

Epidemiology of Mental Health In Adolescents: A Literature Review Of Causes and effective interventions

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Received: April 19, 2025

Revised: April 28, 2025

Accepted: May 15, 2025

Published: May 24, 2025

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Abstract: This study aims to examine the prevalence, causes, impacts, and effectiveness of interventions related to mental health disorders among adolescents in Indonesia. Based on data from the WHO and the 2018 Basic Health Research (Riskesdas), mental disorders among adolescents such as depression, anxiety, and behavioral disorders show high prevalence rates. This research also identifies contributing factors at the individual, family, social, and digital levels, and analyzes the long-term impacts of untreated mental health issues. In addition, the effectiveness of various interventions whether school-based, family-based, or digital technology-based is evaluated. The study reveals existing gaps in mental health services, including a lack of professional personnel, social stigma, and limited access in certain areas. The conclusion of this study emphasizes the need to strengthen mental health service capacity and to develop more inclusive and culturally sensitive policies and interventions to address adolescent mental health issues.

Keywords : *mental health, adolescents, prevalence, causes*

How to cite: Rizkiyanti Alwi, T., Sunarsih, S., Ibrahim, A. Z., Sudirman, S., Yani, A., & Amalinda, F. (2025). Epidemiology of mental health in adolescents: A literature review of causes and effective interventions. Journal of Health and Humanity, 2(1), 1–11. <https://doi.org/10.62872/pysqyt79>

INTRODUCTION

Adolescent mental health is an increasingly crucial issue in the field of public health. Adolescence is a complex transitional phase from childhood to adulthood, marked by significant biological, psychological, and social changes. These changes often make adolescents more vulnerable to emotional pressure, identity conflicts, and social stress. In many cases, mental health disorders first emerge during this period, making it a critical time for early detection and intervention.

Globally, the prevalence of mental health disorders among adolescents shows alarming figures. UNICEF data from 2019 estimates that one in seven adolescents experiences a mental



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disorder, equivalent to around 166 million adolescents worldwide. Disorders such as depression, anxiety, and behavioral problems are the most commonly found. In Indonesia, data from the 2018 Basic Health Research (Riskesdas) shows an increase in the prevalence of emotional mental disorders among adolescents and young adults. The prevalence of emotional mental disorders in the 15–24 age group reached 10%, which is above the national average. Unfortunately, the current mental health services are still not sufficiently youth-friendly and accessible for this age group, whether in terms of facilities, professional personnel, or service approaches. This presents a major challenge in efforts to address and prevent mental health problems among Indonesian adolescents.

Mental health disorders that are not promptly identified and treated can have serious impacts on adolescents' lives. These problems not only interfere with the learning process and academic achievement but can also affect social relationships, increase the risk of substance use, and lead to suicidal thoughts and attempts. Furthermore, untreated mental disorders can persist into adulthood, affecting an individual's productivity and quality of life. The causes of mental disorders in adolescents are complex and multidimensional. From the individual perspective, hormonal changes and psychological development during puberty can trigger emotional instability. Family-related factors such as authoritarian parenting styles or lack of parental attention, as well as conflicts within the household, further worsen adolescents' psychological conditions. In addition, social factors such as academic pressure, bullying, and excessive exposure to social media including cyberbullying also significantly contribute to the increasing incidence of mental health disorders.

With the rising prevalence of mental disorders, the need for effective interventions becomes increasingly urgent. Various approaches have been developed to address this issue, ranging from school-based programs such as Social-Emotional Learning (SEL), Cognitive Behavioral Therapy (CBT) in clinical settings, to digital-based interventions such as stress management applications. Support from family and a positive social environment has also been proven to be protective factors in preventing and reducing symptoms of mental disorders. However, despite numerous studies, there is still a gap in the literature that systematically summarizes the causes and interventions for adolescent mental health in a comprehensive manner, especially within different cultural and social contexts. Many studies remain fragmented and fail to integrate interdisciplinary approaches.

This study aims to comprehensively review the epidemiology of adolescent mental health by examining the prevalence, common types of disorders, as well as relevant global and national trends. Furthermore, this study also seeks to identify the various complex and multidimensional causes of adolescent mental health disorders, including individual, family, social, and digital environmental factors. Moreover, this research aims to compile and analyze various forms of interventions that have been proven effective in preventing and addressing mental disorders among adolescents, including school-based, family-based, clinical services, and digital technology-based interventions. Through a systematic literature review approach, the findings of this study are



expected to contribute to the development of more contextual and applicable promotive and preventive strategies in efforts to improve adolescent mental health across various social and cultural backgrounds.

