

# Analysis of Factors Influencing Adolescents' Risky Behavior in HIV-AIDS Prevention

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**Abstract**— HIV-AIDS is a health problem that occurs throughout the world, one of which is in Indonesia. According to WHO, there were 37.9 million HIV Aids cases in 2018 and based on data on new HIV-Aids cases in Indonesia, there was a significant increase in 2019 with ages 15-29 years. One-fifth of Indonesia's population is adolescents who are likely to have risky behavior, among others due to inappropriate and directed sources of information, unhealthy associations and the impact of advances in technology such as easy access to information that can damage adolescent behavior. This literature review article aims to analyze articles related to factors that consistently relate to and influence changes in adolescent behavior in HIV-Aids prevention. Results: Factors associated with HIV-Aids prevention behavior in adolescents are knowledge, attitudes, peer support, exposure to information sources, parenting. Conclusion: Each factor is interrelated with each other so that it can change the behavior of adolescents in the prevention of HIV-Aids.

**Keywords**— Factors, risk behavior, adolescent, HIV-Aids.

## I. BACKGROUND

HIV (Human Immunodeficiency Virus) is a virus that infects white blood cells and attacks the human immune system, making the individual susceptible to other diseases. AIDS (Acquired Immunodeficiency Syndrome) is a condition that develops when the immune system becomes severely weakened due to HIV, making it difficult for the body to fight infections and other diseases. According to the WHO, there were 37.9 million reported cases of HIV/AIDS in 2018. Based on new HIV/AIDS cases, Indonesia experienced a significant increase in 2019, especially among individuals aged 15-29. One in five of Indonesia's population comprises adolescents, who have a higher likelihood of engaging in risky behavior. This is partly attributed to inaccurate and unguided sources of information, unhealthy social interactions, and the impact of technological advancements facilitating easy access to potentially harmful information for adolescents. (2,3) Behavioral changes in adolescents are generally initiated by changes in knowledge and attitudes. HIV/AIDS prevention in adolescents is closely related to individual behavior. Therefore, prevention efforts need to consider factors such as knowledge about transmission or prevention, easy access to sexual health services, reducing social stigma, and creating a safe and conducive environment for adolescents. (4,5) According to data released by The Joint United Nations Programme on HIV and AIDS (UNAIDS) in 2019, there were about 3.8 million people infected with HIV worldwide, 1.7 million people newly diagnosed with HIV, and 690,000 deaths

due to AIDS. According to UNAIDS estimates, there were 8 cases of HIV-related deaths per day among individuals aged 15 to 24, which accounts for three out of four cases of HIV overall (4). According to data released by WHO in 2019, Indonesia (5)

## II. METHOD

The research method used is literature review (literature study). The purpose of this literature review is to review and analyze articles related to consistent factors influencing or relating to the prevention of HIV-AIDS incidents in adolescents in Indonesia. Several previous studies have been published in international and national online journals, and these findings serve as the data source for this research. Data collection in this literature review study uses both domestic data through Google Scholar, with a total of 15 articles, and foreign literature from PubMed, with 4 articles.

The keywords used are 'Factors, risky behavior, adolescents, HIV-AIDS prevention.' There are 14 research articles that meet the inclusion criteria with a cross-sectional research design, targeting adolescents aged 10-25 years. The selection of articles is limited to the years 2019 to 2023.

