



Family Education and Students' Attitudes Toward Pornography Effects: A Cross-Sectional Study

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Abstract:

Background: Adolescence, generally defined as the period between 12 and 20 years of age, is a critical stage of human development characterized by rapid physical, psychological, emotional, and social changes. During this period, adolescents begin to explore interpersonal relationships and are increasingly exposed to sexual content through various media, particularly the internet. Therefore, parents play a crucial role in providing guidance, instilling moral values, and promoting healthy behaviors within the family. Family education is a fundamental component of children's character development and prepares them to become responsible members of society. As stated by UNESCO, the family serves as the first environment for socialization and moral education, playing an essential role in preventing risky behaviors. Previous studies have reported that nearly 80% of adolescents in several cities in the United States had experienced sexual intercourse by the age of 17. Similarly, studies in Indonesia have documented a growing prevalence of premarital sexual behavior among high school and university students (YARHS, 2023). In Timor-Leste, approximately 25% of women have their first child before the age of 20, mainly due to gender inequality, violence, and inadequate sexual and reproductive health education (UNFPA, 2021). The 2022 Population Census also reported that only 30% of women aged 19–29 years continued their education. Despite these concerns, empirical evidence examining the combined influence of family education and students' attitudes on the effects of pornography among adolescents in Timor-Leste remains limited, highlighting an important research gap.

Objective: This study aimed to examine the influence of family education and students' attitudes on the effects of pornography among students at Escola Secondary 5 de Maio, Dili, Timor-Leste.

Methods: a method quantitative analytic design using a cross-sectional approach. The study population consisted of 617 students, and a sample of 226 participants was selected using probability sampling with the Systematic Random Sampling technique. Data were analyzed using Ordinal Logistic Regression to determine the influence of family education and students' attitudes on the effects of pornography.

Results: The findings revealed that family education was significantly associated with the effects of pornography among students ($p < 0.001$). Students' attitudes were also significantly associated with the effects of pornography ($p < 0.001$). Furthermore, family education and students' attitudes jointly demonstrated a significant influence on the effects of pornography ($p < 0.001$).

Conclusion: Family education and students' attitudes were significant determinants of the effects of pornography among adolescents. Strengthening family-based education, particularly regarding reproductive

health, digital literacy, responsible internet use, and pornography awareness, is essential to reduce the negative physical, psychological, and behavioral consequences of pornography exposure. This study lies in its comprehensive analysis of the combined effects of family education and students' attitudes on pornography-related outcomes among secondary school students in Timor-Leste.

Keywords: Adolescents; family education; students' attitudes; pornography effects; Timor-Leste

Introduction

Adolescence, generally defined as the period between 12 and 20 years of age, represents a critical stage of human development characterized by rapid physical, psychological, emotional, and social changes. During this period, adolescents begin to develop their identity, establish social relationships, and experience changes related to emotional and sexual development. These changes may influence adolescents' attitudes, behaviors, and decision-making processes. Therefore, parents play an essential role in providing appropriate guidance, instilling moral values, strengthening positive attitudes, and encouraging healthy behaviors within the family environment. Family education is a fundamental component of children's holistic development and character formation, as it prepares them to become responsible members of society. The family is recognized as the first environment for learning social and moral values and has an important role in shaping responsible citizenship and preventing risky behaviors (UNESCO, 2020).

Adolescence is an important period in personality development because it represents the transition from childhood to adulthood (Sriwanti, 2020). Individuals entering this stage experience various physical, emotional, and psychological changes due to hormonal development. One of the main characteristics of this transition is sexual maturation, which begins during puberty (Angraini & Maulidya, 2020). Adolescent girls experience physical changes such as menstruation, which indicates reproductive system maturity, as well as breast development and other physiological changes. Meanwhile, adolescent boys experience changes including increased body hair growth, nocturnal emissions, acne, changes in body composition, and voice maturation (WHO, 2022). These developmental changes require appropriate education and support from families, schools, and communities to ensure adolescents develop healthy attitudes and responsible behaviors.

The rapid advancement of information technology and widespread internet access have increased adolescents' exposure to various sources of sexual information, including pornographic content. Studies conducted in several cities in the United States have reported that a high proportion of adolescents have experienced sexual activity before the age of 17. Similarly, studies among Indonesian adolescents have shown increasing concerns regarding premarital sexual behaviors among students at secondary schools and universities (Youth Adult Reproductive Health Survey [YARHS], 2023). Research conducted by the National Commission for Child Protection in collaboration with child protection institutions in 12 provinces in Indonesia reported that many students had experienced various forms of sexual behavior, while exposure to pornographic materials among adolescents remained high. Furthermore, premarital sexual behavior among

young people in East Java has also become a significant social and public health concern (UNFPA, 2021).

