

Risky Sexual Behavior Among Foster Care Adolescents: A Social Cognitive Theory Perspective

Febri Hariadi¹, Alda Tiara Puspita¹, Muhammad Muzhaffar Daud¹, Fedhilla Fieldhathama², Aditya Kusumawati^{1*}

¹Faculty of Public Health, Universitas Diponegoro

²Faculty of Science and Mathematics, Universitas Diponegoro

ABSTRACT

Background: Previous studies have shown that 3.6% of male adolescents in Indonesia have engaged in sexual intercourse, with permissive neglectful parenting identified as a significant contributing factor. Many children in Indonesia grow up without adequate parental care, leading to the establishment of nonprofit social organizations such as SOS Children's Village Semarang. This study aims to identify the factors contributing to risky sexual behavior among foster care adolescents at SOS Children's Village Semarang using the framework of social cognitive theory.

Method: This study employed a mixed-methods approach with a sequential explanatory design. Quantitative data were collected through questionnaires, followed by qualitative data collection through observations and in-depth interviews. Binary logistic regression was used to analyze the quantitative data, while content analysis was used to analyze the qualitative data.

Result: This study found that personal factors, including knowledge, attitudes, and expectations, along with environmental factors such as social norms and peer group influence, significantly contribute to risky sexual behavior among foster care adolescents. These findings emphasize the need for comprehensive interventions involving foster parents, orphanage staff, and peers to improve adolescents' understanding of sexual risks, promote positive attitudes toward sexuality, and strengthen their ability to resist negative peer pressures.

*Correspondence

adityakusumawati@lecturer.undip.ac.id

Article History

Received 17 August 2024

Revised 30 October 2024

Accepted 2 December 2024

Available Online 2 January 2025

Keywords

Risky sexual behavior

Adolescents

Social cognitive theory

DOI

10.14710/jpki.20.2.89-95

INTRODUCTION

Adolescence is a transitional period characterized by vulnerability to various problems, including sexual behavior that can be influenced by interactions within the social environment.(1) At this stage, adolescents begin to develop certain habits, such as dietary practice, physical activity, drug use, and sexual behavior.(2) Sexual behaviors commonly reported by adolescents aged 15-19 years are nonpenetrative sex or outercourse, such as holding hands, hugging, and kissing. Approximately 3.6% of male adolescents admitted to having engaged in sexual intercourse resembling marital relationships. Common sexual behavior with partners included holding hands (86.4%), kissing (31.7%), and fingering or stimulating.(3)

Previous research has identified several risk factors that contribute to risky sexual behavior in adolescents. One significant factor is parenting styles that tend to be permissive-neglectful.(4) This finding is in line with a study by Ungsianik and Yuliati which showed that permissive parenting significantly contributes to risky sexual behavior in adolescents.(5) Additionally, Susanto

found a significant relationship between knowledge, attitudes, self-efficacy, religious understanding, parental supervision, exposure to information, subjective norms, and premarital risky sexual behavior in adolescents.(6) These findings emphasize the importance of parenting, especially for children who have lost their parents.

However, previous studies have limitations in terms of the generalizability of their findings because the samples were less representative. For example, Ungsianik and Yuliati's and Najib's studies only focused on adolescents in general without detailed characterization, while Susanto's study only focused on premarital adolescents in Boyolali.(5-7) The novelty of this study lies in the characterization of foster care adolescents in relation to the influence of risky sexual behavior from personal and environmental perspectives using the framework of social cognitive theory (SCT).

According to the data from the Central Bureau of Statistics (BPS), 4.59% of children in Indonesia are neglected due to the inability of their parents to meet their basic physical, spiritual, and social needs.(8) Of these children, the majority (52.12%) do not have

biological parents.(8) The increasing number of abandoned children has led to the establishment of various institutions that care for children who have lost their families. One of them is the SOS Children's Village Semarang. This non-governmental and non-profit social organization plays an active role in supporting the rights of children who have lost their parents or are at risk of losing parental care.

