

# Risk Factors for Suicide among Adolescents in Bangka Belitung Island, Indonesia: a Qualitative Study Approach

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## ABSTRACT

**Background.** Suicide among adolescents is a critical global health problem. Identifying risk factors for suicide in adolescents is crucial because it is one of the most severe mental health issues and can result in loss of life. Risk factors serve as indicators that have the potential to bring life to an end. However, people around adolescents often display indifference and even tend to overlook the suicide risk factors experienced by them.

**Objective.** This study aimed to explore the risk factors for suicide in adolescents in Indonesia.

**Methods.** This study used qualitative descriptive research design conducted at State Vocational High Schools (SMKN) and Puskesmas. Data collection was done through Focus Group Discussion (FGD) of 10 students, and in-depth interviews of eight participants (two parents of adolescents who attempted suicide, two guidance counseling teachers, two adolescents who attempted suicide, and two mental nurses) The data were analyzed using thematic analysis.

**Results.** The risk factors for suicide experienced by adolescents are biological, psychological, and social factors. These risk factors for suicide are stressors that contribute to adolescents engaging in suicidal behavior. Identifying the risk factors experienced by adolescents is crucial for suicide prevention.

**Conclusion.** The risk factors that lead to suicide in adolescents encompass biological, psychological, and social factors. A thorough understanding of suicide among parents, teachers, and peers can significantly assist in implementing suitable prevention measures and interventions for adolescent suicide.

**Keywords:** adolescent, risk factors, biological factor, psychological factor, social factor, suicide

## INTRODUCTION

An attempted suicide is referred to as a nonfatal act in which the individual deliberately puts himself at risk of death. **Suicide is the fourth leading cause of death among 15–29-year-olds and seventy-seven percent of global suicides occur in low- and middle-income countries.**<sup>1</sup> In 2018, the prevalence of suicide among adolescents aged 10–24 years in America was 10.7% per 100,000 population.<sup>2</sup> In Indonesia, the prevalence of suicide increased from 2007 to 2015, with rates among adolescent girls rising from 4.8% to 6.2%, and among adolescent boys from 3.2% to 4.0%.<sup>3</sup> The rise in suicide cases among adolescents can be attributed to the disregard of suicide risk factors by those around them, which ultimately leads to the tragic outcome of suicide.<sup>4,5</sup>

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Individual, family, environmental, and cultural factors are found to contribute to the risk of suicide in adolescents. Suicide can be seen as a psychological phenomenon, a social phenomenon, and as a phenomenon related to mental disorders, genetic, environmental, and biological issues.<sup>6-9</sup> Thus, suicide is defined by many factors and a deep understanding of this issue is necessary for the prevention and rehabilitation of those attempting suicide. Individuals experiencing suicidal thoughts do not necessarily desire death, but often feel trapped and see suicide as the only option to escape their current problems.<sup>10</sup> This highlights the importance of support and attention from those around adolescents who are facing emotional or mental difficulties, as it can provide them with the necessary help to overcome their challenge, a concept often referred to as a "cry for help".<sup>11</sup> However, it is unfortunate that people often show apathy and tend to disregard the suicide risk factors experienced by adolescents. This underscores the importance of researchers delving into suicide risk factors to prevent suicide among adolescents.

## METHODS

### Study Design

This study utilized a qualitative descriptive approach to investigate the risk factors for suicide experienced by adolescents.<sup>12</sup> The research was conducted in State Vocational High Schools (SMKN) and Community Health Centers (Puskesmas) in the Bangka Belitung Island Province, Indonesia. The selection of this location was made due to a suicide attempt involving a student. The study was conducted from September 2022 to November 2022.

### Participants

Participants were recruited using information sessions about the study on mental health problems by the guidance and counselling teacher. Recruitment was conducted in school settings in a provincial city and invitations were sent directly to potential candidates. Eligible participants contacted the guidance and counselling teacher following expression of interest. An initial meeting was arranged wherein the researchers provided information about participation in the study, and opportunity to clarify any uncertainties about participation, and obtained informed written consent. If the prospective participant continues to decline, the researcher respects their decision without coercion or pressure to participate. The researcher notes this refusal and seeks alternative participants who are willing to participate.