Pornography refers to sexual materials presented through text, images, audio, or videos that are intended to stimulate sexual feelings among individuals who view, hear, or consume them (Hasiholan et al., 2023). The development of digital technology has transformed pornography into easily accessible content through online platforms, creating greater opportunities for adolescents to encounter inappropriate sexual materials. Although governments have implemented policies and technological restrictions to prevent access to online pornography, adolescents may still find alternative methods, including the use of virtual private networks (VPNs), to access restricted content. Therefore, strengthening adolescents' attitudes through family education, digital literacy, and appropriate sexual health education is essential to promote responsible internet use and reduce potential negative impacts associated with pornography exposure (Hasiholan et al., 2023).

The effects of repeated exposure to pornographic content among adolescents have become an important concern because they may influence psychological, social, and behavioral development. Previous studies have suggested that excessive pornography consumption may be associated with difficulties in concentration, self-control, decision-making, and future planning (Ningtyas Purnomo, 2023). Furthermore, pornography exposure may contribute to unhealthy perceptions of sexuality, risky sexual behaviors, and vulnerability to sexual violence. These concerns highlight the importance of preventive approaches involving families, schools, and communities to support adolescents in developing responsible attitudes toward sexual information.

In Timor-Leste, adolescent sexual and reproductive health remains a significant concern. According to UNFPA (2021), approximately 25% of women in Timor-Leste have their first child before the age of 20. Several contributing factors include gender inequality, violence, limited access to sexual and reproductive health education, and social pressures related to early marriage. The 2022 Population Census reported that approximately 30% of women aged 19–29 years continued their education, indicating that educational interruption remains a challenge among young women. Comprehensive sexuality education plays an important role in enabling adolescents to understand their bodies, develop responsible attitudes, make informed decisions, and prevent negative reproductive health outcomes (Rilijanto, 2023).

Although previous studies have explored adolescent sexual behavior, pornography exposure, and the role of parental guidance in various countries, evidence regarding the relationship between family education, students' attitudes, and the effects of pornography among secondary school students in Timor-Leste remains limited. Furthermore, few studies have simultaneously examined the contribution of family education and adolescents' attitudes in relation to pornography effects within the context of a developing country, particularly in the Timor-Leste educational setting.

Therefore, the novelty of this study lies in providing the first empirical evidence from 5 de Maio Senior High School, Dili, Timor-Leste, regarding the association between family education and students' attitudes toward the effects of pornography using a cross-sectional analytical approach. This study contributes new contextual evidence that may support the development of family-centered, school-based, and culturally appropriate interventions

aimed at promoting healthy adolescent development and preventing pornography-related risks.

Methodology

Study Design and Setting

This study employed a quantitative analytic study design with a cross-sectional approach to examine the association between family education and students' attitudes toward the effects of pornography among students at 5 de Maio Senior High School, Dili, Timor-Leste. The cross-sectional design was used to assess the relationship between the independent variables and the dependent variable at a specific point in time.

Population and Sample

The study population consisted of 617 students enrolled at 5 de Maio Senior High School. A total of 226 students were selected as study participants. The sample size was determined based on the

research requirements, and participants were selected using a probability sampling technique with Systematic Random Sampling to ensure that every student had an equal opportunity to be included in the study.

Data Analysis

Data analysis was performed using statistical software. Descriptive analysis was conducted to summarize the demographic characteristics of participants and the distribution of study variables. Bivariate analysis was performed to identify the relationship between independent variables and the effects of pornography. Furthermore, Ordinal Logistic Regression analysis was conducted to determine the association between family education, students' attitudes, and the effects of pornography while controlling for potential influencing factors. The level of statistical significance was set at $p\text{-value} < 0.05$.

Table 1: Distribution frequency by characteristics of the respondents

Variabel	Category	Frequency (n)	Percentage (%)
Gender	Male	71	61
	Female	155	39
	Total	226	100
Age	< 17	15	6,6
	>17	211	93,4
Total		226	100

Source: Primary research data, 2025

Table 1 describes the demographic characteristics of the respondents. Among the 226 students who participated in this study, the majority were female (155 students; 69.0%), while male

students accounted for 71 participants (31.0%). Regarding age distribution, most respondents were aged ≥ 17 years (211 students; 93.4%), whereas only 15 students (6.6%) were aged < 17 years.

Table 2: Distribution frequency by characteristics of the respondents by family education, attitude and Effect Pornography

Variavbles	Strongly Agree		Agree		Not Agree		Realy Disagree		Strongly Disagree		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Family Education	0	0	0	0	69	31	116	51	41	18	226	100
Attitude	0	0	0	0	68	30	85	38	73	32	226	100
Effect Pornography	0	0	0		68	31	101	44	57	25	226	100

Source: Source: Primary research data, 2025

Based on Table 2, the frequency distribution of respondents according to family education shows that the majority of respondents were in the Disagree category, with 116 respondents (51%), followed by the Strongly Disagree category with 41 respondents (18%). This finding indicates that most respondents perceived that the role of family education in providing guidance, supervision, and information related to adolescent sexual behavior was still inadequate.