Initial observations at SOS Children's Village Semarang revealed that foster children need assistance because they experience psychosocial problems such as lack of confidence, low cognitive activity, and difficulty controlling emotions. Therefore, research is needed to assess and address the problem of risky sexual behavior in adolescents at SOS Children's Village Semarang. SCT provides a framework for understanding the complex interactions between self-efficacy, outcome expectations, and observational learning in shaping adolescents' behavior. The concept of reciprocal determinism in SCT emphasizes that internal factors and the social environment, including parenting in foster care influence risky sexual behavior in foster children.(9) Upon comprehending these interactions, more effective interventions can be designed to prevent risky sexual behavior among foster adolescents.

This study aims to identify factors that contribute to risky sexual behavior among foster care adolescents using the framework of SCT. Specifically, it examines the influence of personal factors including knowledge, expectations, and attitudes, as well as environmental factors including social norms, community access, and peer influence in shaping risky sexual behavior among foster care adolescents.

METHOD

This study employed a mixed-methods approach combining quantitative and qualitative approaches to obtain thorough, valid, reliable, and objective data.(10) The type of mixed-methods approach used was sequential explanatory, where data collection was carried out in stages, beginning with quantitative data and followed by qualitative data based on the results of the quantitative approach.(11) This study was conducted at SOS Children's Village Semarang over a four-month period from April 19 to August 18, 2024. This study received ethical approval from the Ethics Committee of the Faculty of Public Health, Universitas Diponegoro, with an approval number 311/EA/KEPK-FKM/2024.

The dependent variable of this study was risky sexual behavior, while the independent variables included personal factors (knowledge, expectations, attitudes), and environmental factors (social norms, community access, peer influence). The data were obtained from primary data

sources through initial observation, questionnaires, and in-depth interviews. The questionnaires were distributed to all 50 foster care adolescents aged 10-18 years at SOS Children's Village Semarang. Five respondents with the highest scores, indicating the riskiest sexual behavior, were selected to participate in in-depth interviews. To build rapport with participants, the researchers engaged in various activities such as playing soccer and hide and seek, and participating in the free-time activities of foster care adolescents before distributing the questionnaires. Furthermore, qualitative data were collected through in-depth interviews and observations, facilitated by the rapport built during the initial engagement phase. The interviews aimed to explore a deeper understanding of the phenomenon under study.

This study followed a sequential explanatory design for data analysis with a significance level of 0.05 ($\alpha = 5\%$). Quantitative data analysis began with data management and scoring to identify participants in the in-depth interviews. The results of the analysis were qualitatively verified using the phenomenological method through in-depth interviews. The quantitative data were analyzed using binary logistic regression, which is a statistical method to predict the probability of an event occurring based on specific factors.(12) This analysis was used to examine the influence of personal and environmental factors on the likelihood of engaging in risky sexual behavior among foster care adolescents. Meanwhile, qualitative data were processed using the NVivo software. The results of the in-depth interviews were analyzed using content analysis as a basis for drawing conclusions. Data validity through source triangulation was conducted by interviewing foster mothers and caregivers at SOS Children's Village Semarang. Conclusions were drawn by reducing narrative text data and aligning the findings with the research objectives and questions.(13)

RESULT AND DISCUSSION

Factors Influencing Risky Sexual Behavior Among Foster Care Adolescents Based on SCT

Factors influencing risky sexual behavior were identified through binary logistic regression analysis coded as 0 for good and 1 for bad¹⁴. To avoid model bias, synthetic data generation was carried out using the synthetic minority oversampling technique (SMOTE).(15) The likelihood ratio test was carried out to determine whether the independent variables collectively influenced the dependent variable.(16) The hypotheses for this test were: (1) $H_0 : \beta_k = 0$ (the independent variables collectively do not affect the model); and (2) $H_1 : \text{at least one } \beta_k \neq 0$ where $k = 1, 2, 3, 4, 5, 6$ (the independent

variables collectively affect the model). At a significance level of $\alpha = 5\%$, H_0 was rejected because the value of $G > \chi^2_{(\alpha;6)}$, which is $60.88 > 12.59$. Therefore, it can be concluded that the independent variables collectively affected the model.

