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Original Article

Lived Experiences of Pornography Exposure among Adolescents in East Kalimantan, Indonesia: A Qualitative Study

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Abstract

Background: Pornography exposure among Indonesian adolescents is a growing concern, as limited sexuality education and cultural taboos restrict open discussion of sexuality related issues. This study aimed to explore adolescents' lived experiences of pornography exposure and its psychological impacts, identify their educational needs, and examine the perspectives of key stakeholders.

Methods: This qualitative study was conducted in East Kalimantan, Indonesia, between January and April 2025 following a preliminary screening survey to identify students with diverse exposure histories. Data were collected through two focus group discussions (FGDs) with adolescents and stakeholders, and six in-depth interviews (IDIs) with students. Data were analyzed thematically following Braun and Clarke's framework, with methodological triangulation applied to enhance trustworthiness.

Results: Thirteen participants were involved, consisting of six senior high school students (including two peer educators) and seven stakeholders (two school counselors, one clinical psychologist, two public health academics, one youth task force representative, and one officer from the Population and Family Planning Office). This composition of participants was selected to allow triangulation between adolescents' lived experiences and stakeholders' professional perspectives. Three overarching themes emerged: (1) ambivalent perceptions and lived experiences of pornography, (2) psychological, academic, and social consequences, including intrusive thoughts, sleep disturbance, declining performance, aggression, and imitative risk taking; (3) educational needs and preferences. Adolescents reported curiosity, guilt, secrecy, intrusive thoughts, sleep difficulties, and reduced concentration. They preferred short digital videos and supportive peer led discussions over conventional seminars. Stakeholders emphasized stronger school family collaboration.

Conclusions: Adolescents described pornography exposure as intertwined with curiosity, guilt, and secrecy, alongside perceived difficulties in daily life. Findings support the development of culturally sensitive, peer led digital education with school and family involvement.

Keywords: Adolescent, Pornography, Qualitative Research, Health Education, Mental Health

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1. Introduction

Pornography consumption among adolescents has become a global public health concern with the rapid growth of Internet access and social media. Recent studies have suggested that pornography exposure among adolescents may be associated with sexual attitudes, perceived gender norms, and risky sexual behaviors (1–3). Several studies from Western settings, such as Australia (4), and from Indonesia indicated that while intervention vary in format, geographic and cultural factors strongly affect adolescents exposure to pornography and their coping mechanism (5).

In Indonesia, this issue is particularly complex. Although cultural and religious norms discourage open discussion of sexuality, adolescents gain increasing access to pornography through smartphones and digital platforms. Research in Indonesia showed that earlier exposure to pornography is significantly associated with higher levels of risky sexual behavior among adolescents (2). Meanwhile, national data from the Indonesia Demographic and Health Survey (IDHS 2017) and cross-country surveys indicated low levels of Sexual and Reproductive Health and Rights (SRHR) knowledge among Indonesian adolescents including limited understanding of puberty, fertility, and reproductive health (6).

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The Global Early Adolescent Study (GEAS) Indonesia report found that adolescents aged 10–14 years in Bandar Lampung, Denpasar, and Semarang had limited knowledge of pregnancy and HIV prevention, as well as difficulties discussing sexual and reproductive health issues (7). Similarly, a study among adolescents in rural Riau, Indonesia, reported gaps in reproductive health knowledge (8). Limited communication about pornography between adolescents, families, and educators may restrict opportunities for appropriate guidance (9). Some adolescents may experience shame and avoid openly discussing their pornography related experiences (10). These findings highlight the need for age appropriate sexuality education that addresses adolescents' questions and strengthens their knowledge and confidence in making informed decisions about sexual and reproductive health (3, 8).

Most existing studies in Indonesia adopted a quantitative design, focusing on prevalence and patterns of pornography exposure among adolescents (11, 12). While valuable, such studies fall short of capturing how adolescents themselves interpret and cope with pornography exposure. Empirical evidence on adolescents' lived experiences, emotional struggles, and educational needs remains limited, particularly within cultural contexts where sexuality is considered a sensitive issue (9).

Despite growing research on adolescent pornography exposure, limited qualitative evidence is available on how adolescents in Indonesia perceive, interpret, and cope with such experiences, particularly within sociocultural contexts where sexuality remains a sensitive topic. Furthermore, adolescents' emotional responses and educational needs have received limited attention. This gap highlights the need for a deeper understanding of adolescents' lived experiences of pornography exposure.

To address this gap, this study aimed to explore adolescents' lived experiences of pornography exposure in East Kalimantan, Indonesia, focusing on their perceptions, emotional responses, coping mechanisms, and educational needs. The study also examined stakeholders' perspectives to inform the development of culturally appropriate educational interventions.

2. Methods

2.1. Design

This qualitative study aimed to explore adolescents' lived experiences of pornography exposure and their educational needs, as well as the perspectives of key stakeholders. Before the qualitative data collection, a brief screening survey was conducted to identify students with different histories of pornography exposure. The screening results were used solely to inform participant selection and were not included in the qualitative data analysis. The main data collection used two complementary methods, including focus group discussions (FGDs) to capture collective perceptions and social dynamics, and in-depth interviews (IDIs) to explore sensitive personal experiences in greater depth. The combination of FGDs and IDIs allowed methodological triangulation and was considered the most appropriate approach to explore meanings, emotions, and coping strategies that cannot be captured through surveys alone.

2.2. Selection and Description of Participant

The study was conducted in Samarinda, East Kalimantan, Indonesia, between January and April 2025. A total of 13 participants were purposively selected based on the screening results, consisting of six high school students (including two peer educators) and seven stakeholders (two school counselors, one clinical psychologist, two public health academics, one youth task force representative, and one officer from the Population and Family Planning Office). The inclusion criteria for students were: enrollment in senior high school, prior exposure to pornography, and provision of informed consent (with additional parental consent for those under 18 years). Stakeholders were included if they had professional experience in adolescent health promotion, counseling, or education.