For the attitude variable, the results show that most respondents were categorized as Disagree, with 85 respondents (38%), while the lowest proportion was found in the Agree category, with 68 respondents (30%). This finding suggests that a considerable proportion of respondents had attitudes that were less supportive toward efforts to prevent risky sexual behavior, indicating the need

for strengthening adolescent knowledge, awareness, and positive attitudes through appropriate health education.

Regarding the effect of pornography variable, the majority of respondents selected the Disagree category, with 101 respondents (44%), while the Strongly Disagree category had the lowest frequency, with 57 respondents (25%). This result indicates that most respondents did not perceive pornography as having a significant influence on their attitudes or sexual behaviors; however, continuous education and awareness programs are still needed to help adolescents understand the potential negative impacts of pornography exposure.

Overall, the distribution of responses demonstrates that family education, adolescent attitudes, and perceptions regarding pornography are important factors that require attention in preventing unhealthy sexual behaviors among senior high school

students. Strengthening the role of parents, schools, and health education programs may contribute to improving adolescents'

knowledge, attitudes, and decision-making related to reproductive and sexual health.

Table 3: Influence of Family Education on the Effects of Pornography among Senior High School Students

No	Variables	R ²	P.Value	Interpretation
1	Family Education	0.457	0.000	Means Positive and a little strong correlation
2	Attitude	0.517	0.000	Means Positive and strong correlation
3	Family Education and Attitude	0.283	0.000	Means positive and weak correlation

Based on Table 3, the analysis of the association between family education, attitude, and the effects of pornography shows that all variables have a statistically significant association, with a p-value of 0.000 ($p < 0.05$).

The results indicate that family education has a positive association with the effects of effect pornography, with an R^2 value of 0.457. This finding suggests that better family education is associated with differences in adolescents' perceptions and responses related to pornography.

The attitude variable shows a positive and stronger association with the effects of pornography, with an R^2 value of 0.517. This indicates that adolescents' attitudes are significantly associated with their perceptions and responses toward pornography-related issues.

Furthermore, the association between family education and attitude shows a positive but weak association, with an R^2 value of 0.283. This finding indicates that family education is associated with the formation of adolescent attitudes; however, other factors may also contribute to shaping adolescents' attitudes.

Overall, Table 3 demonstrates that family education and attitude are significantly associated with the effects of pornography among senior high school students. These findings highlight the importance of strengthening family education and adolescent health education programs to support positive attitudes and prevent unhealthy sexual behaviors.

Discussion

a. Association between Family Education and the Effects of Pornography

The findings of this study showed that family education was significantly associated with the effects of pornography among senior high school students, based on ordinal logistic regression analysis with a significance value of $p = 0.000$ ($p < 0.05$). This result indicates that family education is an important factor related to adolescents' understanding, attitudes, and responses toward pornography.

In this study, the majority of respondents reported that family education was categorized as Disagree (116 respondents; 51%), indicating that many students perceived that family guidance related to sexual education, moral values, and pornography prevention was still inadequate. Family education in this study was mainly provided through informal approaches, such as advising children, teaching respect toward parents, and explaining differences between acceptable and unacceptable behaviors. However, these approaches may not always be sufficient because parents may have limitations in knowledge, communication skills, and appropriate strategies for discussing sensitive topics such as sexuality and pornography.

This finding is consistent with the concept proposed by

Notoatmodjo (2020), who stated that education influences knowledge formation because individuals with better educational backgrounds generally have better access to information and the ability to process information. Similarly, Nursalam (2019) emphasized that family education contributes to the development of individual knowledge, attitudes, and behaviors through continuous guidance and interaction within the family environment.

The present finding is also supported by previous research conducted by Merlis et al. (2004), which found a significant relationship between family education and students' attitudes toward pornography. This similarity suggests that the family environment remains a fundamental factor in shaping adolescents' perceptions and behavioral responses toward pornography. In this study, family education showed an R^2 value of 0.457, indicating that family education explains approximately 45.7% of the variation related to the effects of pornography, while the remaining proportion may be explained by other factors not examined in this study, such as peer influence, internet accessibility, parental supervision, social environment, and individual characteristics. This finding emphasizes that family education has an important role in shaping adolescents' understanding and responses toward pornography.

However, this study provides additional insight that family education among adolescents should not only focus on general moral advice but also include structured communication about reproductive health, digital literacy, and the risks of pornography exposure. The new perspective from this study suggests that improving family education requires strengthening parents' capacity to communicate effectively with adolescents in accordance with their developmental stage. Therefore, parental involvement should shift from merely controlling adolescent behavior toward providing supportive education and open communication.

b. Association between Attitude and the Effects of Pornography

The results of this study demonstrated that attitude was significantly associated with the effects of pornography, with a significance value of $p = 0.000$ ($p < 0.05$). This finding indicates that adolescents' attitudes play an important role in determining how they perceive and respond to pornography exposure.

