). Given that school is where children spend a substantial portion of their time, it is anticipated that sex education in this setting can facilitate a more accurate understanding of gender- and sexuality-related actions (Zwi, Woolfenden, Danielle, O'Brien, Tait, Katarina, 2007).

Sex education is essential for children to make informed decisions regarding their reproductive and sexual health (Ramadhanti, 2024). The primary objective of sex education is to shield children from the adverse consequences of misconceptions and inappropriate actions related to sexuality (Dasilva et al., 2019). Through sex education, children should gain an understanding of the appropriate role of sex, avoid misinterpretations, and work to dispel misconceptions. Despite its importance, numerous misconceptions about sex education persist, contributing to a low level of knowledge (Windani, 2023). Sex education encompasses the natural, mental, and sociocultural changes associated with human development, as well as the functioning of reproductive organs, all within the context of ethics, morals, and religious beliefs (Lieberman, 2022). Consequently, sexuality encompasses various dimensions, including

biological, psychological, social, and cultural aspects.

The life system, physiological conditions, sexual organs, hormones, brain, central nervous system, and organic conditions are intricately linked to sexual personality, which essentially represents an individual's sexual identity (Desrosiers, 2020). Adolescents can accurately perceive activities that align with their sexual personality, regardless of how they choose to express their sexual identity or self-concept. Human sexual development is distinct from that of animals and is complex. In animals, sexual activity is primarily for reproduction and occurs during specific seasons, driven by instinctual urges (Hutasoit, 2023). Contrarily, biological, physiological, psychological, social, and normative factors influence human sexuality. Sex education extends beyond physical aspects and encompasses various elements related to overall reproductive health (Askhori, 2021).

Sex education, like other subjects within the curriculum, involves the dissemination of information, promotion of individual autonomy, and facilitation of social integration within the broader community. Consequently, sex education encompasses content that warrants explicit discussions. This study aimed to identify the perceptions of adolescents at Taruna

Tekno Nusantara Vocational High School regarding the significance of sex education within the school environment, analyze the factors influencing these perceptions, and describe the impact of these perceptions on the behaviour of adolescents.

**Method**

This study employed a cross-sectional design and descriptive approach to examine the perceptions of 10th-grade students at Taruna Tekno Nusantara Vocational High School in Deli Serdang Regency regarding sex education, a topic often deemed taboo, particularly among youth. This research was conducted at Taruna Tekno Nusantara Vocational High School, located on Jl. Pembangunan, Sidirejo, Namorambe District, Deli Serdang, North Sumatra, from April to August 2024.

Data collection techniques are crucial in research, as their primary objective is to gather information. This study utilized various data collection methods, including interviews and document analysis. A structured questionnaire was administered to 30 students to assess their knowledge of sex education, focusing on their perceptions of its importance, their understanding of it in

school, and its reinforcement within the school curriculum.

The collected data by documenting events, incidents, and current situations using personal notes and photographs. The researcher explained the research process and obtained informed consent from the students of Taruna Tekno Nusantara Vocational High School prior to conducting the interviews. Students who objected were excluded from this study. A validated questionnaire on sexual education was used, eliminating the need for additional validity or reliability testing. The data will be analysed descriptively using JASP software (Version 19).

**Results**

**Table 1. Distribution Knowledge and Perceptions About Sex Education for female students**

<b>Knowledge About Sex Education</b>	<b>F</b>	<b>%</b>
Highly knowledgeable	10	33.3
Somewhat knowledgeable	20	66.7
<b>Importance of Sex Education</b>		
Very important	10	33.3
Not Important	20	66.7
<b>Sex education helps teenage girls understand reproductive health</b>		
Very important	22	73.3
Not Important	8	26.7
<b>Appropriate boundaries between boys and girls in school</b>		
Very important	16	73.3
Not Important	14	26.7
<b>Schools should provide accurate and age-</b>		

<b>appropriate sex education to students</b>		
Very important	16	53.3
Not Important	14	46.7

