#### **Open Peer Review on Qeios**

# The Correlation between Adolescents' Bullying Experiences and Mental Health

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#### Abstract

One indicator of good adolescent quality of life can be observed through their mental health conditions. Variables suspected to be associated with and affecting adolescent mental health include experiences of bullying. This study aims to assess the relationship between bullying experiences among adolescents and their mental health.

The research utilizes an analytical observational method with a cross-sectional design. The population consists of high school students in North Sulawesi, Indonesia, totalling 3,514 individuals. A sample of 390 students aged 15-18 years was selected using accidental sampling techniques. The relationship between bullying experiences and mental health was analysed using the chi-square test. To evaluate the extent of the risk of bullying experiences influencing adolescent mental health, multiple logistic regression analysis was employed.

The research results indicate a significant association between adolescents who have experienced bullying and their mental health (p = 0.006). Adolescents who are victims of bullying are four times more likely to experience mental health disorders (OR = 4.204; 95% CI = 1.525 – 11.589). It is recommended that schools establish anti-bullying units comprising students, teachers, and parents to minimize bullying incidents in schools that can impact adolescent mental health.

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# Introduction

The mental health of adolescents should be a primary concern for the government and all segments of society so that issues related to mental health among adolescents can be promptly addressed, leading to the creation of a future generation that is physically and mentally healthy, intelligent, and professional. According to the World Health Organization (WHO), globally, 10% of adolescents experience mental health problems, yet the majority of them do not seek assistance or receive treatment. The consequences of untreated mental health issues in adolescents have the potential to persist into adulthood and can hinder opportunities for leading a quality life<sup>[1][2]</sup>.

The adolescent period is a crucial phase for developing social and emotional habits, serving as a primary domain for mental health. Individuals experiencing poor mental health during adolescence face challenges in sustaining their well-being into adulthood if not promptly addressed and remedied<sup>[3]</sup>.

"The World Health Organization defines adolescence as a community still in the phase of growth and development toward adulthood, encompassing the age range of 10-19 years. According to the Indonesian Ministry of Health Regulation Num. 25 of 2014, adolescents are individuals aged 10-18 years. Meanwhile, according to the National Population and Family Planning Board, the age range for adolescence is 10-24 years for those who are unmarried. Adolescence marks the transitional period from childhood to adulthood, during which individuals undergo physical, mental, social, and emotional development. One characteristic of adolescence is the volatility of emotions due to the instability of hormones. This makes adolescents more sensitive and prone to anger. During this period, emotions tend to dominate adolescents more than their realistic thoughts, rendering them vulnerable to mental health issues<sup>[4]</sup>.

The study by Kaligis et al. (2021) indicates that among adolescents, anxiety is the most prevalent mental health issue, affecting 95.4% of them. Additionally, 90% of adolescents face financial difficulties, academic challenges, and feelings of loneliness. Disturbingly, 50% of adolescents often engage in self-harm, and harbour suicidal thoughts<sup>[5]</sup>. These findings align with the World Health Organization's discovery that 1 in 4 adolescents experiences a mental health disorder. This phenomenon arises as adolescents are increasingly required to step out of their 'comfort zones,' confronting a myriad of choices and decisions as an initial step toward leading an independent life<sup>[6]</sup>.

Based on data from the World Health Organization (2022), the global prevalence of mental health disorders in 2019 indicated that 970 million people experienced mental health issues. Out of this total, 301 million individuals were diagnosed with anxiety disorders, and 280 million with depression. Among the 970 million worldwide suffering from mental health disorders, the adolescent age group (15-19 years) ranked second in the highest prevalence at 14.7%, following the 25-49 age group at 14.9%. The most common types of mental disorders afflicting adolescents aged 15-19 were anxiety (4.6%), depression (2.8%), attention-deficit or hyperactivity disorder (2.4%), behavioral disorders (2.1%), developmental disorders (2.0%), bipolar disorder (0.6%), autism (0.4%), eating disorders (0.3%), and schizophrenia (0.1%).