The study involved a total of 18 participants, divided into five groups. The first group consisted of 10 adolescents who met the following inclusion criteria: 1) students, 2) have friends who had attempted suicide, and 3) ages between 12 and 18 years. The second group included two teachers who met the following inclusion criteria: 1) guidance counselors, 2) have experience dealing with a student's suicide attempt,

and 3) willing to participate. The third group comprised of two parents who met the following inclusion criteria: 1) have a family member who had attempted suicide, and 2) have no communication barriers. The fourth group consisted of two adolescents who had attempted suicide, meeting the criteria of 1) being adolescents who had made a suicide attempt, 2) ages between 12 and 18 years, and 3) have no communication barriers. Finally, the fifth group involved two nurses who met the following inclusion criteria: 1) mental health program nurses, 2) have a minimum D3 Nursing education, and 3) have treated students who had attempted suicide.

### Data Collection

Data for this study were collected through a focus group discussion (FGD) conducted on 10 adolescents who had friends who attempted suicide and four groups of participants had in-depth interviews conducted on two BK teachers who had handled students who had attempted suicide, two, parents of adolescents who had attempted suicide, and two nurses who had treated probationary adolescents suicide. The same guide of questions was used for both interviews and FGDs. The consultation guide comprised questions and prompts about the following key areas of perspectives on factors contributing to suicide attempts among adolescents. Each group session lasted between forty-five minutes and one hour, and all sessions were digitally recorded and transcribed by the researchers. The transcript samples were anonymized and distributed to the study team to support analysis.

### Data Analysis

In this study, thematic analysis techniques was used to analyze FGDs and in-depth interviews. One of the advantages of this approach is that it provides flexibility for theoretical frameworks. We follow a 6-step approach in analyzing interview transcripts: familiarize ourselves with the data, generate initial codes, search for themes, review themes, define and name themes, and generate reports.<sup>13</sup> Analysis was conducted manually using Microsoft Excel and coded segments of each transcript were marked with quotes linking emerging themes in Excel and indicating participant type. To ensure coding consistency, two researchers coded the transcript independently. Next the themes that emerged from the coding process were discussed among the study team analysts to reach consensus and to further illustrate how the data were interpreted.

### Ethical Considerations

The Nursing Faculty of Universitas Indonesia Ethics Committee granted ethical clearance with identity number KET 229/UN2.F12.D1.2.1/PPM.00.02/2022.

## RESULTS

The participants in this study were 18 people assigned with a code number - 10 teenagers who had friends who

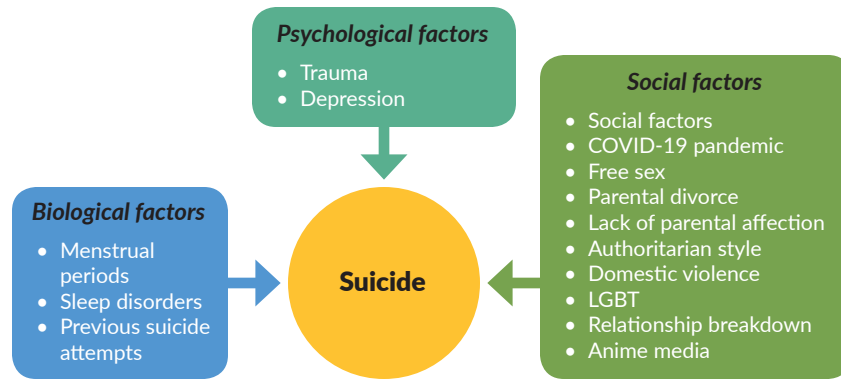


Figure 1. Risk factors for suicide.

attempted suicide (code number R1-R10), two BK teachers who had handled students attempting suicide (code number GBK1-GBK2), two parents of adolescents attempting suicide (code number ORT1-ORT2), two adolescents who attempted suicide (code number RPB1-RPB2), and two nurses who had treated adolescents who attempted suicide (code number P1-P2). In this finding, there is a dynamic, unique, and complex relationship between a single risk factor or a combination of other interrelated risk factors for suicide, encompassing biological, psychological, and social factors. Figure 1 summarizes the participants' responses during the interview.