The goodness of fit test was carried out to assess the alignment between the observed and predicted data.(17) The hypotheses for this test were: (1) H_0 , where the model is a good fit (no difference between observation and prediction); and (2) H_1 , where the model is not a good fit (there is a difference between observation and prediction). With a p-value of 0.052 and $\chi^2_{(\alpha;8)} = 15.507$ and at a significance level of $\alpha = 5\%$, H_0 could not be rejected, because the value of $C < \chi^2_{(\alpha;8)}$ which is $15.367 < 15.507$ or p-value $> \alpha$ which is $0.052 > 0.05$. Therefore, it can be concluded that the model was a good fit or no difference was found between the observed and predicted data.

The Wald test was conducted to evaluate the significance of each independent variable on the dependent variable in binary logistic regression analysis.(18) Based on the results of partial testing of the logistic regression model shown in Table 1. with a significance level of 5% five variables were found to significantly influence risky sexual behavior, including knowledge with a Wald value of 12.000, expectations with a Wald value of 9.760, attitudes with a Wald value of 12.146, social norms with a Wald value of 9.873 and peer influence with a Wald value of 5.282. Each of these Wald values exceeded the value of $\chi^2_{(1;\alpha)}$ with $\alpha = 5\%$ and the corresponding p-values for the x_1, x_2, x_3, x_4, x_6 are likewise smaller than $\alpha = 5\%$. Therefore, H_0 was rejected since $|W| > \chi^2_{(\alpha;1)}$ or the p-value was less than 5%. These results indicated that knowledge, expectations, attitudes, social norms, and peer influence partially influenced risky sexual behavior. The final model obtained is as follows:

$$\pi(x_i) = \frac{e^{-0,227+0,282x_1+0,251x_2+0,284x_3-0,256x_4-0,1866x_6}}{1+e^{-0,227+0,282x_1+0,251x_2+0,284x_3-0,256x_4-0,1866x_6}}$$

Table 1. Results of hypothesis testing

Coefficient	Parameter	B	Wald	df	Sig.	Exp. (B)
(Intercept)	β_0	0.282	4.546	1	0.001	1.326
X_1 (Knowledge)	β_1	0.251	12.000	1	0.002	1.286
X_2 (Expectations)	β_2	0.284	9.760	1	0.000	1.329
X_3 (Attitudes)	β_3	-0.256	12.146	1	0.002	0.774
X_4 (Social Norms)	β_4	-0.108	9.873	1	0.185	0.898
X_5 (Community Access)	β_5	-0.186	1.756	1	0.022	0.830
X_6 (Peer Influence)	β_6	-0.227	5.282	1	0.033	0.797

where x_1 = Knowledge; x_2 = Expectations; x_3 = Attitudes; x_4 = Social Norms; x_5 = Community Access; x_6 = Peer Influence.

Perspective of Personal Factors on Risky Sexual Behavior Among Foster Care Adolescents

Binary logistic regression analysis revealed that personal factors including knowledge, attitudes, and expectations influenced risky sexual behavior among foster care adolescents. Interview results regarding knowledge of risky sexual behavior showed that S1, S2, and S3 emphasized an increased risk of sexually transmitted diseases (STDs) and unwanted pregnancy. Additionally, S3 highlighted that female reproductive organ hygiene can be a risk of STDs.

"In my opinion, risky sexual behavior is what can make us get venereal diseases or get pregnant outside of marriage." (S1 and S2)

"Sexually transmitted diseases that occur because women's internal organs are sometimes not maintained." (S3)

"The point is that when it leads to sexual direction, it is definitely risky and causes STDs. For example, peeping into mom's or sister's bathroom is risky." (T1)

A different answer was expressed by a triangulation informant T1. This finding suggested that triangulation informants' knowledge of STD risks includes aspects of physical health, social norms, and emotional consequences.(19) Caregivers at the foundation are quite open about sexuality and expected to provide optimal assistance in sexuality knowledge for foster children. Cognitive knowledge is crucial for shaping one's attitude and behavior.(20)

In-depth interviews regarding attitudes revealed various attitudes of subjects and triangulation informants towards sexuality, including masturbation. S5 viewed masturbation as a natural thing, while S2 disagreed for health reasons.