Hasil Pencarian Prisma

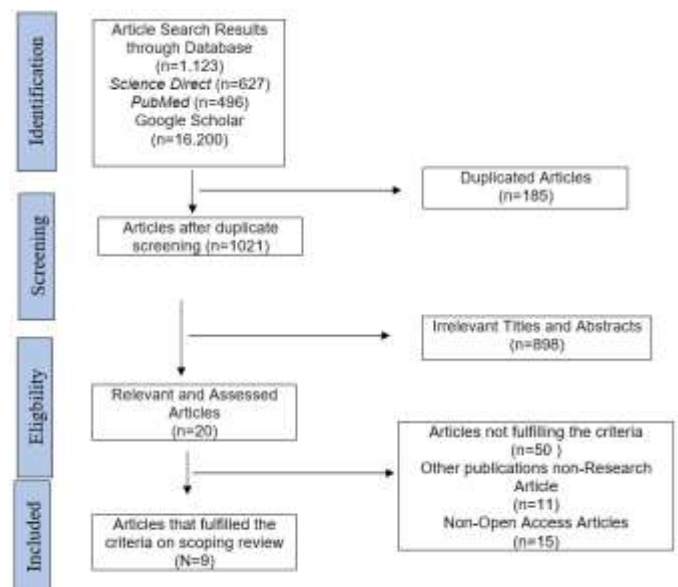


Table 1 Articles

NO	AUTHOR	JUDUL	HASIL
1	Azagoh-Kouadio Richard ,1 Yeboua Kossonou Roland,2 Yao Kouassi Christian,2 Kouassi-Kouadio Amenan Cécile,3 Aholi Jean Michel,3 Cissé Lacina,3 and Asse Kouadio Vincent2	Knowledge, Attitudes, and Practices of HIV-Positive Adolescents Regarding HIV/AIDS Prevention in Abidjan, Ivory Coast	The level of knowledge, attitudes, and practices of HIV-positive adolescents regarding HIV/AIDS transmission is insufficient. We recommend preparing a therapeutic HIV/AIDS education program for adolescents.
2	Bárbara Joana Alvarenga Carvalho 1, António Miguel da Cruz-Ferreira 1	Knowledge and Risk Behavior Regarding Human Immunodeficiency Virus Transmission Among Portuguese Health Students 2023 Jan 19	Most students are aware of the three main routes of HIV transmission, but 66.3% are unaware of the level A recommendation for HIV screening in adolescents and adults. Additionally, 59.6% of students have never been informed by their general practitioners about behaviors that pose a risk of HIV transmission or HIV screening tests. From the sample, 78.9% have never been tested for HIV. Furthermore, out of the 74.6% of sexually active students, 82.0% have had sexual intercourse without using condoms. Men are more likely to engage in sexual behavior than women. None of the respondents reported using injectable drugs, and the majority of students (69.9%) have never shared personal items.
3	Delphine Mbong Wam Iwoi1, Peter Fon Nde1,2, Euphrasia Yuh3, Emmanuel Tebit Kwenti2,4*, Edouard Katayi Tshimwanga5, Denis Tange Achiri6, Kenne Emmanuel Djunda7	Assessment of the Level of Knowledge, Attitude, and Practice Regarding the Care of People Living with HIV/AIDS among Nursing and Midwifery Students in Fako, Cameroon	Our research indicates that nursing and midwifery institutions in the Fako division should develop more targeted educational programs to reduce differences in knowledge, attitudes, and practices regarding the care of people living with HIV/AIDS (PLWHA).
4	Esther Beebwa1, Conrad Muzoora2, Scholastic Ashaba3, Sara Groves4, Fortunate Atwine5	Knowledge, attitudes, and preferred strategies regarding HIV/AIDS prevention among adolescents attending secondary schools in Southwest Uganda	There are four themes that emerge: knowledge about HIV, access to resources, perceptions of those suffering from HIV, and prevention methods. Most adolescents have basic knowledge about HIV from social media, healthcare workers, peers, and their parents. They feel sad, sorry, and compassionate towards those suffering from HIV.
5	Khodadad Azizi1, Ns. Mila Sartika S.Kep.,M.Kep.,Sp.Kep.MB2. Khodadad Azizi S.Kep: Nursing Program, Faculty of Health Sciences, Medika Suherman University; Sukatani Avenue Cikarang Utara Bekasi, Jawa Barat – 17630	Factors Related to Risky Behavior of HIV/AIDS among Adolescents at SMAN 1 Sukatani in 2022	There is a correlation between gender and risky behavior of HIV/AIDS with a p-value of 0.030 greater than the value of a (0.05) and OR 2.568. There is a correlation between knowledge and risky behavior of HIV/AIDS with a p-value of 0.000 greater than the value of a (0.05) and OR 5.898. There is a correlation between peer encouragement and risky behavior of HIV/AIDS with a p-value of 0.002 greater than the value of a (0.05) and OR 2.485.
6	Septika Dewi1, Ruhyana2 Universitas ‘Aisyiyah Yogyakarta, Siliwangi Street No. 63 Nogotirto Gamping Sleman, Yogyakarta 55292, Indonesia Septikadewi.1414@gmail.com1, ruhyana@gmail.com2, edysuprayitno@unisayogya.ac.id	The relationship of family support to HIV-AIDS prevention behavior in adolescents: literature review	That family support is interconnected, meaning we must be aware of how important the role of the family is in encouraging adolescents to behave positively. Families can provide emotional, appreciative, instrumental, and informative support. Adolescents are very interested in new things, so support is needed to prevent them from engaging in deviant behavior that could potentially transmit HIV/AIDS. Families should monitor and encourage adolescents to avoid behaviors that are detrimental to their health.
7	Ratyas Ekartika PCN*, Munica Rita H, Yuliasi Eka P Department Midwifery of Polytechnic of Health Ministry Yogyakarta, Tatabumi Street No.3 Banyuraden, Gamping, Sleman	Factors Affecting Adolescent Behavior in HIV/AIDS Prevention at SMUN 2 Sleman in 2018	The majority of respondents, 39 (66.1%), have a moderate level of knowledge about HIV/AIDS. The perception of HIV/AIDS prevention is mostly supportive, with 32 (54.2%) respondents falling into this category. Electronic media is the most common source of information, identified by 29 (49.2%) respondents. The most prevalent behavior towards HIV/AIDS prevention is exhibited by 31 (52.5%) respondents. The Chi-Square test results indicate that the knowledge level is p=0.035, and attitude is p=0.007. The most significant factor influencing adolescent behavior in HIV/AIDS prevention is attitude (p-value=0.008; PR=4.4; 95% CI=1.472-13.152).
8	<ul style="list-style-type: none"> <li>Departamento de Psicologia, Universidade Federal de Santa Catarina, Florianopolis, SC, Brazil</li> <li>Departamento de Saúde Pública, Universidade Federal de Santa Catarina, Florianopolis, SC, Brazil</li> <li>88101-260 São Jose, SC, Av. Salvador di Bernardi 505/1102, Brazil</li> </ul>	AIDS, sexuality and attitude of adolescents about protection against HIV	The primary information regarding HIV transmission related to peer influence is not significant (p < 0.05). A stable romantic relationship is the main context for sexual relationships with penetration (p = 0.001). AIDS protection is associated with three factors: the number of sexual partners, safe sex, and the duration of relationships (p = 0.001). Discussions about sexuality and the intention to use condoms encourage a positive attitude towards condom use (p = 0.001).
9	M Mwale <sup>1</sup> , A S Muula	Systematic Review: Review of Behavior Change Interventions [BCI] and their Effectiveness in Preventing HIV and AIDS in Sub-Saharan Africa	This study yielded about 200 titles and abstracts; 20 full-text articles were critically analyzed, and 17 articles were reviewed, indicating scarcity in studies published on psychosocial BCI interventions targeting adolescents in Social Hospitals. The research findings show that most of the reviewed interventions [n= 8] demonstrated improvements in knowledge and sexual