### Theme: Biological Factors

In this study, the biological factors can increase the risk of suicide in adolescents. The category of biological factors includes a history of suicide attempts, menstrual periods, and sleep disorders.

Among participants, three people answered that a history of suicide attempts was one of the risk factors for suicide in adolescents.

*"...she had consumed all the anti-depressant drugs given by the psychiatrist so she overdosed..."* (GBK1)

*"...That's it, her parents just wanted to be called to school after their daughter was told by the doctor that she was depressed and had wanted to commit suicide..."* (GBK1)

*"I got information from her aunt that she had wanted to commit suicide several times..."* (ORT1)

Two participants answered that menstrual period is one of the risk factors for suicide in adolescents.

*"...when she has her period, she has premenstrual syndrome (PMS), her emotional changes are high and her tone is a bit angry. I will not ask much because I know her condition, so I know she has a suicide attempt from Mrs. W."* (ORT1)

*"During menstruation and when I'm anxious like that, in my head I think of suicide, I'm more emotional, brother."* (RPB1)

Five participants answered that sleep disorder is one of the risk factors for suicide in adolescents.

*"If you observe and you have trouble sleeping, your mind wants to die, it's because your mind is chaotic and disturbed."* (P1)

*"Sometimes punishing him and having trouble sleeping, so because of insomnia, chaotic thoughts and suicidal thoughts are high."* (P2)

*"She often wakes up in her sleep, something like that, she says her mind is messed up, always thinking about suicide, so I often look at her handphone, every time she is still online, I video call."* (ORT1)

*"It was insomnia and nightmare, I didn't want to think about it but it occurred to us to commit suicide."* (RPB1)

*"Lack of sleep, sometimes we can't sleep or just don't want to sleep, now that situation makes us mess up and think about suicide, brother."* (RPB2)

### Theme: Psychological Factors

Psychological factors (unpleasant experiences and depression) can increase the risk for suicide in adolescents.

Two participants answered that unpleasant experience is one of the risk factors for suicide in adolescents.

*"...She was traumatized, by sexual trauma, so she was stressed, she was traumatized as a child. But her parents did not notice, she thought it was an ordinary abuse, apparently had an impact when she was a teenager. She was in daydreaming class for quite a while, so I referred her to a psychologist..."* (GBK1)

*"...like being slapped, pinched, thrown things at, continues to often see parental quarrels where the quarrel traumatized R until now. Not only fighting but also using items such as knives, sharp weapons, and that's what scares R until now..."* (RPB2)

Three participants answered that depression is one of the risk factors for suicide in adolescents.

*"...That's why her parents just wanted to be called to school after their child was told by doctor 'H' to be depressed..."* (GBK1)

*"...Previously like feeling stressed and had headaches, consulted a psychologist, after that in check depression, something like that. After that, my mother and sister knew, then the condition changed like they started to encourage and understand."* (RPB1)

*"My friend is the cause of his depression, my brother..."* (R3)

### Theme: Social Factors

Social factors can increase the risk for suicide in adolescents. Social factors include COVID-19 pandemic, free sex, parental divorce, lack of parental affection, authoritarian style, domestic violence, LGBT, relationship breakdown, and anime media.

Three participants answered that COVID-19 pandemic is one of the risk factors for suicide in adolescents.