Data collection followed a purposive sampling technique, targeting adolescents who reported prior exposure to online pornography. Prior to the qualitative phase, a preliminary survey was conducted with 109 students (ages 15-18) from three senior high schools in East Kalimantan identified as having high levels of pornography exposure. The screening survey employed the Youth Pornography Addiction Screening Tool (YPAST)

to assess pornography related problems and inform participant selection (13, 14). Based on the survey results, adolescents with scores indicating mild to moderate levels of addiction were invited to participate in the in-depth interviews. Recruitment was facilitated through school networks and youth community organizations to ensure diversity in gender and socioeconomic background. Interviews continued until data saturation was achieved, which occurred after the twelfth interview when no new themes emerged. Data collection continued until thematic saturation was reached. For anonymity and clarity, student participants were coded as S1–S6 and stakeholders as ST1–ST7. This composition enabled triangulation of perspectives between adolescents and adults working closely with youth, thereby enriching the depth and credibility of the data. Saturation was defined as the point when no new codes or insights emerged across successive interviews (15).

2.3. Sample Size Determination

Prior to the qualitative phase, a preliminary survey involving 109 students aged 15–18 years from three high schools in East Kalimantan was conducted using the Youth Pornography Addiction Screening Tool (YPAST) to assess pornography related problems and inform participant selection (13, 14). Students with mild-to-moderate scores indicating exposure were invited for interviews. Sampling continued until thematic saturation was reached, defined as the point where no new codes or insights emerged from consecutive interviews. Saturation occurred after the twelfth interview, confirming the adequacy of the final sample (13 participants).

2.4. Data Collection and Measurements

Data collection was carried out between January and April 2025 through two focus group discussions (FGDs) and six in-depth interviews (IDIs). One FGD involved six students and the other involved seven stakeholders, while IDIs were conducted with students to capture more personal and sensitive experiences. Guiding questions included: "*Can you describe your first encounter with pornography?*" and "*How did that experience affect your emotions or daily activities?*" The semi-structured guides, as described above, were used to ensure consistency while allowing flexibility to follow emerging topics. All sessions were facilitated by the principal investigator in Bahasa Indonesia. FGDs lasted 75–90 minutes, while IDIs lasted 45–60 minutes. Interview duration varied according to participants' comfort levels and the depth of information shared. All sessions were conducted in private and comfortable settings.

Discussions and interviews were audio-recorded with prior informed consent, and field notes were taken to capture non-verbal expressions and contextual details. Verbatim transcripts were prepared in Bahasa Indonesia, and illustrative quotations were later translated into English by the research team. All transcripts were first prepared in Bahasa Indonesia and then translated into English by a professional bilingual translator. To ensure translation accuracy and preserve cultural meaning, a back-translation into Bahasa Indonesia was performed by another bilingual researcher. Any discrepancies were reviewed and resolved by consensus among the research team before coding and analysis.

FGDs and IDIs were conducted in private rooms at the school or community health center by trained facilitators. Only participants and facilitators were present during sessions. Before each discussion, participants were reminded of the voluntary nature of participation and confidentiality agreements were emphasized. Pseudonyms were used for all transcriptions, and all identifiable information was removed. Data were stored securely without personal identifiers to protect participants anonymity and confidentiality, consistent with established guidelines for focus group methodology in sensitive research contexts (16).

Longer durations were observed for IDIs when participants provided more detailed narratives. All FGDs and IDIs were held in private rooms without the presence of teachers or parents to ensure confidentiality and comfort. To ensure translation quality, quotations were checked through back-translation by bilingual researchers and verified for cultural accuracy by the research team.

In this qualitative study, the primary research instrument was the investigator, who facilitated discussions, guided interviews, and interpreted the meanings of participants' narratives. To support this role, two semi-structured guides were used, including one for focus group discussions (FGDs) and one for in-depth interviews (IDIs).

The FGD guide was organized into three sections: 1) opening questions to build rapport and explore general perceptions of pornography among adolescents; 2) core questions focusing on perceived impacts in psychological, academic, social, and behavioral domains; and 3) concluding questions that invited participants to reflect on preventive and educational strategies.

The IDI guide followed a similar structure but was tailored to elicit more personal narratives. It began with background questions about first exposure, followed by probing questions on emotional reactions (e.g., guilt, curiosity, secrecy), coping behaviors, and concluded with participants' suggestions for improving educational support. This structured progression allowed participants to move from general to sensitive topics in a gradual and comfortable manner.

2.5. Procedure

The participants were recruited through school networks and youth organizations. Prior to participation, all were informed of the objectives of the study, voluntary nature, and confidentiality measures. For those under 18 years, parental consent was obtained in addition to adolescent assent. Pseudonyms were used in transcripts, and all identifying information was removed.

The principal investigator and trained facilitators conducted all FGDs and IDIs without teachers or parents present. Confidentiality agreements were reiterated before each session. All digital recordings and transcripts were securely stored in password-protected files.

2.6. Data Analysis

Data from FGDs and IDIs were analyzed thematically using Braun and Clarke's six-phase framework (17). First, all transcripts and field notes were read repeatedly to achieve familiarization with the content. Second, initial codes were inductively derived from the transcripts, capturing meaningful phrases and expressions that reflected adolescents' experiences and perspectives. The initial codes were grouped into subthemes, which were then organized into broader themes. Third, these codes were organized into preliminary categories and grouped into sub-themes. Fourth, potential themes were developed by clustering related sub-themes, such as ambivalent perceptions, psychological struggles, and educational preferences. Fifth, the themes were reviewed and refined by comparing data across FGDs and IDIs to ensure coherence between individual and collective narratives. Finally, the themes were clearly defined, named, and supported with representative quotations from participants. Thematic saturation was determined when no new codes, subthemes, or perspective emerged from the final two interviews, consistent with established qualitative research criteria (15, 18). To enhance credibility, the coding process was independently reviewed by two researchers, and findings were cross-validated through peer debriefing. The first author also drew upon prior experience conducting qualitative studies with adolescents, ensuring reflexivity in interpreting the data.