METODOLOGI

This study employs a descriptive qualitative approach using a systematic literature review method to evaluate and synthesize scientific findings related to the epidemiology of adolescent mental health, its contributing factors, and proven effective interventions. This method was chosen to provide a comprehensive and in-depth overview of the research developments in this topic, as well as to identify existing knowledge gaps

The data collection process was carried out by searching for scientific articles published within the last five years (2019–2024) from various international academic databases such as PubMed, Scopus, ScienceDirect, and Google Scholar. The keywords used in the literature search included: *mental health in adolescents, epidemiology of youth mental disorders, risk factors, mental health interventions, school-based mental health programs, digital mental health interventions, and adolescent depression/anxiety*. The inclusion criteria for this study covered articles written in English or Indonesian, published in peer-reviewed journals, and relevant to the topic of adolescent mental health. Articles of an opinion or editorial nature, or those lacking a clear methodology, were excluded from the analysis.

After the search process, all relevant articles were selected through a screening phase of titles and abstracts, followed by a full-text review to ensure alignment with the research focus. Data from each study were then extracted using a systematic format that included: the author's name, year of publication, study location, research design, target population, key findings on contributing factors, and the type of intervention used along with its level of effectiveness. The data analysis was conducted thematically to categorize the findings into main categories: prevalence and types of mental disorders, contributing factors (individual, family, social, and digital), as well as the forms and effectiveness of interventions.

With this approach, the study is expected to provide a strong scientific foundation for the development of adolescent mental health policies and the design of evidence-based intervention programs that are culturally and socially appropriate for adolescents in both Indonesia and globally.

Table 1. Inclusion Criteria for Literature Review

Category	Inclusion Criteria
Publication Type	Scientific articles published on https://scholar.google.com



Journal Specifications	Top international and national journals published within the last 5 years
Journal Indexes	Google Scholar, SINTA (1–6), Scopus (Q1–Non-Q), GARUDA, Crossref, ICI
Publication Year	2019–2024
Research Country	Indonesia and other countries
Variables	Causes of adolescent mental health problems and the effectiveness of intervention strategies
Field of Study	Medicine, Public Health, Psychology, Social Science, and General Health
Study Type	Theoretical and empirical studies
Keywords	<i>Mental Health Education for Adolescents, Effective Intervention Programs, Depression, Anxiety, Psychosocial Risk, Preventive Strategies</i> (in English and Indonesian)
Subjects	Adolescents and health professionals involved in mental health education and intervention efforts

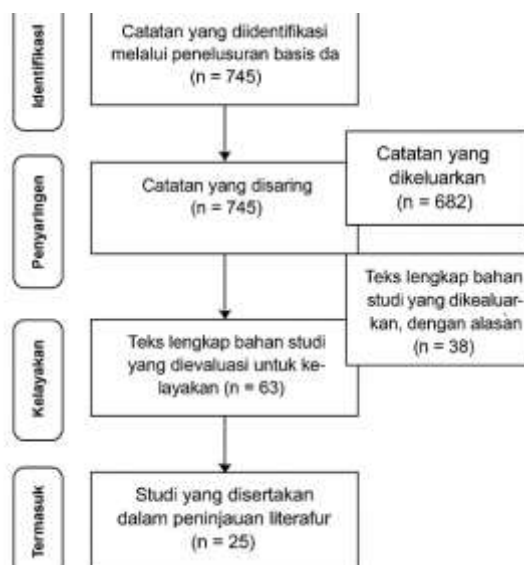


Fig 1. PRISMA Flow Diagram

RESULTS AND DISCUSSION

Through a comprehensive literature review using the Systematic Literature Review (SLR) method guided by the PRISMA framework, a total of 745 articles were obtained from various academic databases such as Google Scholar, Scopus, SINTA, GARUDA, Crossref, and ICI.



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After applying strict inclusion and exclusion criteria, only 38 articles were deemed eligible for in-depth analysis. The selected articles represent a variety of studies conducted in different countries, including Indonesia, and were published between 2019 and 2024. These studies focused on the epidemiology, underlying causes, and intervention strategies related to mental health issues in adolescents.

The analysis produced the following key findings:

1. Mental health problems such as depression, anxiety, and self-harming behavior remain prevalent among adolescents and show an increasing trend globally.
2. Several contributing factors have been identified, including biological predisposition, family and peer relationships, academic pressure, use of social media, and limited access to mental health services.
3. Effective intervention strategies include school-based mental health programs, digital mental health tools, family-based therapies, and community-level awareness initiatives.
4. The success of these interventions often depends on factors such as program sustainability, stakeholder involvement (schools, parents, and healthcare providers), and cultural sensitivity.
5. The main barriers to implementation include stigma surrounding mental disorders, limited resources, and gaps in mental health policy and infrastructure.