*"At that time during online school days, she was very suicidal, but after she went back to school everyday she had met friends, and many activities were reduced."* (GBK1)

*"But I am also bored during COVID, brother, if I am alone when there is a problem or I am upset with myself, then negative thoughts of wanting to kill myself come out, brother."* (RPB1)

*"It feels lonely, brother because you can't meet friends, and the learning system is also destroyed, now that's when it feels like we are thinking about suicide, brother, but I can't tell you what the reason is..."* (RPB2)

Two participants answered that free sex is one of the risk factors for suicide in adolescents

*"I apologize for saying this, but there is someone here engaging in promiscuous behavior."* (GBK2)

*"Finally, two individuals have also embraced a lifestyle of promiscuity, which increases the likelihood of children ending up in such circumstances. Furthermore, just yesterday, two individuals openly solicited their services as paid companions."* (GBK1)

Six participants answered that parental divorce is one of the risk factors for suicide in adolescents

*"But indeed, the main factor is that the parents, the house, is not comfortable for them, so if I ask in class, who wants to go home early, right? None. They want to go home early but not to their houses, they just want to go out. So it's pressure for them at home, maybe this has many factors, like parents, and then the high divorce rate here..."* (GBK1)

*"I once talked to a child whose background turned out to be from a broken home, and they just follow the trends without knowing the consequences."* (GBK2)

*"Mom and Dad have separated, and Mom has remarried, so the time for Mom and R has become scarce."* (RPB2)

*"They are from families with a high divorce rate."* (P1)

*"Due to issues of family conflicts and divorces."* (R10)

*"Then, because of a broken home, he developed a liking for smoking like that."* (R1)

Three participants answered that lack of parental affection is one of the risk factors for suicide in adolescents.

*"Girls feel more comfortable with their mothers, but her mother doesn't understand, doesn't appreciate, doesn't want to listen, and doesn't accept her."* (GBK1)

*"The lack of affection from her father."* (P2)

*"The lack of affection from both parents, whether it's from the father or the mother."* (RPB2)

Four participants answered that authoritarian parenting is one of the risk factors for suicide in adolescents.

*"But she has mentioned that her father tends to get angry easily, meaning he often can't control his words, which hurts to hear. Sometimes, teenagers want this or that, but they are prohibited. Sometimes, parents often use a questioning tone, and her father would say things like 'Your older sibling is like this, you should be like that too, don't be like this,' according to her."* (ORT2)

*"...when parents get angry, their words hurt, sis. For example, the words they use can be painful, it feels like they're killing us. Everything I do is not allowed, I can't come home late without being questioned constantly."* (RPB1)

“So, they are being compared to their older sibling, like, their older sibling used to be like this, not like you, and that’s a difference...” (GBK1)

“Looking at the child, it’s clear that the pressure from their family is high. The family expects them to do A, but they choose to do B. The child said, for example, at home, they want to do something a certain way, but their parents say it’s not allowed...” (P2)

Two participants answered that domestic violence is one of the risk factors for suicide in adolescents.

“...since childhood, R has been unlucky, always experiencing violence like being slapped, pinched, and having objects thrown at them.” (RPB2)

“...there is also domestic violence, there are also those who are frequently beaten, and in the end, they dropped out of school.” (GBK1)

Four participants answered that LGBT is one of the risk factors for suicide in adolescents.

“In 10<sup>th</sup> grade, there was a friend who had a trauma because of being a lesbian, so she became traumatized to make friends and be close to us...” (R2)

“Yes, what R2 said about being a lesbian is true.” (R4)

“Yes, I have heard about lesbians...” (R1)

“Yes, I have heard about it. They say that A is like a lesbian.” (R5)

Three participants answered that relationship breakdown is one of the risk factors for suicide in adolescents.