Integration of FGD and IDI data was conducted during coding to allow triangulation, enabling individual accounts from IDIs to complement and deepen the collective perspectives expressed in FGDs. The analysis was independently performed by two researchers, followed by peer debriefing sessions to discuss coding decisions and resolve discrepancies. An audit trail was maintained to document coding steps and theme refinement. These strategies enhanced the credibility, dependability, and confirmability of the findings. For example, FGDs highlighted that students who watched pornography tended to bully peers, while IDIs revealed personal accounts of aggression and attempts to imitate sexual acts. This illustrates how group observations and individual narratives converged.

3. Results

3.1. Socio-Demographic Characteristics of Respondents

A total of 13 informants participated in this qualitative study, consisting of 7 stakeholders and 6 students. Data were obtained from two Focus Group Discussions (FGDs) and six in-depth interviews (IDIs). FGDs explored collective views on pornography exposure, its perceived impacts, and educational needs among adolescents and stakeholders. Meanwhile, IDIs were conducted exclusively with high school students to capture their lived experiences of pornography exposure. Through IDIs, students shared detailed accounts of how they first encountered pornography, what they felt during and after viewing, and what actions

they took following exposure. This combination of FGDs and IDIs allowed the study to uncover both collective perspectives and deeply personal narratives, thereby enriching the thematic findings. The detailed characteristics of all participants are presented in Table 1.

Thematic analysis generated three overarching themes: (1) Adolescents' perceptions and experiences of pornography, (2) Impacts of pornography exposure, and (3) Educational needs and preferences. FGDs provided insights into shared perceptions, social observations, and educational expectations, while IDIs with students offered richer accounts of individual experiences such as feelings of guilt, secrecy, curiosity, intrusive thoughts, and even behavioral changes after exposure. By integrating FGDs and IDIs, the analysis demonstrated consistency across group and individual data, while also highlighting unique insights that only emerged through students' personal narratives.

The qualitative analysis of FGDs and IDIs generated meaning units that were coded into sub-themes and overarching themes. This stepwise process, summarized in Table 2, illustrates how adolescents' narratives were translated into structured categories capturing their perceptions, impacts of exposure, and educational needs. This analytical process integrates group and individual perspectives, allowing for methodological triangulation and strengthening the credibility of the findings.

To complement the tabular presentation, Figure 1 provides a visual framework that illustrates the relationships among themes, sub-themes, and codes, offering a clearer overview of how adolescents' experiences, impacts, and educational needs are interconnected.

Table 1: Characteristics of the participants

No.	Code	Age	Gender	Occupation/Status	Education
1	ST1	54	F	Population and Family Planning Officer (DP2KB)	Bachelor's Degree
2	ST2	28	F	Clinical Psychologist	Master's Degree
3	ST3	29	M	Public Health Academic	Doctoral Degree
4	ST4	47	F	Public Health Academic	Doctoral Degree
5	ST5	25	M	Youth Task Force (BKR/PIK-R)	Master's Degree
6	ST6	55	F	School Counselor, Teacher	Bachelor's Degree
7	ST7	59	F	School Counselor, Teacher	Four-year Diploma
8	S1	17	M	Student, Peer Educator	Senior High School
9	S2	16	M	Student	Senior High School
10	S3	16	M	Student	Senior High School
11	S4	16	F	Student	Senior High School
12	S5	17	F	Student	Senior High School
13	S6	17	F	Student, Peer Educator	Senior High School

ST1–ST7: Stakeholders 1–7; S1–S6: Students 1–6; F: Female; M: Male; DP2KB: Dinas Pengendalian Penduduk dan Keluarga Berencana (Population Control and Family Planning Office); BKR: Bina Keluarga Remaja (Adolescent Family Development); PIK-R: Pusat Informasi dan Konseling Remaja (Youth Information and Counseling Center)

Table 2: Thematic analysis of adolescents' experiences and educational needs

Codes	Sub-themes	Themes
Ambivalent Perception	Perceptions of Pornography	Adolescents' Perceptions and Experiences of Pornography
Early Exposure, Shock	Age of First Exposure	
Guilt, Secrecy, Repeated Exposure	Age of First Exposure / Emotional Reactions	
Curiosity Mixed with Guilt	Emotional Reactions	
Guilt, Sleep Disturbance, Intrusive Thoughts	Psychological Impacts	Impacts of Pornography Exposure
Addiction, Wasted Time	Psychological Impacts	
Reduced Academic Performance	Academic Impacts	
Aggressive Behavior, Bullying	Social Impacts	
Desire to Imitate, Risky Behavior	Behavioral Impacts	
Seminar Ineffective, TikTok Preferred	Limitations of Conventional Methods	Educational Needs and Preferences
Trust in Peers, Openness	Peer Education	
Lack of Parental Communication	Family and Moral Values	
Gaps in Current Youth Programs, Urgency of New Approach		