The data from 2021 reveals the attitudes of Indonesian adolescents towards mental health issues, with 57% feeling ashamed or afraid to disclose their mental health conditions to others. Additionally, 22% believe that psychological or psychiatric therapy and treatment would negatively impact their self-confidence and future. Sourced from the Indonesia National Adolescent Mental Health Survey, data on the prevalence of adolescent mental health in Indonesia indicates that

1 in 20 (5.5%) adolescents aged 10-17 years are diagnosed with a mental health disorder. The most common mental health disorders among Indonesian adolescents are anxiety (3.7%), depression (1.0%), and behavioral disorders  $(0.9\%)^{[7]}$ .

Based on the 2018 Basic Health Research data from the Ministry of Health of the Republic of Indonesia, the prevalence of mental health disorders in Indonesia among individuals aged  $\geq$ 15 years is 9.8%. One province in Indonesia, namely North Sulawesi, ranks 16th among the 34 provinces in Indonesia for the prevalence of mental health disorders at 10.9%, a figure exceeding the national average<sup>[8]</sup>. The city of Kotamobagu, located in the North Sulawesi Province, has a prevalence of mental health disorders among individuals aged  $\geq$ 15 years at 4.35%. This figure is still below the national average. However, based on an initial survey conducted in December 2022 on adolescents aged 15-18 in this area using the Self Report Questionnaire, it was found that 92 adolescents (70%) out of a total of 132 experienced mental health disorders. This indicates a notable discrepancy from the overall prevalence, underscoring the need for targeted interventions and attention to adolescent mental health in this specific locality<sup>[9]</sup>. This figure is higher compared to the percentage of adolescents aged 15-18 experiencing mental health issues in the city of Bandung, which stands at 59.5%<sup>[10]</sup>.

A study conducted by Buleno et al. (2021) on 221 adolescents in the city of Kotamobagu reveals that more than 80% of adolescents have a moderate to poor quality of life, with psychological variables as the main domain of measurement. This indicates that over 80% of adolescents are experiencing mental health issues that impact their psychological well-being and, consequently, their overall quality of life<sup>[11]</sup>. "In line with the study conducted by Erol et al. (2022) on adolescent refugees in Syria, it is evident that mental health issues frequently experienced by adolescents manifest in symptoms of depression and personality traits associated with low quality of life<sup>[12]</sup>.

Adolescents with low quality of life often struggle to cope with various pressures and demands that arise in their lives, leading to various psychotic conditions. Thomas Achenbach and Craig Edelbrock categorized mental disorders into two main categories: internalizing and externalizing problems<sup>[13]</sup>. Internalizing problems are behavioral issues directed inward, affecting an individual's psychological well-being, such as anxiety, depression, eating disorders, and a tendency toward suicide<sup>[14]</sup>. On the other hand, externalizing problems involve socially problematic behavior where adolescents exhibit negative actions toward their environment and those around them. These problematic behaviors include rule-breaking, disobedience, verbal aggression, delinquency, bullying, and other similar actions<sup>[15]</sup>. One external variable that influences adolescent mental health is the experience of bullying.

Our observations indicate that adolescents in the city of Kotamobagu frequently experience bullying in both verbal and physical forms. Adolescents who experience bullying, such as threats or intimidation, are more likely to have mental health issues compared to those who are not victimized. Results from a study conducted by Kasoema (2020) demonstrate a significant relationship between bullying experiences and depression<sup>[16]</sup>. This is consistent with the study by Abdillah & Ambarini (2018), which indicates that adolescents with a mental health status at risk of psychosis disorders have experienced bullying in the form of both verbal and non-verbal expressions, such as mockery and isolation<sup>[17]</sup>. A literature review conducted by Mori et al. (2021) revealed that bullying in schools is a factor that causes adolescents to

feel unsafe, subsequently leading to mental health issues, including emotional problems and suicidal tendencies<sup>[18]</sup>.

Bullying is a condition where an individual receives negative behavior from someone or a community repeatedly over an extended period. Bullying can manifest through both physical and verbal actions. Physical bullying involves actions such as hitting, kicking, biting, and similar forms of aggression. Meanwhile, verbal bullying includes mocking, threats, body shaming, and other forms of verbal expression<sup>[17]</sup>. Victims of bullying experience various disturbances in their daily lives. The impacts of bullying are quite serious, ranging from a decline in self-confidence and developing negative self-perceptions to difficulties in building social relationships, depression, and the emergence of other negative behaviors.