"It's very important, to avoid unexpected 'accidents'. If we understand contraception, we can make wiser and safer choices." (S3 and S2)

"For me, it's normal to masturbate, but only to the extent that it doesn't harm others." (S5)

"It's forbidden, they say it can damage the brain, so it's not good. Then, it can cause addiction too, it's really hard to stop." (S2)

The term "accident" mentioned by S3 and S2 referred to unexpected events such as premarital sex or unwanted pregnancy. Some subjects believed that masturbation can mitigate pregnancy or other negative risks by fulfilling biological needs, as expressed by the following triangulation informant:

"Yes, I think within reasonable limits, it is normal in my opinion for men because the digital world now really helps people to be more mature in terms of sexual matters before marriage." (T1 and T2)

Another point was expressed by triangulation informant T3 who mentioned that the practice of masturbation was also found among adolescent girls.

"Actually, the girls have masturbated but don't confess. But sometimes they are more secretive, so there are things that I don't know." (T3)

Furthermore, the subjects and triangulation informants had different opinions regarding the complexity of the issue of adolescent masturbation. Subjects tended to focus on health aspects and social norms, while triangulation informants paid more attention to the reality of adolescent behavior in the digital era following previous research on the rise of digital porn.(21) Previous research shows that lack of access to accurate sexual information can increase negative attitudes towards risky sexual behavior.(22)

Participants also expressed different views on expectations or the desire to engage in risky sexual behavior while dating. S5 considered kissing as normal within certain limits, while S4 believed that sexual intercourse should be done after marriage. Research shows

that partner expectations about physical intimacy can influence individuals' decisions to engage in sexual activities, including the risky ones.(23)

"In my opinion kissing is normal but not directly lip to lip. At most, only to the hand or the forehead is still natural." (S5)

"It's not normal. Sexual intercourse should be after marriage. Let the guy be responsible too." (S3 and S4)

The responses from the triangulation informants regarding the statement on the desire for risky sexual behavior are as follows:

"Children who date and hold hands, hug, kiss, and preparing for marriage, when it is carried out during high school or early university years, I think they are still friends." (T1)

"Most of the SOS kids date each other when they are in elementary school or junior high school. But when they are in high school or older, they will date outside kids more often so they can play outside more." (T3)

The perspective differences are influenced by various factors including an understanding of the risks of sexual behavior such as aspects of physical health, social norms, and emotional consequences. This understanding influences sexual attitudes, such as masturbation, according to their values and norms. Dating expectations also influence adolescents' decisions to engage in sexual activity. To build correct perceptions, adolescents need to obtain accurate information through appropriate means from trusted parties, especially those with whom they have social and emotional bonds.

Perspective of Environmental Factors on Risky Sexual Behavior Among Foster Care Adolescents

Binary logistic regression analysis revealed that environmental factors including social norms and peer influence influenced risky sexual behavior among foster care adolescents. In terms of social norms, the results of in-depth interviews revealed support for homoerotic content and risky sexual behavior in the foster care environment.

"Some friends are more towards BL (boys' love). That's right, BL (boys' love), so it's like supporting gay content." (S2)

"If you see, I've seen groping, kissing, in my friends." (S1)

"I saw it in the park, but just passing by. They looked really close and kissed." (S3)

The responses from the triangulation informants regarding the statement about boys' love and the experience of seeing risky behavior are as follows:

"Things like that are covered up, yes, many even access porn videos." (T3)

"There is something really bad but I did not see it directly, but I handled the case because it has occurred many times." (T1)

These findings demonstrated the influence of social norms and the surrounding environment on risky sexual behavior among foster care adolescents. Exposure to risky sexual behaviors among adolescents, either in person or through online content, may increase the risk of engaging in similar behaviors. In addition, there are differences between explicitly expressed norms and behaviors that occur covertly, indicating the complexity of social dynamics that influence adolescent sexual behavior.

In terms of peer influence, the in-depth interviews found that peer influence was very strong in encouraging adolescents to engage in risky sexual behavior, which was not revealed by the quantitative data.

"For example, when we are hanging out, they suddenly tell us to kiss or something just for fun, like inviting us to watch porn sometimes." (S5)

"Sometimes, there are friends who mock me because I choose not to participate in activities that are not in accordance with my principles." (S3)

"At SOS, it's more about being allowed to date but just be careful and never lead to indecent behavior." (S2, S3, and S4)

"I was once invited to have sex, but I refused. I know it's not right." (S3)

The responses from the triangulation informants regarding the statements of the subjects are as follows.