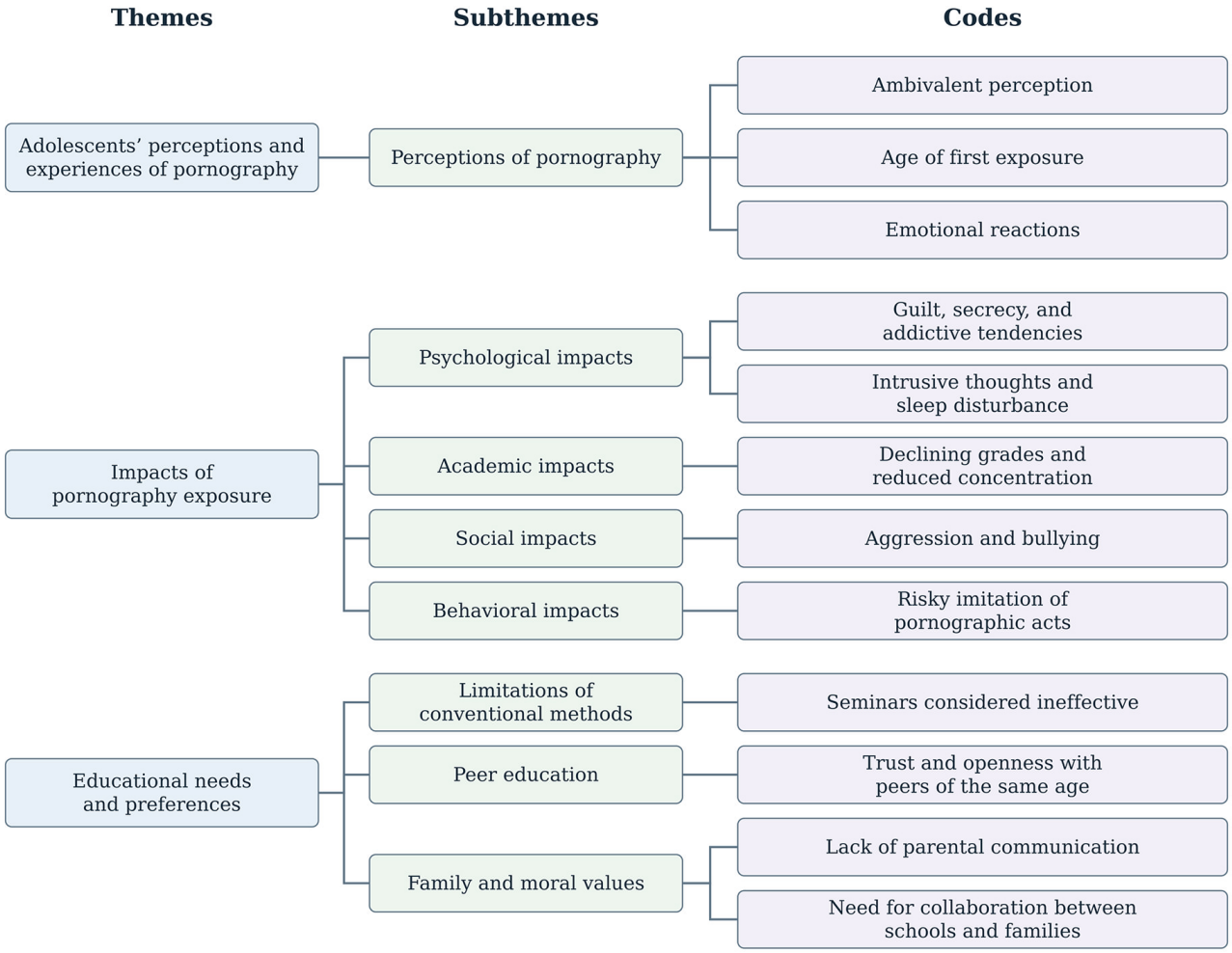


Figure 1: The figure shows the thematic map of findings on pornography exposure.

Building on the themes illustrated in Table 2 and Figure 1, the analysis revealed that adolescents' perceptions and experiences of pornography were characterized by ambivalent views, with some perceiving pornography as "educational" but simultaneously "wrong" or shameful. Both FGD and IDI participants reported early exposure, often during late childhood or early adolescence, usually introduced by peers. Emotional reactions included shock, guilt, curiosity, and secrecy, with several IDI participants describing recurrent intrusive thoughts and difficulties sleeping after exposure.

The impacts of pornography exposure were multifaceted. Psychological consequences such as guilt, addictive tendencies, and preoccupation were reported in both FGDs and IDIs, with some students in IDIs highlighting sleep disturbance and persistent intrusive imagery. Academic consequences included decreased concentration and declining school performance, explicitly described in IDI accounts of distraction during study time. Social impacts included aggression and bullying, while behavioral impacts included imitative tendencies, as expressed by both FGD and IDI participants.

Educational needs and preferences consistently emphasized the ineffectiveness of conventional seminars, with a strong demand for interactive, digital-based strategies (e.g., TikTok or short videos). Both FGDs and IDIs reinforced the importance of peer educators, with IDI participants underscoring the comfort of discussing sensitive issues with same-age peers. Stakeholders and teachers further highlighted the lack of parental communication on pornography-related issues, stressing the need for stronger collaboration between schools and families.

Together, these findings demonstrated convergence between FGD and IDI data,

strengthening the credibility of the themes identified and highlighting the urgency for adolescent-responsive, peer-led, and digitally mediated educational interventions.

3.2. Preliminary Survey Findings

The preliminary survey revealed important patterns of pornography use among adolescents. Around 27% reported repeated viewing despite feelings of guilt, and 15% reported interference with daily activities. In this study, the term 'compulsive use' refers to repeated pornography consumption despite negative consequences rather than a clinical diagnosis. These findings provided contextual insights and informed the purposive selection of participants for the qualitative phase, while not being analyzed quantitatively. The survey results therefore served as a foundation for participant selection and offered important context for interpreting adolescents lived experiences described in FGDs and IDIs.

Based on these preliminary insights, the qualitative findings further elaborated how adolescents perceived and coped with pornography exposure, as presented in the following themes.