Adolescents who experience bullying are three times more likely to suffer from depressio<sup>[16]</sup>. A study conducted by Ranjith et al. (2019) on middle school students in India revealed that the majority of students reported having been victims of bullying in the form of verbal intimidation<sup>[19]</sup>. In a study conducted by Ringdal et al. (2020) on students aged 15-21 in Norway, it was found that bullying is the strongest factor causing anxiety and depression compared to other factors<sup>[20]</sup>. A study by Garaigordobil and Machimbarrena (2019) in Spain also found that students who have been victims or perpetrators of bullying exhibit high levels of stress and experience emotional and behavioral issues<sup>[21]</sup>. With the various facts presented, these form the basis for this study to assess the relationship between bullying experiences and adolescent mental health.

# Methods

This research employed a cross-sectional design and was conducted in the city of Kotamobagu, North Sulawesi Province, Indonesia. The selection of the research location was based on previous studies which revealed that over 80% of adolescents in Kotamobagu experienced a moderate to poor quality of life<sup>[11]</sup>, furthermore, this is in reference to the preliminary survey we conducted on adolescents in the city of Kotamobagu in October 2022. From the findings of the preliminary survey, it was discovered that 92 out of 132 adolescents experienced mental health disorders, constituting 70% of the sample<sup>[9]</sup>. The population in this study consisted of high school students aged 15-18, totalling 3,514 individuals. The sample size was determined using accidental sampling, and the calculation employed the Slovin formula. Based on the formula's results, the minimum sample size was determined to be 360 individuals. When the questionnaire was distributed comprehensively to four high schools in the city of Kotamobagu, a total of 390 students participated in the survey. The instrument used to measure bullying experiences was a modified version of the Olweus Victim Questionnaire, comprising 15 items. The questionnaire grid for the research variable of bullying victims in the instrument is outlined as follows:

Table 1. Questionnaire Indicators of Bullying Experience

Variable	Dimension	Indicator	Amount	Items
	Physical bullying	Physical abuse	1	1
		Property destruction	1	2
		Sexual violence	1	3
	Emotional bullying	Body shaming	2	4,5
Bullying		Mockery	3	6,8,13
		Threats	2	9,10
		Racism	1	7
	Relational bullying	Defamation	2	11,12
	notational bullying	Being disliked by friends	2	14,15
Total			15	15

The measurement of adolescent mental health disorders was conducted using a Self-Report Questionnaire consisting of 20 items employing a Guttman scale. Data collection was facilitated through the completion of a questionnaire in the form of a Google Form, distributed and directly filled out by adolescents. Statistical analysis employed in this research included the chi-square test to examine the presence or absence of a relationship between the variables of bullying experiences and adolescent mental health disorders. To assess the probability of the impact of bullying experiences on adolescent mental health, multiple logistic regression analysis was employed.

# Results

The sample for this study comprised 390 students from public high schools in the city of Kotamobagu. The characteristics of the subjects in this research can be observed in the following table:

**Table 2.** Distribution of Adolescents based onDemographic Characteristics

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Adolescents' Characteristics	n=390	%
Years		
15	152	39
16	112	28.7
17	98	25.1
18	28	7.2
Sex		
Male	91	23.3
Female	299	76.7
Number of siblings		
0-3	335	85.9
4-7	55	14.1
Number of family members in the household		
1-4	225	57.7
5-8	165	42.3
Families with chronic illness		
Yes	39	10
No	351	90

In table 2, it is evident that among the adolescents involved in this study, the majority were 15 years old, comprising 152 individuals (39%), with a higher representation of female adolescents at 299 (76.7%). Examining the educational level of parents, both mothers and fathers were predominantly high school graduates. A significant portion of the respondents had fathers employed as farmers (44.6%). Regarding the mothers' occupation, entrepreneurship was the dominant category (44.6%). The profile data of adolescents' parents can be observed in Table 3:

**Table 3.** Distribution of Adolescents based onParental Demographic Characteristics

Adolescents' Family Characteristics	n=390	%
Father's Education		
Elementary School	81	20.8
Junior High School	83	21.3
Senior High School	149	38.2
Bachelor's/Master's Degree	77	19.7
Mother's Education		
Elementary School	76	19.5
Junior High School	69	17.7
Senior High School	162	41.5
Bachelor's/Master's Degree	83	21.3
Father's Occupation		
Farmer	174	44.6
Entrepreneur	138	35.4
Civil Servant	53	13.6
Military/Police Office	25	6.4
Mother's Occupation		
Housewife	91	23.3
Farmer	48	12.3
Entrepreneur	174	44.6
Civil Servant	77	19.7

There are various types of bullying incidents that adolescents have experienced, including being physically hurt, facing sexual harassment, being slandered, encountering hostility, humiliation, threats, and even physical attacks. A more comprehensive overview of adolescents' bullying experiences is presented in Table 4 below:

Table 4. Adolescents' Experience of Bullying

		Respond (	n = 390)
Num	Expression	Yes	No
		n (%)	n (%)
1	Have you ever been harmed by someone or a group of people?	150 (38.5)	240 (61.5)
2	Has your belongings ever been damaged by someone?	167 (42.8)	223 (57.2)
3	Have you ever experienced sexual harassment?	77 (19.7)	313 (80.3)
4	Have you ever been humiliated or mocked due to skin color, body shape (body shaming), or clothing?	233 (59.7)	157 (40.3)
5	Have you ever received negative comments on photos or videos of yourself uploaded on social media?	123 (31.5)	267 (68.5)
6	Have you ever been teased with names or terms that you dislike?	245 (62.8)	145 (37.2)
7	Have you ever been insulted based on race, place of residence, or religion?	87 (22.3)	303 (77.7)
8	Have you ever been mocked by disparaging the names of your parents?	248 (63.6)	142 (36.4)
9	Have you ever received threatening messages through chat platforms?	100 (25.6)	290 (74.4)
10	Have you ever been directly threatened by someone if you did not comply with their wishes?	138 (35.4)	252 (64.6)
11	Have you ever been slandered?	283 (72.6)	107 (27.4)
12	Have you ever been harmed on social media platforms by someone creating a fake social media account?	68 (17.4)	322 (82.6)
13	Have you ever been attacked by someone or a group of people and disparaged on social media platforms?	87 (22.3)	303 (77.7)
14	Have you ever been removed from a friendship group without your knowledge?	171 (43.8)	219 (56.2)
15	Have you ever been disliked by some friends in the classroom or school environment?	245 (62.8)	145 (37.2)

The data in table 4 was subsequently categorized into two groups: "Yes" and "No." Respondents who answered "Yes" to any of the questions were classified as having experienced bullying. Meanwhile, respondents who answered "No" to all questions were not included in the bullying victim category. The following table presents the frequency distribution of adolescents based on statements regarding bullying experiences:

Table 5. Categories ofAdolescents' BullyingExperiences

Bullying Experiences	n	%
Yes	366	93.8
No	24	6.2
Total	390	100

Table 5 indicates that the majority of adolescents have been victims of bullying in the past month, totalling 366 respondents with a percentage of 93.8%. Based on Table 4, it is evident that over 50% of respondents have experienced various forms of bullying, including being slandered, ridiculed by disparaging their parents' names and using derogatory terms, facing hostility from friends at school, and being humiliated due to appearance or experiencing body shaming.

Various mental health issues have been experienced by adolescents in the past month, including feelings of fear, anxiety, trembling, insomnia, loss of appetite, and a sense of worthlessness. The following outlines other mental health symptoms reported by adolescents based on their subjective accounts:

Table 6. Distribution of Mental Health Disorders Perceived by Adolescents

		Respond	
Num	Mental health disorders experienced in the last 1 month	Yes	No
		n (%)	n (%)
1	Frequent headaches	225 (57.7)	165 (4.3)
2	Frequently loss of appetite	161 (41.3)	229 (58.7)
3	Frequently experiencing insomnia	228 (58.5)	162 (41.5)
4	Easily feeling fearful	220 (56.4)	170 (43.6)
5	Frequently feeling tense, anxious, and worried	260 (66.7)	130 (33.3)
6	Frequently trembling unconsciously	129 (33.1)	261 (66.9)
7	Disrupted digestion	127 (32.6)	263 (67.4)
8	Difficulty thinking clearly	238 (61)	152 (39)
9	Frequently feeling sad and unhappy	238 (61)	152 (39)
10	Frequently crying	179 (45.9)	211 (54.1)
11	Finding it difficult to enjoy daily activities	198 (50.8)	192 (49.2)
12	Frequently feeling difficulty in making decisions	268 (68.7)	122 (31.3)
13	Work or activities are often disrupted	116 (29.7)	274 (70.3)
14	Feeling unable to do meaningful things in life	158 (40.5)	232 (59.5)
15	Losing interest in various things	200 (51.3)	190 (48.7)
16	Frequently feeling unworthy	202 (51.8)	188 (48.2)
17	Having thoughts of self-harm or wanting to end one's life	122 (31.3)	268 (68.7)
18	Frequently feeling tired all the time	262 (67.2)	128 (32.8)
19	Frequently feeling discomfort in the stomach	190 (48.7)	200 (51.3)
20	Easily fatigued	280 (71.8)	110 (28.2)

The chi-square test was employed to assess the relationship between adolescents' bullying experiences and the mental health disorders they encountered. Table 7 illustrates a significant relationship between bullying experiences and adolescent mental health disorders (p = 0.000):

Health Disorders in Ad	dolesc	ents					
	Menta	al Healt	h Dis	orders	Tota		
	Yes		No		Tota	•	p
Bullying Experiences	n	%	n	%	n	%	
Yes	293	80.1	73	19.9	366	100	
No	9	37.5	15	62.5	24	100	0.000
Total	302	77.4	88	22.6	390	100	

Table 7. Relationship Between Bullying Experiences and Mental

The results of the multiple logistic regression test indicate that adolescents who have experienced bullying are 4.204 times more likely to suffer from mental health disorders compared to those who have not experienced bullying. This can be observed in table 8 below:

Table 8. Influence of Bullying Experiences on Adolescents'						
Mental Health						
Bullying Experience	В	W	Adj. OR	95%CI	р	
Never Ever	1.436	7.706	4.204	1.525-11.589	0.006	

# Discussion

"Bullying etymologically originates from the word 'bully,' which is interpreted as intimidating or harassing someone weaker. The term 'bullying' is defined diversely by experts, but essentially, it constitutes a form of intimidation directed at someone weaker, repeatedly targeting a specific victim based on race, religion, gender, sexuality, or abilities. Bullying often manifests physically, psychologically, verbally, and rationally. It can occur in schools, workplaces, communities, and even within households. Additionally, bullying frequently transpires on social media, with the highest prevalence observed in secondary school environments. An action is commonly recognized as bullying when it encompasses three main criteria<sup>[22]</sup>:

- a. Intent (action carried out intentionally to harm, intimidate, and/or insult)
- b. Repeated occurrences
- c. Existence of social or physical differences or disparities between the perpetrator and the recipient, where the intimidator is typically more dominant than the victim.

Based on data from the Global Burden of Disease (2019), bullying is identified as one of the major risk factors for mental health issues. This study reveals that being a victim of bullying has an impact on adolescent mental health disorders. Adolescents who are victims of bullying are at a 4.204 times higher risk of experiencing mental health disorders compared to those who have never been bullied. The findings of this research align with a meta-analysis conducted by Ye et al., (2023), indicating that bullied adolescents are 2.77 times more likely to experience depression compared to non-bullied adolescents in China indicate that the experience of being bullied has a positive

correlation with anxiety and depression. The more frequent the incidents of bullying, the more severe the levels of anxiety and depression experienced by adolescents<sup>[24]</sup>.

This study found that the majority of respondents, 93.8%, have experienced bullying. Based on adolescents' responses, the prevalent type of bullying is relational bullying, involving being humiliated or mocked based on skin colour, body shape (body shaming), or clothing. They reported being teased with derogatory terms, having their parents' names disparaged, and facing humiliation and hostility from some classmates or within the school environment. One form of bullying identified is body shaming, particularly directed more frequently towards teenage girls who do not conform to conventional beauty standards, such as being slender, having fair and smooth skin, and so forth<sup>[25]</sup>.