			practices.
10	Puti Sari Hidayangsih, Dwi Hapsari Tjandrarini, Rofingatul Mubasyiroh and Supanni	Factors related to risky behavior among adolescents in the city of Makassar in 2009	The research results in Makassar city show that the sampled adolescents are mostly aged 10-19 years (78 percent), female (55 percent), with junior high school education (33 percent), still in school (70%), unemployed (86%), and mostly unmarried (96%).
11	WENI WIRAWAN, No.BP. 1411216044	Factors related to risky behavior of HIV/AIDS disease among adolescents in SMAN 6, South Padang District, Padang City, in 2016	The research results indicate that 22.0 percent of respondents have high-risk behavior, 42.7 percent have low knowledge, 43.9 percent have a negative attitude, 68.3 percent have influential friends, and 82.9 percent have influential parents. Statistical tests show a significant relationship between knowledge and perception levels with risky behavior (p-value 0.05).
12	Ela Rohaeni	Factors Affecting Adolescent Risky Behavior Towards Sexually Transmitted Infections	The p-value (Sig) is 0.000 for the factors of parental role, environmental factors, and media information factors on adolescent risky behavior towards sexually transmitted infections (STIs).
13	Mia Wahdini - BKKBN, Indonesia Noormarina Indraswari - Faculty of Medicine, Padjajaran University, Indonesia Ari Indra Susanti* - Midwifery Program, Faculty of Medicine, Padjajaran University, Indonesia Budi Sujatmiko - Faculty of Medicine, Padjajaran University, Indonesia	Factors related to risky behavior in adolescents	Older adolescents, male, living in urban areas, and having mothers aged over 60 years are more vulnerable to risky behaviors. On the other hand, adolescents with higher secondary education, better understanding of reproductive health, and parents with more exposure to reproductive health information have a significant influence on reducing risky behaviors.
14	Rilyani1, Dewi Kusumaningsih2	Factors related to HIV-AIDS prevention behavior among adolescents at SMA Persada Bandar Lampung in 2015	According to the analysis, there is a significant relationship between HIV/AIDS prevention behavior among adolescents at SMA Persada Bandar Lampung in 2015 and variables such as knowledge, attitudes, exposure to information sources, and the role of peers, with p-values of 0.025, or 2.66, $\alpha$ 0.05, and CI 1.20–5.90 for knowledge; p-value of 0.009, or 3.08, $\alpha$ 0.05, and CI 1.38–6.86 for attitudes; p-value of 0.000, or 5.34, $\alpha$ 0.05, and CI 2.18–13.05 for exposure to information sources; and p-value of 0.021, or 2.83, $\alpha$ 0.05, and CI 1.24–6.47 for the role of peers.
15	rsyah dunnas jamka, no. Bp. 1811212053	The factors related to adolescent behavior towards HIV/AIDS prevention at SMA Negeri 6 Padang in the year 2022	The results show that 65.6 percent have high knowledge, 56.3 percent have a positive attitude, 65.6 percent are exposed to media exposure, 54.2 percent are responsible as peers, 54.2 percent are responsible as teachers, 51.0 percent are responsible as parents, and 65.6 percent behave well in preventing HIV/AIDS. Multivariate test results show that attitude is the most associated variable (p=0.000; OR=9.296); knowledge (p=0.001); attitude (p=0.000); media exposure (p=0.020); peer role (p=0.059); and parental role (p=0.062).
16	Olivya millyan samber, no.bp. 1611213018	Factors Related to Adolescent Behavior in Preventing the Transmission of HIV/AIDS at SMAN 4 Mandau in 2021	The results of the study show that 45.1% of students exhibit poor behavior, 47.7% have low knowledge, 50.5% have a negative attitude, 43.2% are not exposed to media exposure, 60.4% do not have a peer role, 58.5% do not have a teacher role, and 44.1% do not have a parental role in preventing the transmission of HIV/AIDS.
17	Puti sari hidayangsih, dwi hapsari tjandrarini, rofingatul mubasyiroh and Supanni	Factors related to risky behavior in adolescents in the city of Makassar in 2009	The results of the study conducted in Makassar shows that the surveyed adolescents were mostly aged 10-19 years where 78 percent are male and 55 percent are female with 33 percent in junior high school education, 70 percent still attending school and 86 percent unemployed where the majority are still unmarried.
18	Tiara anggraini1, murdiningsih2,	Analysis of Factors Related to Adolescent Behavior in HIV/AIDS prevention	The chi-square test results revealed that there is a relationship between knowledge (p-value = 0.004), attitude (p-value = 0.000), and adolescent behavior in HIV/AIDS prevention. However, there is no relationship between the source of information and adolescent behavior in HIV/AIDS prevention, with a p-value of 0.809.