3.3. Theme 1: Adolescents perceptions and experiences of pornography

Adolescents commonly described pornography as online media depicting nudity or sexual acts, with initial exposure occurring at an early age (10–13 years), often facilitated by peers. For many, the first encounter was framed as accidental or playful, but it soon developed into intentional searching.

"At first I thought it was just a joke, but then I kept searching secretly." (Student participant 3, 16 years old, male, FGD)

Focus group discussions revealed an ambivalent perception: pornography was simultaneously recognized as a source of sexual knowledge and regarded as morally wrong or shameful.

"Pornography can be considered as education, but at the same time it feels like something wrong because it shows the whole human body." (Student participant 1, 17 years old, male, FGD)

In-depth interviews deepened this theme by illustrating the tension between curiosity and secrecy. Adolescents reported that, even as they became aware of its taboo status, they continued to engage with pornography in private. Unlike FGDs, where pornography was debated in moral terms, IDIs uncovered how personal encounters were marked by repeated, concealed viewing.

These findings suggest that pornography occupies a paradoxical position in adolescent life; it is both socially normalized through peer influence and individually hidden due to cultural silence around sexuality. This duality underscores its complex role as an informal source of sexual socialization in Indonesia. Rather than openly addressed, pornography is negotiated privately, shaping adolescents' early understanding of sexuality in ways that blend curiosity, secrecy, and digital accessibility.

3.4. Theme 2: Impacts of pornography exposure on adolescents

The impacts of pornography exposure were multidimensional, spanning psychological, academic, social, and behavioral domains. FGDs captured collective concerns such as distraction from learning, declining school performance, and inappropriate classroom behaviors, while IDIs deepened these accounts by revealing more personal struggles including intrusive thoughts, guilt, and sleep disturbance. This integration highlights how group-level observations and individual narratives complemented one another. As one student shared:

"Porn makes us distracted...sometimes we cannot focus in class after watching." (Student participant 2, 16 years old, male, FGD)

while another admitted:

"I noticed my grades went down because I was distracted by watching porn almost every day." (Student participant 2, 16 years old, male, IDI)

Stakeholder perspectives reinforced these concerns, noting that pornography consumption was often linked with declining academic performance, classroom disruption, and inappropriate social behaviors

"We notice some students are becoming less

focused and their academic performance is declining, but parents rarely connect this with online pornography." (Stakeholder participant 6, 55 years old, Female, FGD)

In terms of social impacts, FGDs emphasized peer-related dynamic such as bullying and aggression, whereas IDIs illustrated more hidden effects such as fear and secrecy in response to imitative behaviors. Adolescents described both overt aggression and subtle stigma. Some also noted that peers who consumed pornography tended to bully others or adopt inappropriate attitudes. A female student explained:

"Some of my friends who often watch porn become more aggressive and like to bully others." (Student participant 4, 16 years old, Female, FGD)

Others highlighted stigma rooted in cultural and religious norms:

"Socially, the impact is significant because we live in a country with a Muslim majority, where any discussion related to sexuality is often labeled as vulgar. This creates a negative personal image which, in turn, causes peers to distance themselves." (Student participant 5, 17 years old, female, FGD)

In this context, stigma amplified the emotional burden and reinforced secrecy in coping strategies (3). Teachers echoed these concerns, reporting that:

"Some boys imitate what they see online and use it in jokes or harassment. This creates problems in class discipline." (Stakeholder participant 4, 47 years old, female, FGD)

At the psychological level, FGDs described pornography use as a source of guilt and shame within peer contexts, while IDIs uncovered how these emotions persisted in private, often manisfesting as insomnia and intrusive imagery.

"At night I often cannot sleep because the images keep coming back to my mind." (Student participant 6, 17 years old, female, IDI)

"The first time I watched was in junior high, I felt guilty but kept repeating it secretly." (Student participant 3, 16 years old, male, IDI)

Similiary, a female student admitted,

"Sometimes I felt guilty, but also curious to see more." (Student participant 5, 17 years old, female, IDI)

Importantly, these accounts highlighted the emotional burden of guilt, which adolescents experienced after repeated exposure. While curiosity drove continued viewing, many described feelings of shame and regret, underscoring the role of pornography not only as a behavioral distraction but also as a source of moral conflict and psychological distress. This sense of inner conflict was consistently recognized by stakeholders, who described pornography use as creating hidden emotional struggles not easily observable in classroom settings.

Behaviorally, some adolescents reported attempts to imitate pornographic acts, leading to confusion and fear:

"When I watched too much, I tried to imitate what I saw, and it scared me." (Student participant 1, 17 years old, male, IDI)

Such accounts illustrate how exposure not only disrupts personal wellbeing but also shapes peer interactions in risky ways.

Taken together, the integration of FGD and IDI findings demonstrated that pornography exposure undermines adolescent wellbeing at multiple levels, psychological, academic, social, and behavioral. FGDs revealed visible, peer related dynamics such as bullying and stigma, while IDIs uncovered hidden personal struggles including insomnia, guilt, and behavioral experimentation. The convergence of perspectives between adolescents and stakeholders provides robust evidence of the multi-layered risks of pornography exposure in adolescence.

3.5. Theme 3: Educational needs and preferences

Focus group discussions revealed adolescents' dissatisfaction with conventional seminar formats, which they perceived as largely ineffective. The participants emphasized that interactive, digitally mediated formats such as TikTok were more engaging and offered the advantage of private access, which they considered crucial when addressing sensitive subjects such as pornography. In-depth interviews reinforced these findings, providing more personal accounts of how adolescents felt safer

and more comfortable discussing pornography with peers of the same age rather than with teachers or parents. This demonstrates how FGDs captured collective expectations, while IDIs revealed the emotional context and personal rationales behind these preferences.