“...In junior high school (SMP), there was a friend who liked a boy but he disappointed her. So, she became stressed and wanted to harm herself by cutting her wrists. She said she wanted to die and often had the urge to cut her wrists. After that, she posted a picture with me (on social media).” (R1)

“Hey, there’s another one, but not directly, just through WhatsApp. So, this person’s boyfriend never paid attention to her, while this friend P9 was sincere, genuine, and kind to her boyfriend. When they broke up, she said she wanted to end her life, saying there was no other way. Then R9 said, ‘you can’t say that,’ and she replied, ‘God is unfair,’ why does she end up with someone who doesn’t truly love her.” (R9)

“Well, there were a few friends, P7, during junior high school who self-harmed by cutting their wrists because of their love for their boyfriends and when they were dumped.” (R7)

Ten participants answered that anime is one of the risk factors for suicide in adolescents.

“...like tired of wanting to self-harm. She just prefers to watch what is the name? Anime... (answered by all FGD participants)” (R4)

“anime...” (R1)

“.. watch anime.” (R2)

“anime...” (R3)

“anime...” (R5)

“...watch anime...” (R6)

“...anime...” (R7)

“...anime...” (R8)

“...anime...” (R9)

“...anime...” (R10)

## DISCUSSION

Suicide among adolescents is a serious issue that needs attention. This study was conducted to identify biological, psychological, and social risk factors for adolescent suicide. Biological factors associated with suicidal risk among youth include menstrual periods, sleep disorders, and previous suicide attempts. Menstrual issues, such as menorrhagia, oligomenorrhea, and irregular cycles, often occur in adolescent girls. According to a study conducted by Chen et al.<sup>14</sup>, on adolescent girls in China, irregular menstrual problems among adolescents aged 12-17 significantly affect suicidal behavior, including suicidal ideation, planning, and attempts among teenagers. A study also indicates that girls who experience menstruation before entering junior high school have a higher prevalence of depression, which in turn increases the risk of suicide.<sup>15</sup>

Several studies conducted in the United States, Belgium, Scotland, and South Korea have shown that adolescents who experience sleep disorders are vulnerable to an increased risk of suicide.<sup>16-18</sup> Individuals who experience chronic sleep disorders will encounter difficulties in their daily lives related to cognitive, emotional, interpersonal, and physical functioning, thereby increasing the risk of suicide.

Adolescents who have made suicide attempts are at a significantly higher risk of making subsequent suicide

attempts. The findings of the study by Aouidad et al.<sup>19</sup> indicate that adolescents who have been hospitalized for suicide attempts and received psychiatric treatment are at a high risk of making subsequent suicide attempts within 12 months after receiving treatment. According to Carballo et al.<sup>20</sup>, adolescents who have made suicide attempts are at a significantly higher risk of repeating suicide attempts, and therefore, their history of suicide attempts should be closely monitored to prevent further suicidal behaviors.

Psychological factors associated with suicidal behaviors among youth include trauma and depression. The findings of the study by Kim et al.<sup>21</sup> show that approximately 80% of adolescents have a history of at least one traumatic experience, which significantly increases the likelihood of suicide risk. Adolescents with trauma are likely to have mental or emotional health problems that further strengthen their inclination toward suicidal actions.<sup>22</sup> When discussing trauma, it is important to correlate it with mental health issues and the risk of suicide. Trauma experienced during childhood is an unpleasant and long-lasting experience that can manifest in behaviors or excessive stress during adolescence. Therefore, it requires attention in efforts to prevent the risk of suicide.

Data from the WHO<sup>23</sup> shows that depression is the leading cause of illness among adolescents, and suicide is the third leading cause of death among individuals aged 15-19. Research conducted in several countries such as China, Pakistan, the United States, and South Korea reveals the fact that adolescent depression is positively associated with the risk of suicide.<sup>24-27</sup>

Social factors associated with suicidal behaviors among youth include COVID-19 pandemic, free sex, parental divorce, lack of parental affection, authoritarian style, domestic violence, LGBT, relationship breakdown, and anime media. The COVID-19 pandemic in the past three years has had social and emotional impacts that generate fear of transmission, stress, guilt, disrupted routines, pain, insomnia, anxiety, loneliness, limited social connections due to physical distancing obligations and quarantine, which can increase the risk of suicide. Several studies have identified that the restrictions on social activities to prevent the spread of COVID-19 have made adolescents feel bored and lonely, disrupted their routines, and limited their social interactions, leading to an increase in maladaptive behaviors and ultimately posing a risk of suicide.<sup>28</sup>