"SOS caregivers have said that we protect them, we ask them to tell us when they experience bullying or sexual matters, so far they have never told us." (T1)

"If they tell us about actions that they don't deserve, there will be a special team from self-guarding to help them. But

if they like each other, they prefer to keep it to themselves." (T2)

The results of this study showed the strong peer influence on encouraging adolescents to engage in risky sexual behavior. Although the SOS Children's Village Semarang provides protection and a platform for reporting bullying or inappropriate sexual behavior, many adolescents are reluctant to report, especially if there is mutual agreement or discomfort with friends. Direct peer pressure remains prevalent, and adolescents are often reluctant to seek help despite the protection system. This finding is consistent with a previous study identifying peer influence as a predictor of premarital sex among adolescents.(24) Although peers are a source of information on adolescent sexual behavior, this information is often inadequate. As a result, adolescents can develop misconceptions that shape their sexual knowledge, perceptions, attitudes, and behaviors.(25) Collaboration among peers, caregivers, and adolescents is needed to foster accurate understanding, positive attitudes, and safe practices in preventing risky sexual behavior.

This study has limitations that may impact the interpretation of its findings. Firstly, the small sample size of 50 adolescents from a single institution limits the generalizability of the results to the wider population of foster care adolescents. Additionally, the cross-sectional design restricts causal inferences regarding the relationships between personal and environmental factors and risky sexual behavior, suggesting that longitudinal studies could provide more comprehensive insights. The reliance on self-reported data introduces potential biases, as adolescents may underreport risky behaviors or misinterpret survey questions due to social desirability. Furthermore, this study did not account for other confounding variables such as mental health issues or peer pressure from outside the foster care environment, which could significantly influence behavior. Lastly, while qualitative interviews were conducted, subjective interpretations may have limited the depth of analysis and overlooked nuanced perspectives that are crucial for developing effective interventions. Addressing these limitations in future research could enhance understanding and inform tailored strategies to mitigate risky sexual behaviors among this vulnerable population.

CONCLUSION

The results of this study indicated that according to SCT, risky sexual behavior among adolescents in foster care at SOS Children's Village Semarang is influenced by personal factors, such as knowledge, expectations, and attitudes, as well as environmental factors, including social norms and peer influence. Personal factors and

environmental factors play a significant role in shaping the fundamental perspectives of foster care adolescents toward risky sexual behavior. Consistent with SCT, peer counselors can serve as positive role models for these adolescents, with direct and intensive supervision and guidance from caregivers. Support from various parties is expected to strengthen the adolescents' motivation to engage in healthy sexual behavior with positive self-efficacy and confidence.