The findings from this research also indicate that bullying remains prevalent among adolescents. According to the 2018 Program for International Student Assessment study, 41% of students in Indonesia aged 15 and above were reported to have experienced bullying at least several times in one month<sup>[26]</sup>. The high incidence of bullying victims is often attributed to the apathetic attitude within the school environment, especially in small towns. Teachers at schools may consider bullying as a commonplace occurrence among adolescents, as long as there is no physical aggression involved. This perception contributes to the increasing number of bullying victims. A study by UNICEF on addressing harassment issues in Sorong regency, West Papua, Indonesia, found that 87% of teachers felt that the school had taken reports of harassment seriously, but only 9% of students supported this statement. This indicates a significant difference in perception regarding bullying between teachers and students, leading to a continual increase in bullying victims among students over the years<sup>[26]</sup>.

Bullying incidents within the educational realm often occur among teachers, students, school staff, and even parents of students, and these incidents typically take place within the school premises (school bullying). The most common and prevalent form of bullying identified is oppression between students. Such actions manifest through verbal, rational, and physical bullying. If not comprehensively addressed, these actions can have detrimental consequences, potentially leading to setbacks in structured education<sup>[27][28][29]</sup>. Schools constitute the primary social environment for adolescents, making them susceptible to bullying. If the school environment, including teachers, neglects this issue, perpetrators of bullying may feel reinforced in their behavior, and this may extend to other social environments and even into the broader community<sup>[30][31][32]</sup>.

The most significant impact of bullying is undoubtedly experienced by the victims. They may suffer from physical health disorders, anxiety, stress, and depression, often culminating in uncontrollable anger or withdrawal from social environments. Some may experience fear, loss of concentration in learning, and even develop a dislike for school, thereby affecting academic achievement. The extreme effects on victims can even lead to suicidal thoughts, with some individuals tragically acting upon them<sup>[33]</sup>.

The results of the 2020 UNICEF survey indicate that the mental health of children and adolescents in several high-income countries has worsened due to bullying and lack of support from their families. Turkey has the lowest level of life satisfaction among adolescents, at only 53%, followed by Japan and the United Kingdom. Meanwhile, the highest levels of

life satisfaction are reported in the Netherlands, Mexico, and Romania. Additional information from the survey reveals that Lithuania, New Zealand, and Estonia have the highest rates of teenage suicide, which is a leading cause of death among adolescents aged 10-19 years<sup>[34][35]</sup>. The 2020 UNICEF report states that the rate of violence among adolescents aged 13-15 in Indonesia exceeds 21%. This figure is equivalent to 18 million teenagers, with 25% of them being involved in physical bullying<sup>[26][36]</sup>.

The experience of bullying can leave both victims and perpetrators with physical and psychological trauma. The disturbances that occur as a result of bullying experiences include psychosomatic symptoms, substance abuse, self-harm or suicide attempts, running away from home, and absenteeism in the classroom. These consequences persist into adulthood, where adolescents who have experienced bullying are more likely to suffer from psychiatric disorders later in life<sup>[37][38]</sup>.

# Limitations

This study solely assesses the relationship between bullying experiences and adolescent mental health without juxtaposing other variables that may also have potential associations and risks to adolescent mental health. This limitation underscores the need for future research to explore additional factors that could contribute to a more comprehensive understanding of the complexities surrounding adolescent mental health.

# Conclusion

There is a significant association between adolescents who have experienced bullying and their mental health. Adolescents who have been victims of bullying are four times more likely to experience mental health disorders compared to those who have not experienced bullying. Based on these findings, it is recommended that schools establish a bullying prevention unit involving students, teachers, and parents to minimize bullying incidents in schools, as they have an impact on adolescent mental health.

# Statements and Declarations

#### **Ethical Considerations**

Regarding the issue of bullying and adolescent mental health, ethical approval was obtained to gather information from the respondents who were the subjects of this study. Ethical clearance was granted by the Ethics Committee of the Faculty of Public Health, Hasanuddin University, with reference number 15629/UN4.14.1/TP.01.02/2022. Informed consent for the participation of subjects in this research was obtained from all participants after adolescents voluntarily completed the consent form.