"Seminars are not effective for Gen Z… we prefer something interactive, like short videos on TikTok." (Student participant 6, 17 years old, female, FGD)

"It feels easier to talk with friends my age than teacher about these topics." (Student participant 3, 16 years old, female, IDI)

Stakeholders in FGDs also echoed adolescents concerns, describing seminars as passive and ineffective, and emphasized the need for interactive and peer-led approaches. At the same time, IDIs with students provided concrete illustrations of how peer-led formats functioned in practice adolescents described a stronger sense of openness and willingness to disclose sensitive experiences when guided by peers.

"Seminars are often one-way and students don't pay attention. Interactive and peer-led sessions would be more effective." (Stakeholder participant 7, 59 years old, female, FGD)

"If peer educators are the same age, we feel more comfortable to ask questions." (Student participant 3, 16 years old, male, IDI)

Both adolescents and stakeholders also emphasized the limited role of parents in addressing pornography. FGDs highlighted the absence of parental dialogue and the tendency of families to delegate responsibility to schools. IDIs complemented this by showing the personal consequences of this absence, as adolescents reported feeling unsupported and left to navigate their experiences alone.

"Parents expect schools to handle the problem, but at home these issues are rarely discussed. We need collaboration." (Stakeholder participant 6, 55 years old, female, FGD)

"Parents rarely discuss this issue; we need both family and school to guide us." (Student participant 2, 16 years, male, IDI)

The study participants and stakeholders further underlined the absence of pornography-specific content in existing youth programs. FGDs pointed to the gap in youth initiatives, while IDIs revealed how this gap translated into unmet needs at the individual level, reinforcing adolescents' sense of urgency for more relevant and responsive interventions.

"We already have youth programs, but they rarely focus on pornography. It is urgent to develop peer-led models supported by digital content." (Stakeholder participant 1, 54 years old, female, FGD)

The integration of FGD and IDI findings underscores that effective prevention must go beyond conventional, one-way seminars and adopt strategies that directly align with adolescents realities. FGDs captured broad dissatisfaction with current models and the demand for peer-led, digital learning, while IDIs highlighted the lived experiences of trust, comfort, and secrecy that explain why such approaches are more effective. Bridging the persistent communication gap between families and schools also emerged as a shared concern across both data sources. By articulating both collective preferences and personal barriers, this integration offers practical insights for designing culturally sensitive and developmentally appropriate educational interventions for Indonesian adolescents.

Meanwhile, digitally mediated strategies reflect the demand for online platforms that match adolescents daily media use, allowing them to learn in spaces they already inhabit and trust. Importantly, the findings also point to a persistent gap in parental communication, students reported that pornography was rarely discussed at home, while stakeholders acknowledged that families often rely on schools to address the issue. Bridging this gap requires structured collaboration between schools and parents, such as integrating family dialogue components into peer-led and digital programs, thereby ensuring that adolescents receive consistent guidance across both educational and home environments. By articulating both collective preferences and personal barriers, the study offers practical insights into designing culturally sensitive and developmentally appropriate educational interventions for Indonesian adolescents.

4. Discussion

This qualitative study explored adolescents' lived experiences of pornography exposure in East Kalimantan, Indonesia. The findings revealed a recurring pattern of curiosity, guilt, secrecy, and repeated exposure, shaped by peer influence, digital accessibility, and sociocultural norms. Adolescents described perceived psychological and academic difficulties, including intrusive thoughts, shame, and reduced concentration. They also expressed a preference for peer-led discussions and interactive digital education delivered in supportive school environments.

These findings may be understood in relation to moral incongruence, in which conflicts between pornography related behaviors and personal or religious values contribute to feelings of guilt and distress (19, 20). Qualitative research among adults who self-identified as having problematic pornography use similarly described guilt, shame, and inner conflict related to difficulties controlling their use and conflicts with personal values (21). A cross-sectional study among young adults also found associations between problematic pornography use, frequent consumption, and adherence to religious norms (22). Although these studies involved adults, they provide contextual perspectives for interpreting the adolescents' accounts rather than direct evidence of the same mechanisms. Participants' accounts suggest that some adolescents used pornography as an informal source of sexual information when opportunities for open discussion were limited. This interpretation can be situated within research on young people's encounters with online pornography and pornography literacy in their digital cultures (9, 23).

These findings align with international research regarding emotional discomfort and difficulties discussing pornography-related experiences. For example, research among young Swedish women has described shame and the negotiation of personal agency in relation to pornography (10). However, adolescents in the present study particularly emphasized secrecy and moral conflict within their perceived religious and cultural environments. This comparison highlights the importance of considering sociocultural context when interpreting adolescents' experiences of pornography exposure.

The in-depth interviews further highlighted how Indonesian adolescents internalize pornography exposure as a private struggle. Students described feelings of guilt, secrecy, and repeated curiosity, which aligns with studies showing that early pornography exposure is associated with cycles of avoidance and relapse, often accompanied by moral incongruence (3, 22). Several participants admitted that despite feeling guilty, they continued to rewatch pornography. The repetition of pornography use among adolescents, despite their awareness of its moral implications, illustrates a critical paradox in their behavioral patterns. Prior research suggested that such repetition may reflect compulsive or addiction like tendencies, as pornography consumption activates the brain's reward pathways, stimulating dopamine release and reinforcing cycles of craving and repetition. Over time, these mechanisms can establish habitual patterns that are difficult to control, even when accompanied by guilt or moral disapproval (21, 24). The experience of guilt may paradoxically intensify secrecy and create a cycle of relapse, a phenomenon known as moral incongruence (19). Within the Indonesian context, this cycle is further complicated by strong cultural and religious norms that discourage open discussion about sexuality. Adolescents who considered pornography morally wrong described feelings of guilt and a tendency to conceal their experiences. Limited opportunities for open and supportive discussions about sexuality may further contribute to secrecy and difficulties in seeking guidance. Beyond neurobiological reinforcement, repetition of pornography use in this study was strongly shaped by cultural and religious norms. In Indonesia, where both Islamic and Christian teachings emphasize sexual morality, adolescents frequently interpreted their behavior as sinful, reinforcing cycles of guilt, secrecy, and relapse. This moral incongruence reflects a cultural religious driver that distinguishes the Indonesian context from more secular settings, such as Sweden, where pornography is often framed around personal choice and agency rather than sin or guilt (10). Previous research highlighted the relationship between moral disapproval, religious values, and feelings of guilt associated with pornography use (19). These findings suggest that repeated pornography use is not merely an individual behavioral pattern but may also be influenced by sociocultural factors, including religious norms and limited opportunities for open