The data reveals a concerning disparity in sex education knowledge among students. While two-thirds (66.7%, n=20) describe themselves as only somewhat knowledgeable, just one-third (33.3%, n=10) feel highly knowledgeable. This suggests current education efforts may be failing to deliver comprehensive understanding, leaving most students with partial or superficial knowledge. A striking two-thirds majority (66.7%) dismiss sex education as not important – exactly mirroring the percentage who lack deep knowledge. This parallel implies that familiarity breeds appreciation: students who know more about sex education tend to value it more highly. The 33.3% who recognize its importance likely represent those with greater exposure to quality education in this domain.

Nearly three-quarters (73.3%, n=22) acknowledge sex education's critical role in helping teenage girls understand reproductive health. An identical 73.3% (n=16\*) affirm its importance for establishing appropriate gender interactions in schools. Opinions split almost evenly regarding schools' role: 53.3% (n=16) advocate for schools to provide accurate, age-appropriate sex education, 46.7%

(n=14) oppose this institutional involvement.

**Discussion**

The findings of this study highlight significant deficiencies in students' knowledge and valuation of sex education, revealing a broader sociocultural and gendered gap in the teaching, perception, and internalization of sexual and reproductive health (SRH) among adolescents. A notable proportion of respondents (66.7%) reported being only "somewhat knowledgeable", and an equally substantial majority (66.7%) perceived sex education as being unimportant. This parallel suggests a bidirectional relationship between knowledge and perceived relevance, indicating that a lack of foundational understanding likely contributes to a diminished appreciation of the value of sex education (Ahmad, 2021). These results match worldwide evidence showing that poor sexual and reproductive health (SRH) education causes risky behaviors, especially in teenage girls, who are more at risk because of social pressures and biological reasons (Chandra-Mouli, 2024).

The gender dimension of these findings is particularly significant in this study. The fact that 73.3% of respondents acknowledged the importance of sex education in helping girls understand

reproductive health and the same percentage associated it with promoting respectful interactions between genders demonstrates that many young people recognize the significant benefits of Comprehensive Sexuality Education (CSE). CSE has consistently been shown to enhance knowledge about menstruation, contraception, consent, and sexual agency, particularly when delivered through gender-sensitive and rights-based approaches (Adebayo, 2022). However, the contradiction lies in the undervaluation of sex education, suggesting that its current delivery may not be relevant, engaging, or accessible, especially for young people navigating strict gender expectations. Several gender theories offer critical explanatory power to elucidate these contradictions (Muarifah, 2019).

Posits that individuals assimilate societal gender norms early in life, which influences how they process sex-related information. In this study, the undervaluation of sex education likely stems from internalized schemas that label open discourse on sexuality—especially by girls—as being taboo or morally deviant (Igras, 2021). This internalization may lead to passive engagement in classroom settings and perpetuate a cycle of misinformation, shame, and silence that disproportionately affects girls (Supriyadi,

2019). Furthermore, the nearly even division in opinions on whether schools should deliver sex education (53.3% supportive vs. 46.7% opposed) may reflect competing sociocultural messages communicated through Social Learning Theory (Bandura, 2004). Adolescents develop attitudes by observing and imitating influential figures such as parents, teachers, religious leaders, and peers. Students who support institutionalized sex education may be exposed to progressive role models and peer-led initiatives, while those who oppose it may reflect conservative community norms that construct sex education as morally inappropriate. This situation underscores the importance of role modeling within school environments and the integration of gender-equitable and inclusive narratives within educational content and pedagogy (Iskandar et al., 2022) (Rosenthal, 2020).

Beyond knowledge acquisition, this study underscores the necessity of examining intersectional vulnerabilities. The acknowledgment by 73.3% of students that sex education enhances girls' reproductive knowledge underscores how gendered experiences are further influenced by intersecting factors such as socioeconomic status, age, and cultural norms (Susanti, 2020). For girls in lower-resource settings, obstacles such as poverty,

stigma, and lack of agency often exacerbate their limited access to accurate sexual and reproductive health (SRH) information (Acharai, 2023).