#### Conflict of Interest

The authors declare no conflict of interest.

#### References

- 1. *WHO. Guidelines on mental health promotive and preventive interventions for adolescents. World Health Organization* (2020).
- 2. <sup>^</sup>WHO. Mental Health in School: A manual. (2021).
- <sup>^</sup>Joint, W. & Needs, S. Mental Health and Wellbeing of Infants, Children and Young People Warwickshire Joint Strategic Needs Assessment 2023. (2023).
- 4. <sup>^</sup>Fitriani, A. et al. Psikologi Perkembangan. (2023).
- <sup>^</sup>Kaligis, F. et al. Mental health problems and needs among transitional-age youth in Indonesia. Int. J. Environ. Res. Public Health 18, (2021).
- Osborn, T. L., Wasanga, C. M. & Ndetei, D. M. Transforming mental health for all. The BMJ (2022). doi:10.1136/bmj.o1593.
- 7. <sup>^</sup>Wilopo, et al. National Adolescent Mental Health Survey (I-NAMHS) Laporan Penelitian. xviii (2023).
- Badan Penelitian dan Pengembangan Kesehatan RI. Laporan Riskesdas 2018 Nasional.pdf. Lembaga Penerbit Balitbangkes 156 (2018).
- <sup>a, b</sup>Dondo, M. L. et al. Determinant of Mental Emotional Disorder in Adolescent: A Cross-Sectional Study. Int. J. Stat. Med. Res. 12, 148–154 (2023).
- 10. <sup>^</sup>Sitohang, E. D. Adolescents Mental Health During Covid-19 Pandemic. J. Baja Heal. Sci. 3, 78–90 (2023).
- 11. <sup>a, b</sup>Buleno, I., Nelwan, J. E., Runtuwene, J., Manampiring, A. E. & Ratag, G. Kualitas Hidup Remaja di Kotamobagu Sulawesi Utara pada Masa Pandemi Coronavirus Disease 2019. Heal. Care J. Kesehat. 10, 262–267 (2021).
- <sup>^</sup>Erol, E., Koyuncu, Z. & Batgi, D. Quality of Life, Depressive Symptoms, and Personality Traits in Syrian Refugee Adolescents. Child Indic. Res. 16, 641–653 (2023).
- 13. <sup>^</sup>Frick, P. J., Barry, C. T. & Kamphaus, R. W. Clinical Assessment of Child and Adolescent Personality and Behavior. (Springer, 2010). doi:10.1007/978-1-4419-0641-0.
- <sup>^</sup>Madigan, S., Brumariu, L. E., Villani, V., Atkinson, L. & Lyons-Ruth, K. Representational and questionnaire measures of attachment: A meta-analysis of relations to child internalizing and externalizing problems. Psychol. Bull. 142, 367– 399 (2016).
- <sup>^</sup>Zulnida, E. F. Hubungan Masalah Perilaku Internalisasi dan Eksternalisasi Dengan Tingkat Kecerdasan Pada Remaja Di Kota Bandung. J. Ilm. Psikol. Terap. 8, 119 (2020).
- <sup>a, b</sup>Kasome, R. S. Hubungan Keakraban Orangtua Dan Bullying Dengan Depresi Pada Remaja Kota Bukittinggi. Hum. Care J. 5, 798 (2020).
- 17. <sup>a, b</sup>Abdillah, A. A. & Ambarini, T. R. I. K. Gambaran Pengalaman Bully Pada Remaja Dengan Status Mental Berisiko Gangguan Psikosis. J. Psikol. Klin. dan Kesehat. Ment. 7, 38–46 (2018).