Adolescent sexual behavior is considered risky when it results in negative consequences such as unwanted pregnancies, and sexually transmitted infections (STIs), and significantly increases the risk of suicide among teenagers.<sup>29,30</sup> Other negative-impact sexual behaviors that are also considered risky are having first sexual intercourse before the age of 15, having multiple sexual partners, and inconsistent condom use.<sup>31,32</sup> Teenage pregnancy out of wedlock can lead to depression and eventually suicidal behaviors. A study has shown that being pregnant out of wedlock and lack of religious values

are significantly associated with the risk of suicide among teenagers. Rapid development without proper planning has led teenagers to engage in unprotected sexual activities and experience severe depression, ultimately leading to suicidal behavior.<sup>33,34</sup> Teenagers who engage in sexual relationships without being aware of the consequences, such as unintended pregnancy for teenage girls and the fear of impregnating their partner for teenage boys, the financial responsibility of supporting a child, and the risk of contracting sexually transmitted diseases, will become significant burdens in their lives. This condition can trigger the emergence of stress and depression, ultimately leading to suicide as a final solution to their problems.

Parental divorce gives rise to various life events that can pose challenges for teenagers. The findings indicate that adolescents whose parents have divorced experience more social fears, avoidance, higher levels of depression, and a greater desire for suicide.<sup>35</sup> Parental divorce is considered a stressful life event for teenagers, causing them to feel a profound sense of loss, worthlessness, lack of motivation, and difficulty concentrating on their studies.<sup>36</sup> Teenagers who experience long-term parental divorce are predicted to face mental, emotional, and behavioral problems. Research findings indicate that parental divorce and the resulting pressures contribute to mental health issues such as depression, anxiety, loneliness, guilt, trauma, and chronic stress, ultimately leading to suicidal behavior.<sup>37</sup> Increasing attention and support need to be provided in cases of divorce to minimize the occurrence of mental health problems among teenagers following a parental divorce.

Parental affection is one of the crucial factors in the development and well-being of teenagers. When teenagers do not feel loved, valued, or supported by their parents, it can lead to feelings of loneliness, despair, and loss of hope. Empirical evidence shows that low parental attention or lack of care influences mental health and the risk of suicide among teenagers.<sup>38,39</sup> Teenagers who lack emotional support from their parents will feel lonely, and isolated, and struggle to cope with negative pressures and emotions, which can lead to suicidal behavior.

The conflict between children and parents increases throughout early adolescence, usually due to differing preferences stemming from generational gaps, differing principles, perspectives, and parenting styles. Parents who adopt an authoritarian parenting style tend to avoid discussions, fail to appreciate their child's efforts, set rigid boundaries between themselves and their child, and admonish the child to comply with rules.<sup>40</sup> The results of the study prove that adolescents who receive an authoritarian parenting style are more vulnerable to the risk of suicide.<sup>41-44</sup> This is because the authoritarian parenting style tends to involve scolding, criticizing, being dissatisfied, or doubting the abilities of the child, causing the child to interpret failures as a result of personal inadequacy. This condition makes the child vulnerable to depression, ultimately leading to suicidal

behavior.<sup>45</sup> A study suggests that students who receive an authoritarian parenting style from their parents tend to believe that suicide is justified in certain situations and as an individual's right.<sup>46</sup> The authoritarian parenting style applied by parents to their children is one of the unpleasant experiences for teenagers and can result in low self-esteem, anxiety, and fear, thus becoming a risk factor for teenage suicide.