The results showed that the majority of respondents selected the disagree category (85 respondents; 38%), while the Agree category represented the lowest proportion (68 respondents; 30%). This indicates that although most students did not demonstrate supportive attitudes toward pornography, there are still adolescents who may require further education regarding the risks associated with pornography exposure.

According to Notoatmodjo (2010), attitude is an individual

response toward an object or stimulus that involves cognitive, emotional, and behavioral components. Attitudes are formed through knowledge, personal experiences, social environment, and exposure to information. Therefore, adolescents with adequate knowledge and positive values are more likely to develop protective attitudes against risky behaviors.

The findings of this study are in line with Dahniar (2019), who stated that individual attitudes influence decision-making and future actions. Positive attitudes encourage individuals to avoid harmful behaviors, while negative attitudes may increase vulnerability to risky behaviors. The attitude variable showed an R^2 value of 0.517, indicating that attitude explains approximately 51.7% of the variation related to the effects of pornography. This higher contribution compared with family education suggests that adolescents' personal attitudes are an important component in determining how they respond to pornography exposure. Adolescents who have positive attitudes and adequate awareness are more likely to develop protective behaviors.

The contribution of this study is the recognition that adolescent attitudes toward pornography are not only influenced by personal understanding but also by the interaction between family education, school environment, and digital media exposure. Therefore, interventions should not only provide information about the dangers of pornography but also focus on developing critical thinking skills, self-control, and responsible digital behavior among adolescents.

c. Association between Family Education, Attitude, and the Effects of Pornography

This study found that the combination of family education and attitude was significantly associated with the effects of pornography, with a significance value of $p = 0.000$ ($p < 0.05$). This finding demonstrates that adolescent responses toward pornography are influenced by multiple factors, particularly the family environment and individual attitudes. Adolescence is a critical period characterized by rapid physical, psychological, emotional, and social development. During this stage, adolescents increasingly interact with digital technology and the internet, which may provide access to various types of information, including inappropriate content such as pornography. Meanwhile, the combination of family education and attitude showed an R^2 value of 0.283, indicating that both variables together explain approximately 28.3% of the variation related to the effects of pornography. This finding suggests that although family education and attitude are significantly associated with pornography effects, adolescent behavior is influenced by multiple factors, and additional variables should be considered in future studies.

The findings support previous research by Intan Hardian Putri (2020), which identified internet access, availability of digital devices, and parental supervision as factors associated with pornography exposure among adolescents. The study emphasized that reproductive health education and sexuality education are important preventive strategies.

Similarly, Muhammad Zia (2022) highlighted that adolescents require appropriate educational materials to improve their understanding of pornography risks. Effective education should be delivered using approaches that are appropriate for adolescents' cognitive and emotional development.

Compared with previous studies, this research adds a new perspective by demonstrating that prevention of pornography-

related problems requires an integrated approach involving family education, adolescent attitudes, and educational institutions. Family education alone may not be sufficient without strengthening adolescents' ability to evaluate information and make responsible decisions in the digital era.

Therefore, this study proposes that prevention programs should move beyond warning adolescents about the negative effects of pornography and focus on developing a supportive educational ecosystem involving parents, schools, and health professionals. Strengthening family communication, reproductive health education, and digital literacy may become important strategies for promoting healthier adolescent behaviors.

Conclusion

- There is a significant association between family education and the effects of pornography among senior high school students. The ordinal logistic regression analysis showed a significance value of $p = 0.000$ ($p < 0.05$), indicating that family education is an important factor associated with adolescents' perceptions and responses toward pornography.
- There is a significant association between attitude and the effects of pornography among senior high school students. The analysis showed a significance value of $p = 0.000$ ($p < 0.05$), indicating that adolescents' attitudes are significantly related to their responses and perceptions regarding pornography.
- There is a significant association between family education, attitude, and the effects of pornography among senior high school students. The statistical analysis showed a significance value of $p = 0.000$ ($p < 0.05$), demonstrating that family education and adolescent attitudes are important factors associated with pornography-related outcomes.

Ethical Considerations

Ethical principles were strictly maintained throughout the research process. Ethical approval was obtained from the relevant institutional ethics committee before conducting the study. Permission to conduct the research was also obtained from the school authorities. Participation in this study was voluntary, and all participants were informed about the objectives, procedures, potential benefits, and their rights before data collection.

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Conflict of Interest

The authors declare that there are no conflicts of interest related to this study. The research was conducted independently, and there were no financial, institutional, or personal relationships that could influence the study design, data collection, analysis, interpretation of results, or publication of this manuscript.

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