A PRISMA flow diagram is included to provide a clear visual representation of the literature selection process, covering the stages of identification, screening, eligibility assessment, and final inclusion of relevant studies.

Prevalence of Mental Health Disorders in Adolescents

Adolescent mental health is currently a critical global concern. According to data from the World Health Organization (2021), approximately 1 in 7 adolescents worldwide experience mental disorders, which typically begin before the age of 14. In Indonesia, the 2018 Basic Health Research (Riskesdas) reported that around 10% of adolescents suffer from emotional disorders characterized by symptoms of depression and anxiety. The most common mental health disorders include depression, anxiety disorders, and deviant behaviors such as aggression or social withdrawal. Ironically, the gap between treatment needs and the availability of adolescent mental health services remains significant, especially in developing countries that face limitations in professional resources and school or community-based services.

Main Causes of Mental Disorders

Mental health disorders in adolescents are triggered by a variety of interrelated factors. On an individual level, hormonal changes during puberty, identity-seeking, and low self-esteem are primary triggers. Family factors also play a significant role, such as inconsistent parenting, internal conflicts, or even verbal and physical abuse that can cause long-term psychological stress. Socially, high academic pressure, bullying experiences, and social isolation can worsen adolescents' mental conditions. In addition, technological advancements bring new challenges, such as excessive social media use, exposure to negative content, and cyberbullying, all of which seriously impact adolescents' emotional well-being. The interaction among these factors creates complex psychological burdens and increases the risk of mental disorders.



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Impacts of Mental Health Disorders

The impacts of mental health disorders on adolescents are extensive and affect various aspects of their lives. In education, mental disorders cause decreased concentration, declining academic performance, and increased absenteeism or even school dropouts. In social relationships, adolescents with mental disorders often struggle to form friendships and experience isolation. Many also fall into substance abuse or engage in other risky behaviors. Most concerning is the rising tendency of suicide among adolescents with severe depression. If not treated early and appropriately, these mental disorders may develop into chronic conditions that persist into adulthood, affecting productivity and quality of life.

Effectiveness of Existing Interventions

Various interventions have been developed to address adolescent mental health issues. At the school level, programs such as Social Emotional Learning (SEL), mindfulness training, and anti-bullying campaigns have proven effective in enhancing resilience and emotional well-being. Cognitive Behavioral Therapy (CBT) has also shown significant results in reducing symptoms of anxiety and depression. Additionally, family-based approaches that involve parents in counseling or family therapy sessions can strengthen emotional support at home. Digital interventions such as stress management apps, online therapy, and AI-based chatbots are increasingly being developed and have proven helpful for adolescents in managing their emotions independently. Peer support through discussion groups or mentoring is also very beneficial in fostering connectedness and reducing loneliness.

Gaps and Challenges

Despite the development of various interventions, there are still several gaps and challenges that need to be addressed. In developing countries like Indonesia, the lack of professionals such as psychologists and counselors in school settings is a major barrier. Furthermore, the strong social stigma surrounding mental disorders discourages many adolescents and their families from seeking help. There is also a literature gap due to the lack of studies that adapt interventions to local sociocultural contexts. Coordination among sectors—schools, healthcare services, and government policies—is still suboptimal, making prevention and treatment efforts unsystematic and poorly integrated.

Recommendations

To address existing problems, a more comprehensive and inclusive approach is needed. First, school-based programs should be expanded and integrated into the formal curriculum as part of character and health education. Second, teachers and school counselors need adequate training to detect and address mental disorders early. Third, the strengthening of national policies that support adolescent mental health should be a priority, including the provision of youth-friendly and accessible services. In addition, responsive digital applications and platforms need to be developed to meet local needs, including language and cultural aspects. Finally, longitudinal research is needed to understand the long-term effects of various interventions and to adapt them to ever-changing social dynamics.

Comparative Prevalence of Mental Health Disorders in Adolescents

The prevalence of mental health disorders among adolescents is alarmingly high worldwide. Based on WHO data (2021), around 1 in 7 adolescents experience mental health disorders, with depression and anxiety being the most common. This data highlights that adolescent mental health disorders are a global health issue that must be urgently addressed. In Indonesia, Riskesdas 2018 reported that 10% of adolescents



suffer from emotional disorders, a significant figure even though slightly lower than the global average. These prevalence differences may be influenced by various factors, including survey methods and definitions of mental disorders applied in each country. In developed countries, for instance, there is more access to adequate mental health services, making prevalence more accurately recorded, whereas in developing countries like Indonesia, there are often gaps in access and early detection. Different social, cultural, and healthcare systems also contribute to these prevalence variations.