discussion about sexuality. This interplay between neurobiological reinforcement and sociocultural silence highlights the urgency of developing interventions that address both the psychological mechanisms of repetition and the broader cultural barriers that prevent adolescents from seeking support. Religious norms in Indonesia, particularly Islamic and Christian teachings on sexual morality, played a central role in shaping adolescents' guilt and secrecy. These norms reinforced moral incongruence, where adolescents perceived their behavior as sinful yet continued in secrecy (25). Religious norms played a central role in shaping adolescents guilt and secrecy. The study participants often interpreted their pornography use as sinful, a moral failure that reinforced feelings of shame and repeated relapse. Islamic and Christian teachings, which dominate the cultural landscape in East Kalimantan, were invoked directly or indirectly in adolescents narratives, linking pornography with sin and punishment. This moral incongruence created a paradox, while religion discouraged consumption, it simultaneously heightened secrecy and psychological burden when exposure occurred. Such a dual role of religion as both a protective and risk factor underscores the importance of developing culturally sensitive interventions that acknowledge religious values while providing adolescents with supportive coping strategies (10, 25, 26).

A particularly valuable contribution of this study is the candid admission by adolescents that they continued to consume pornography despite experiencing guilt and moral conflict. Such acknowledgment is rarely reported in qualitative research, as adolescents often avoid disclosing behaviors that are socially or culturally stigmatized. The openness of participants in this study therefore provides unique insight into the persistence of pornography use among Indonesian adolescents. It demonstrated that the repetition of viewing is not merely a matter of curiosity or peer influence but reflects deeper psychological and contextual dynamics, including addiction, like tendencies and the absence of supportive coping mechanisms. By capturing adolescents' direct narratives, this study complements previous survey-based research on pornography exposure and related behaviors (2, 3, 5), offering qualitative insights into experiences of guilt, secrecy, and repeated exposure. This finding underscores a critical gap for intervention: adolescents require not only factual education but also psychosocial support systems that help them break this cycle and develop healthier coping strategies.

Importantly, the persistence of pornography use despite guilt and moral conflict is not an isolated experience but one that triggers a cascade of broader consequences in adolescents daily lives. This study revealed that pornography exposure had wide ranging consequences for adolescents, spanning psychological distress, academic difficulties, social problems, and risky behaviors. The participants described feelings of guilt, intrusive thoughts, sleep disturbances, and declining concentration in school. These narratives illustrate how pornography can interfere with both mental health and academic functioning during a critical stage of development. Previous literature has discussed psychological and social difficulties associated with pornography exposure and problematic pornography use across different populations and contexts (22, 27, 28).

Socially, stakeholders and peers observed that pornography exposure was linked to increased aggression, bullying, and relational conflict. These findings shed light on the broader social costs of pornography exposure in adolescence, where individual consumption may translate into peer dynamics and behavioral patterns within schools. Prior research documented that frequent pornography use can reinforce risky sexual scripts and aggressive behaviors, particularly among young people (27).

Stakeholders' observations reinforced and expanded students' accounts of the consequences of pornography exposure. While adolescents emphasized feelings of guilt, distraction, and dependency, teachers and counselors highlighted visible academic decline and disciplinary issues. This convergence suggests that pornography exposure is not only perceived as a private psychological struggle but also as a broader educational concern affecting classroom dynamics. Both students and stakeholders described concerns about reduced academic engagement and social aggression associated with pornography exposure. The convergence of these perspectives highlights the need for school-based preventive measures.Gender differences were evident: male participants often emphasized peer influence and social pressure to

consume pornography, whereas female participants described secrecy, emotional conflict, and stronger feelings of guilt. This suggests gendered pathways in how adolescents experience pornography exposure. Gender differences were evident in how adolescents described their experiences. Male participants frequently emphasized peer influence and social pressure, framing pornography consumption as a shared activity with friends. In contrast, female participants described their experiences in terms of secrecy, emotional conflict, and stronger feelings of guilt and stigma. This aligns with previous findings that cultural norms intersect with gender to shape adolescents' interpretations of pornography use (3, 29). Such gendered pathways indicate that prevention strategies must be responsive to these differences, ensuring that boys and girls receive tailored support that reflects their distinct psychosocial realities.

Within the Indonesian context, these findings underscore a particularly urgent concern. Adolescents face limited access to accurate sexual health education, making them more vulnerable to adopting pornography as a behavioral model. The secrecy and guilt described by participants may further exacerbate psychological distress, since adolescents lack trusted channels for discussing their experiences (30, 31). This hidden burden suggests that the impacts of pornography in conservative settings may be more complex and severe than reported in more open cultural environments (10, 25).

This study contributes new evidence that pornography exposure disrupts adolescent wellbeing at multiple levels. By triangulating FGDs and IDIs, the findings illustrate not only the visible social and academic consequences but also the hidden individual struggles that often remain unaddressed. This layered understanding underscores the need for interventions that simultaneously target psychological resilience, academic support, and behavioral risk prevention. Schools could integrate counseling services and digital literacy programs, while families should be supported to build open communication. Such multi-layered interventions can help reduce secrecy, mitigate psychological burdens, and promote healthier adolescent development.