Physical violence towards children by parents tends to result in negative coping and risky behavioral problems. According to the WHO<sup>47</sup>, children who are exposed to violence and suffering tend to experience behavioral problems such as smoking, alcohol misuse, drug consumption, and engaging in risky sexual behavior, as well as anxiety, depression, and suicidal tendencies. Children exposed to violence and suffering tend to experience behavioral problems such as smoking, alcohol misuse, drug consumption, and engaging in risky sexual behavior, as well as anxiety, depression, and suicidal tendencies. Domestic violence, whether physical, psychological, or sexual, against children will have an impact on their physical and/or mental well-being, thereby increasing the risk of suicide.<sup>48</sup>

In recent years, suicide cases among LGBTQ adolescents have gained media and campaign attention due to bullying, family rejection, and societal discrimination, which make them vulnerable to suicide. A study has identified multiple factors associated with suicidal behavior among LGBTQ individuals, including isolation from family and peers, history of mental health issues (such as depression and anxiety), and substance use disorders.<sup>49,50</sup> LGBTQ individuals feel that they have to face harassment and discrimination from peers, family members, colleagues, workplaces, places of worship, schools, public accommodations, and healthcare facilities.<sup>51</sup>

Falling in love and experiencing heartbreak are closely intertwined with the lives of adolescents, as love is a fundamental need that every human must fulfill. When teenagers fall in love, it brings about positive emotions that lead to behaviors such as enthusiasm, optimism, appreciation, and respect. However, on the other hand, when they experience heartbreak, their world crumbles, and they feel like they are the most miserable person in the world. This sadness and disappointment give rise to negative behaviors such as loss of motivation, melancholy, seeking outlets like smoking and drinking, or even attempting to end their own lives.<sup>52</sup> Research findings indicate that experiencing romantic breakups during adolescence is associated with higher levels of depression, which can lead to more serious issues, such as suicidal behavior.<sup>53,54</sup>

The development of the industry has impacted the lives of Indonesian teenagers, one of which is Japanese anime. Japanese anime can hypnotize teenagers, causing them to spend hours watching it. Teenagers, who are at a vulnerable age, blindly enjoy, consume, and imitate cartoon scenes. There are many scenes of violence, bloodshed, and pornography in Japanese anime, which hurt the physical and mental

development of teenagers. Many anime stories have negative themes, including hatred, pain, jealousy, bitterness, sadness, sexual harassment, nudity, and even suicide.<sup>55</sup> Furthermore, research findings indicate that Japanese anime is positively associated with anxiety, aggression, depressive symptoms, and suicidal tendencies among teenagers.<sup>56</sup> More importantly, empirical studies have found that anime enthusiasts have experienced serious discrimination from their surroundings, which can lead to depressive symptoms and ultimately result in suicidal actions.<sup>57,58</sup>

The findings of this research focused on assessing the risk factors for suicide among adolescents, with an emphasis on three main themes: biological, psychological, and social factors. Firstly, sleep disorders and a history of previous suicide attempts have been identified as associated with an increased risk of suicide among adolescents. Secondly, from a psychological perspective, trauma and depression are recognized as risk factors for adolescent suicide. Thirdly, social risk factors, including parental divorce, an authoritarian parenting style, identification as LGBT, relationship breakdowns, and exposure to certain types of media (such as anime), have been found to influence suicide risk among adolescents. These factors were explored using qualitative approaches to gain a deep understanding of the individual's experiences and perceptions regarding mental well-being.

## CONCLUSION

In conclusion, families, schools, and society at large must pay careful attention to addressing the needs of adolescents at risk of suicide, considering the multifaceted nature of the factors contributing to their vulnerability. Subsequently, conducting research involving interdisciplinary collaboration, including psychology, psychiatry, sociology, education, and public health, to understand the risk factors for adolescent suicide from various perspectives. This approach can aid in developing a more holistic approach to suicide prevention among adolescents.

### Data Availability Statement

The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.

### Statement of Authorship

All authors certified fulfillment of ICMJE authorship criteria.

### Author Disclosure

All authors declared no conflicts of interest.

### Funding Source

This research was funded by the Ministry of Finance of the Republic of Indonesia through the Educational Fund Management Institution (LPDP) Scholarship.

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