Factors Contributing to Adolescent Mental Health Disorders

Mental health disorders in adolescents are caused by various interacting factors. Individual factors, such as hormonal changes during puberty, identity crises, and low self-esteem, play a key role in vulnerability. Within families, authoritarian or permissive parenting styles, as well as family conflicts, can worsen adolescent mental health. Social factors, including high academic pressure and bullying, are often major stress and anxiety triggers. In the digital era, social media and cyberbullying worsen the condition, as adolescents are more vulnerable to the virtual world's social expectations and negative content. In Indonesia, sociocultural factors such as pressure to achieve academically and fulfill family expectations are often more dominant, considering the country's strong collectivist values. These factors often interact with one another, creating cumulative risks that are increasingly difficult to manage without proper support.

Impacts of Mental Health Disorders

Unaddressed mental health disorders can lead to very broad impacts for adolescents. In Indonesia, the effects on academic achievement are evident through high absenteeism and declining school performance. Additionally, these disorders often disrupt social and family relationships, worsening adolescents' existing social isolation. In the long term, adolescents with untreated mental disorders are at risk of facing more serious issues, such as substance abuse, deviant behavior, and even suicide attempts. Moreover, mental disorders that arise during adolescence often persist into adulthood, causing enduring disruptions. This can affect their long-term quality of life. The impact may also vary depending on socioeconomic status and residential location (urban vs rural), where urban adolescents may have better service access, while rural adolescents often lack adequate support.

Effectiveness of Existing Interventions

Mental health interventions for adolescents have been implemented in various forms in Indonesia. School-based programs such as Social Emotional Learning (SEL) and anti-bullying initiatives have proven effective in increasing emotional and social awareness and preventing harmful bullying behaviors. Cognitive Behavioral Therapy (CBT) has also proven effective in reducing symptoms of anxiety and depression in adolescents, although the limited number of professionals in Indonesia is a challenge to large-scale implementation. Furthermore, family support through family counseling has shown positive outcomes in helping adolescents cope with mental health issues. With technological advances, digital interventions such as stress management apps and AI-based online therapy are growing and showing promising results, though access remains limited. However, the biggest challenge in implementing these programs in Indonesia is the lack of training for educators and school healthcare staff, as well as cultural barriers that may prevent adolescents and families from seeking help.

Gaps in Services and Knowledge

In Indonesia, the gap in mental health services for adolescents is still significant. Limited access to mental health facilities in schools and communities, as well as a lack of trained professionals, are the main challenges in providing needed support. Additionally, there remains a strong social stigma surrounding



mental health, causing many adolescents and their families to avoid seeking help. Limited understanding of mental health issues among both parents and educators exacerbates the situation. Many parents do not yet understand the importance of adolescent mental health, and teachers are often not trained to recognize signs of mental disorders in their students. This gap in knowledge and services worsens adolescent mental health conditions, given the need for comprehensive and integrated support across schools, families, and communities.

Policy and Practice Recommendations

To improve adolescent mental health in Indonesia, greater efforts are needed to expand school-based programs that include education on mental health and socio-emotional skills. Strengthening mental health policies that support capacity building for educators and school health workers is essential. Furthermore, it is important to develop culturally appropriate and locally spoken digital intervention apps so that adolescents in remote areas can easily access them. National policy must also prioritize the integration of mental health services into Indonesia's education and healthcare systems. Further research is also necessary to evaluate the long-term impact of existing interventions and to better understand the more dominant risk factors in Indonesia.

Research Limitations and Future Directions

Some limitations of this study include a limited sample size and the methodologies used. Further research with larger samples and longitudinal methods is necessary to evaluate the long-term effects of the implemented interventions. Research should also consider cultural factors that influence public perceptions of mental health, as well as the role of social policies in supporting adolescent mental well-being.

CONCLUSIONS

This study indicates that mental health disorders among adolescents in Indonesia are a significant issue that requires serious attention from various stakeholders. The prevalence of mental disorders such as depression, anxiety, and deviant behavior is relatively high, with complex contributing factors, including individual, family, social, and digital influences. The resulting impacts are extensive, ranging from decreased academic performance to an increased risk of deviant behavior and suicide attempts. Although various interventions have been implemented school-based, family-based, and digital their effectiveness remains limited due to several challenges, such as a shortage of professional personnel, social stigma, and cultural barriers. Therefore, greater efforts are needed to enhance the capacity and accessibility of adolescent mental health services in Indonesia, including the development of culturally sensitive and technology-based interventions. This study also highlights the need for more holistic policies that encompass education, health, and social aspects, as well as stronger support from parents, schools, and communities to create a healthier environment for adolescent mental development.

ACKNOWLEDGMENTS

We would like to express our sincere gratitude to everyone who has supported and encouraged us throughout the process of completing this research. Special thanks to our families, friends, and all



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respondents who contributed directly or indirectly. We hope this research can provide valuable insights for all relevant stakeholders.

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