However, the very challenges described by adolescents also shaped how they perceived existing prevention efforts. Many felt that conventional seminar style programs failed to address the complexity of their experiences, often being perceived as outdated, judgmental, or irrelevant. This study showed that adolescents regarded conventional seminar style programs as ineffective in addressing pornography exposure. Instead, they expressed strong preferences for interactive and digitally mediated formats, particularly short videos on platforms such as TikTok. For adolescents, this type of content was not only engaging but also accessible in private, which they considered essential when navigating sensitive topics. These findings align with broader evidence that health education resonates more effectively with young people when delivered through media that reflect their digital habits (32, 33).

Peer-led approaches were also highlighted as highly relevant. Adolescents described feeling more at ease and more open with peers of the same age than with teachers or parents. These preferences are consistent with the rationale for peer-led sexual health education, including the STASH intervention in the United Kingdom, which combines social media with informal conversations among peers (34). Supporting the educational potential of this approach, a prospective controlled study in France reported greater improvements in sexual and reproductive health knowledge among adolescents receiving education delivered by healthcare students than among comparison adolescents (35). The strength of peer education lies in its capacity to foster trust, relatability, and disclosure on issues adolescents might otherwise keep hidden. However, this study revealed that peer educators are not uniformly equipped, and without adequate training and support there is a risk that information conveyed may be partial or inaccurate. Evidence from recent studies suggested that peer-led programs yield the strongest outcomes when peer educators are supported through structured training, mentorship, and digital/social media integration (35, 36). Such capacity building measures ensure that peer-led programs maintain their advantages in fostering openness while also safeguarding the accuracy and developmental appropriateness of the content delivered.

The convergence of views between adolescents and stakeholders further reinforces the inadequacy of current strategies. Both groups criticized seminar-based models as passive and unengaging, while also

underscoring the absence of parental involvement. Stakeholders acknowledged that families often defer responsibility to schools, yet they simultaneously recognized the need for collaboration. This gap highlights a critical challenge, adolescents rarely receive guidance at home, while school-based interventions remain limited in scope. Bridging this gap requires integrated strategies that actively involve both schools and families, thereby providing adolescents with consistent and supportive guidance across different environments.

The alignment between students and stakeholders in calling for interactive, peer-led education underscores a shared recognition of the inadequacy of current strategies. Both groups criticized seminars as passive and ineffective, suggesting that participatory and peer driven methods would be more engaging. Parents' acknowledgment of limited sexual communication at home shifts the responsibility to schools, but their recognition of the need for collaboration suggests opportunities for integrated school family approaches. These findings echo international recommendations regarding peer education and community involvement in adolescent health promotion, aligning with evidence from systematic reviews and trials demonstrating that school-based peer education can improve health knowledge, resilience, and adherence to protocols (37-39).

From an Indonesian perspective, the results underline the urgent need for culturally sensitive and developmentally appropriate strategies. Current school based interventions remain limited, often emphasizing abstinence or moral warnings without meaningful dialogue. The voices of adolescents in this study provide practical direction for rethinking prevention strategies: they want content that is interactive, digital, peer driven, and supported by family involvement. These preferences also highlight the relevance of pornography literacy approaches that engage with young people's digital cultures (23). By integrating FGD and IDI findings, this study contributes a nuanced understanding of adolescents' educational expectations, offering actionable evidence for designing culturally sensitive interventions that are more likely to resonate with Indonesian youth. Our findings suggest that educational strategies should respect adolescents' religious and cultural values, address barriers to discussing sexuality, and involve families alongside schools in supporting adolescents' learning.

The findings suggest that schools and public health practitioners in Indonesia should provide culturally sensitive education on pornography exposure that responds to adolescents' preferences for interactive digital materials and peer-led learning. Short digital materials can provide accurate, age-appropriate sexual health information, while training and mentorship from teachers or health professionals can help peer educators discuss sensitive topics. Schools can also offer practical guidance to help parents initiate nonjudgmental conversations at home. These strategies can inform school health programs that connect what adolescents learn at school with the support they receive from peers and families.

4.1. Limitations

This study had several limitations. First, the small number of participants and the single site design in East Kalimantan, Indonesia, may limit the transferability of findings to other regions of Indonesia. Second, given the sensitive nature of the topic, some adolescents may have withheld certain experiences despite assurances of confidentiality. Finally, the reliance on self-reported narratives could be influenced by recall bias and social desirability. These limitations should be considered when interpreting the findings.

5. Conclusions

Adolescents in East Kalimantan, Indonesia, described curiosity, guilt, and secrecy in relation to pornography exposure and repeated use. Their accounts highlighted the role of peers and ease of digital access, as well as the influence of religious values on how they interpreted and responded to these experiences. Participants reported intrusive thoughts, difficulty concentrating, and declines in school performance. They considered interactive digital materials and peer-led education more relevant and engaging than conventional seminars. These findings support the development of culturally sensitive, age-appropriate education on pornography exposure, with involvement from schools and families.

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Declaration of AI

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Authors' Contribution

Yuliani Winarti: Contributions to the conception of the study; collection, analysis, and interpretation of data; drafting the work. Zahroh Shaluhiyah: Contributions to the conception of the study; interpretation of data; reviewing the work critically for important intellectual content. Bagoes Widjanarko: Contributions to the interpretation of data; reviewing the work critically for important intellectual content. Ani Margawati: Contributions to the interpretation of data; reviewing the work critically for important intellectual content. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such that the questions related to the accuracy or integrity of any part of the work.

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Ethical Approval

The Ethics Committee of the Faculty of Public Health, Diponegoro University, Indonesia approved the present study with the code of 68/EA/KEPK-FKM/2025. Also, written informed consent was obtained from the participants.

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