REFERENCES

1. Kar S, Choudhury A, Singh A. Understanding normal development of adolescent sexuality: A bumpy ride. Vol. 8, *Journal of Human Reproductive Sciences*. Wolters Kluwer Medknow Publications; 2015. p. 70–4.
2. Murni M. Perkembangan fisik, kognitif, dan psikososial pada masa kanak-kanak awal 2-6 tahun. *Bunayya: Jurnal Pendidikan Anak*. 2017 Oct 26;3(1):19-33.
3. BKKBN. *Survei Demografi dan Kesehatan Indonesia 2017: Kesehatan Reproduksi Remaja* [Internet]. 2017 [cited 2024 February 9]. Available from: <http://www.dhsprogram.com>
4. Rohayani F, Murniati W, Sari T, Fitri AR. Pola Asuh Permisif dan Dampaknya Kepada Anak Usia Dini (Teori dan Problematika). *Islamic EduKids: Jurnal Pendidikan Anak Usia Dini*. 2023 May 25;5(1):25-38.
5. Ungsianik T, Yuliati T. Pola asuh orang tua dan perilaku seksual berisiko pada remaja. *Jurnal Keperawatan Indonesia*. 2017 Nov 11;20(3):185-94.
6. Susanto BN. *Determinan Perilaku Seksual Berisiko pada Remaja Pra-Nikah di Kabupaten Boyolali dengan Pendekatan Teori Sosial Kognitif* [dissertation on the internet]. Universitas Sebelas Maret; 2019 [cited 2024 February 9]. Available from: <https://digilib.uns.ac.id/dokumen/detail/74459/>
7. Najib N. Pola asuh dan peer group terhadap konsep diri remaja tentang perilaku seksual. *HIGEIA (Journal of Public Health Research and Development)*. 2018 Oct 31;2(4):645-53.
8. BPS. *Profil Anak Usia Dini 2023*. [Internet]. 2023 [cited 2024 February 9]. Available from: <https://www.bps.go.id/id/publication/2023/12/12/e9b0a9a0adcffefb137e0d0d/profil-anak-usia-dini-2023.html>.
9. Abdullah SM. Social cognitive theory: A Bandura thought review published in 1982-2012. *Psikodimensia: Kajian Ilmiah Psikologi*. 2019 Jun 19;18(1):85-100.
10. Creswell JW, Poth CN. *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications; 2016 Dec 19.
11. Othman S, Steen M, Fleet J. A sequential explanatory mixed methods study design: An example of how to integrate data in a midwifery research project. *Journal of Nursing Education and Practice*. 2020;11(2):75-89.
12. Yuniarsih ET, Salam M, Jamil MH, Tenriawaru AN. Determinants determining the adoption of technological innovation of urban farming: Employing binary logistic regression model in examining Rogers' framework. *Journal of Open Innovation: Technology, Market, and Complexity*. 2024 May 24;100307.
13. Moleong LJ. *Metodologi Penelitian Kualitatif (Edisi Revisi)*. Bandung: PT Remaja Rosdakarya; 2018.
14. Ghozali I. *Aplikasi Analisis Multivariete Dengan Program IBM SPSS 25 (Edisi 9)*. Semarang: Badan Penerbit Universitas Diponegoro; 2018.
15. Wijayanti NP, Kencana EN, Sumarjaya IW. SMOTE: potensi dan kekurangannya pada survei. *E-Jurnal Matematika*. 2021 Nov;10(4):235.
16. Dette H, Dörnemann N. Likelihood ratio tests for many groups in high dimensions. *Journal of Multivariate Analysis*. 2020 Jul 1;178:104605.
17. Wu Q, Hu J. A spectral based goodness-of-fit test for stochastic block models. *Statistics & Probability Letters*. 2024 Jun 1;209:110104.
18. Calvino A, Martin N, Pardo L. Robustness of Minimum Density Power Divergence Estimators and Wald-type test statistics in loglinear models with multinomial sampling. *Journal of Computational and Applied Mathematics*. 2021 Apr 1;386:113214.
19. Gunawan MA. "I Love Sex:" *Dinamika Regulasi Diri Pelaku Seks Pranikah (Studi pada Remaja Akhir)*. In *Bandung Conference Series: Psychology Science 2024 Feb 1 (Vol. 4, No. 1)*.
20. Cooper J. Cognitive dissonance: Where we've been and where we're going. *International Review of Social Psychology*. 2019 May 3.
21. Anggraini M, Febriyanti SN. Iklan Digital: Pornomedia dan Konten Seksualitas. *JIP-Jurnal Ilmiah Ilmu Pendidikan*. 2023 Apr 1;6(4):2336-45.
22. Agustini D, Damayanti R. Faktor Risiko Infeksi Menular Seksual: Literature Review. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*. 2023 Feb 3;6(2):207-13.
23. Willis M, Jozkowski KN, Bridges AJ, Veilleux JC, Davis RE. Assessing the within-person variability of internal and external sexual consent. *The Journal of Sex Research*. 2021 Nov 22;58(9):1173-83.

24. Irma I, Yuni Y, Paridah P. Pengaruh Teman Sebaya dan Peran Orang Tua Sebagai Prediktor Perilaku Seks Pranikah pada Remaja. *BIOGRAPH-I: Journal of Biostatistics and Demographic Dynamic*. 2022 Nov 30;2(2):77-86.
25. Nurhayati A, Fajar NA, Yeni Y. Determinant premarital sexual behavior of adolescent in Senior High School 1 North Indralaya. *Jurnal Ilmu Kesehatan Masyarakat*. 2017 Jun 29;8(2):464237.