- 18. <sup>^</sup>Mori, Y. et al. Feeling unsafe at school and associated mental health difficulties among children and adolescents: A systematic review. Children 8, (2021).
- 19. <sup>^</sup>James Ranjith, P., Jayakumar, C., Thomas Kishore, M., Binukumar, B. & Bhaskar, A. Association between bullying, peer victimization and mental health problems among adolescents in Bengaluru, India. Indian J. Soc. Psychiatry 35, 207–212 (2019).
- <sup>^</sup>Ringdal, R., Bjørnsen, H. N., Espnes, G. A., Bradley Eilertsen, M. E. & Moksnes, U. K. Bullying, social support and adolescents' mental health: Results from a follow-up study. Scand. J. Public Health 49, 309–316 (2021).
- <sup>^</sup>Garaigordobil, M. & Machimbarrena, J. M. Psychosocial Intervention Victimization and Perpetration of Bullying / Cyberbullying : Connections with. Psychosoc. Interv. Victim. Perpetration Bullying / Cyberbullying Connect. with Emot. Behav. Probl. Child. Stress 28, 67–73 (2019).
- 22. <sup>^</sup>Marsh, V. Bullying in School: Prevalence, Contributing Factors, and Interventions Research Brief | www.rochester.edu/warner/cues/ Written by Valerie L. Marsh, PhD October 2018. (2018).
- Ye, Z. et al. Meta-analysis of the relationship between bullying and depressive symptoms in children and adolescents. BMC Psychiatry 23, (2023).
- 24. <sup>^</sup>Wen, Y., Zhu, X., Haegele, J. A. & Yu, F. Mental Health, Bullying, and Victimization among Chinese Adolescents. Children 9, (2022).
- <sup>^</sup>Widodo, A. & Hakiki, N. Body Shaming pada Remaja Putri: Solusi Perundungan (Bullying) Berbasis Nilai-Nilai Islam. Assert. Islam. Couns. J. 01, 16–30 (2022).
- 26. <sup>a, b, c</sup>UNICEF. Evaluasi program Roots Indonesia Uji coba pencegahan kekerasan sebaya dan perundungan di Sulawesi Selatan dan Jawa Tengah. Unicef 10–13 (2020) doi:10.1016/j.chb.2017.10.008.Diakses.
- 27. <sup>^</sup>Kartika, K., Darmayanti, H. & Kurniawati, F. Fenomena Bullying di Sekolah: Apa dan Bagaimana? Pedagogia 17, 55 (2019).
- <sup>^</sup>Hatta, M. Tindakan Perundungan (Bullying) Dalam Dunia Pendidikan Ditinjau Berdasarkan Hukum Pidana Islam. MIQOT J. Ilmu-ilmu Keislam. 41, 280–301 (2018).
- 29. <sup>^</sup>Hertinjung, W. S. Bentuk-Bentuk Perilaku Bullying Di Sekolah Dasar. Semin. Nas. Psikol. UMS 2013 Parent. 53, 450–458 (2013).
- <sup>^</sup>Bowes, L. et al. School, Neighborhood, and Family Factors Are Associated With Children's Bullying Involvement: A Nationally Representative Longitudinal Study. J Am Acad Child Adolesc Psychiatry 48, 1–15 (2009).
- <sup>^</sup>Merrill, R. M. & Hanson, C. L. Risk and protective factors associated with being bullied on school property compared with cyberbullied. BMC Public Health 16, 1–10 (2016).
- Jan MPhil Scholar, Msa. & Husain Assistant Professor, S. Bullying in Elementary Schools: Its Causes and Effects on Students. 6, 43–57 (2015).
- Mohan, T. A. M. & Bakar, A. Y. A. A systematic literature review on the effects of bullying at school. SCHOULID Indones. J. Sch. Couns. 6, 35 (2021).
- 34. <sup>^</sup>UNICEF. Worlds of influence | UNICEF. (2020).
- Beaton, J. M., Doherty, W. J. & Wenger, L. M. Perundungan Di Indonesia. Routledge Handb. Fam. Commun. 225– 240 (2020).

- 36. <sup>^</sup>UNICEF. Strengthening child protection systems violence against children in East Asia and the Pacific: a regional review and synthesis of findings series, no. 4. (2014).
- 37. <sup>^</sup>Srabstein, J. C. & Leventhal, B. L. Prevention of bullying-related morbidity and mortality: A call for public health policies. Bull. World Health Organ. 88, 403 (2010).
- 38. <sup>^</sup>Gini, G. & Pozzoli, T. Association between bullying and psychosomatic problems: A meta-analysis. Pediatrics 123, 1059–1065 (2009).