These findings support calls for differentiated policy interventions that address adolescents not as a homogeneous group but as individuals with diverse, intersecting identities. Furthermore, the widespread agreement on the role of sex education in improving gender interactions aligns with feminist pedagogical theories that conceptualize education as a site of empowerment and social transformation. Gender-transformative comprehensive sex education (CSE) promotes biological literacy and critical competencies in empathy, communication, and consent—skills essential for dismantling hegemonic masculinity and promoting relational ethics (Goldfarb, 2021). By challenging hierarchical gender norms, CSE can foster safer and more inclusive school environments, particularly in contexts where gender-based violence and discrimination persist.

The resistance to the institutional delivery of sex education—expressed by 46.7% of respondents—further indicates the entrenchment of public-private dichotomies in reproductive discourse, a theme well documented in gender literature (Ali, 2005) (Kistiana, 2023). Historically,

matters of sexuality and reproduction have been feminized and relegated to the private domain, thus excluding them from formal education systems under the guise of cultural or moral preservation (Gumilang Ramadhan, 2023).

This reinforces the stigmatization of sex education and impedes the institutionalization of scientifically grounded, rights-based curricula in schools (Arifin, 2022). From a policy and implementation perspective, the data underscore the urgent need to integrate gender theory into curriculum development, teacher training, and community-engagement strategies. School-based programs must transcend the mere transmission of biological facts and challenge the normative structures that marginalize adolescent voices, especially those of girls. Interventions should prioritize participatory, culturally sensitive approaches involving students and key stakeholders—parents, faith leaders, and civil society organizations—to build broader societal support for mental health (Siregar, 2020). Finally, this study contributes to the growing body of literature that argues that comprehensive sex education is not merely a public health imperative but also a social justice issue (Nasution et al., 2019)(Noden et al., 2010). This reveals the embedded gender

dynamics that shape adolescents' access to knowledge, their valuation of that knowledge, and their ability to act on it. Future research and policy must adopt gender-transformative, intersectional, and contextually grounded CSE approaches that position young people as rights holders, capable of agency, and entitled to information that supports their well-being, autonomy, and equality.

### **Conclusions**

This study offers critical insights into the existing deficiencies in sex education among adolescent girls, highlighting how limited knowledge and the undervaluation of sex education reflect and perpetuate broader gender and sociocultural constraints. The parallel findings—wherein 66.7% of students reported being only somewhat knowledgeable and an equal proportion dismissed sex education as unimportant—indicate a systemic failure to provide meaningful, contextually relevant sexual and reproductive health (SRH) education. These knowledge deficits represent not only pedagogical challenges but also gendered barriers, disproportionately affecting girls by denying them accurate information and agency to make informed decisions. Notably, the strong agreement among respondents regarding the benefits of sex education—particularly its role in

enhancing girls' understanding of reproductive health and fostering respectful gender interactions—demonstrates latent support for more comprehensive and gender-transformative programs. However, resistance to the institutional delivery of sex education, as evidenced by the 46.7% who opposed school-based programs, underscores enduring cultural taboos and gender norms that continue to frame sexuality as a private or morally sensitive matter. By interpreting the findings through gender schema theory, social learning theory, and intersectionality, this study emphasizes that information alone is insufficient. Without challenging patriarchal structures and embedding SRH education in participatory, rights-based frameworks, education risks reproducing inequalities, rather than resolving them. Therefore, comprehensive sexuality education must be reimagined not only as a curriculum topic but also as a vehicle for gender equity, social justice, and adolescent empowerment. Policymakers, educators, and community stakeholders must co-create inclusive educational ecosystems that affirm adolescents' rights to accurate, age-appropriate, and culturally responsive information, thereby fostering healthier, more autonomous, and gender-equitable generations.

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