### III. RESULT

The snowballing technique, which utilizes the reference lists of articles, was employed to search for new articles to be used for the research. Nineteen articles were found based on the keyword searches; fifteen articles were identified using inclusion and exclusion criteria; twelve articles were discovered based on title and abstract; and ten articles were selected for use, comprising four international journal articles and six national journal articles.

### IV. DISCUSSION

The disease that attacks the immune system, such as HIV/AIDS, is one of the diseases that occurs worldwide and is greatly feared. Because this disease makes a person vulnerable to easily contracting other diseases. (14) Until now, no specific medicine or therapy has been found for its cure (11,15), so if someone suffers from this illness, their life expectancy is very low. The numerous factors that influence risky behavior changes in adolescents in preventing

HIV/AIDS can affect an individual's attitude toward efforts to prevent HIV/AIDS transmission. An individual's knowledge about a particular object varies among individuals, depending on how they perceive it.(4,5)

From several research results above, it appears that several factors can influence individuals in adopting preventive behaviors against HIV transmission. These factors include knowledge about HIV/AIDS and its transmission, interaction with peers, the influence of parental roles or parenting styles, and the impact of easy access to social media such as the internet, where individuals can easily obtain information about sex and other risky behaviors without proper supervision. Someone's knowledge can affect their behavior, and an individual's age tends to vary in their attitudes or behaviors related to HIV/AIDS prevention.(12)

From several statements above, there is one journal according to Tiara Anggraini stating that there is no relationship between information sources and adolescent behavior in preventing HIV-AIDS. This is slightly different from another journal in general, which states that there is an influence of information sources on adolescent behavior in preventing HIV-AIDS.(4,13)

#### V. CONCLUSION

Based on the literature review from the results of several studies above, it can be concluded that factors such as knowledge, risky behavior, and the role of parents can greatly influence adolescent behavior in preventing HIV-AIDS.

The findings from this literature review for adolescents indicate an improvement in their knowledge of avoidable risky behaviors. This information can be incorporated into teaching materials for education at the middle school and high school levels, serving as a reference for parents to guide and supervise their adolescent children.

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