Research Article

Profiles of Mental Health Problems Among Adolescents

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Abstract.
Adolescence is one of the developmental stages marked by the emergence of psychological turmoil, so it is not easy for some individuals to live through it. This study aimed to determine the general profile of typical mental health problems experienced by adolescents in East Java. This study used a descriptive survey conducted on adolescents aged 15–18 years in East Java. The sampling technique used is simple random sampling. Data were obtained using sociodemographic data and the Strengths and Difficulties Questionnaire (SDQ). The results show that emotional problems emerged as the most prevalent concern among older students, whereas younger students faced the highest prevalence of peer-related problems. Regarding gender, emotional problems and peer problems were the predominant contributors to the highest rates among female students, while conduct problems exhibited the highest rates among male students. The implications of the study point to the importance of addressing gender-based emotional and behavioral problems in adolescents within school settings. This emphasis is key to cultivating a state of mental health and well-being.

Keywords: emotional problems, behavioral problems, gender, school-based mental health

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1. BACKGROUND

Most mental health problems diagnosed in adulthood begin in adolescence. Children and adolescents with poor mental health feel more depressed, withdraw from the social environment, and engage in risky activities or dangerous behaviors than those with healthier mental health. Adolescents with recurring mental problems are at increased risk of adverse social, economic, and health outcomes later in life.

According to epidemiological research by WHO in 2011, 20% of adolescents at school reported suffering from anxiety and depression yearly, while the incidence of emotional disturbance among adolescents aged 15 years and above is 9.8% in Indonesia [1]. One past study examined 5,664 pairs of adolescent caregivers in Indonesia. It showed that one in three adolescents experienced a mental health problem, and

one in twenty adolescents had a mental disorder in the past 12 months [2]. It was expected to equal 15.5 million and 2.45 million adolescents, respectively. Adolescents were diagnosed with mental disorders by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), the guideline for establishing the diagnosis of mental disorders in Indonesia and internationally. The most common adolescent mental disorders were 3.7% anxiety disorders (a combination of social phobia and generalized anxiety disorder), 1% major depressive disorder, 0.9% conduct disorder, 0.5% PTSD, and 0.5% ADHD [2]. Suffering from poor mental health conditions during adolescence can harm many areas of their life, as they may struggle with school and grades, decision-making, social relationship, and maintaining overall health, causing preventable burdens if not anticipated early.

Several studies have examined and identified the issues that teenagers face [3, 4, 5,6]. If the challenges go undetected or unaddressed, they can have a long-term influence on not just the child's life but also the families and society [7]. A child may endure several stresses throughout the critical childhood years; social and emotional strains may place children and adolescents at increased risk of acquiring physical, emotional, psychological, social, and academic issues [8]. They can also negatively impact a child's normal functioning through poor school performance, social isolation, low self-esteem, and other serious mental health issues [9].

This research will investigate the patterns and profiles of mental health problems among adolescents aged 15–18. This research was carried out in East Java, Indonesia. The benefit of describing mental health profiles among adolescents will provide important data for planning, development, and decision-making for related stakeholders. Understanding the prevalence, patterns, and profiles of adolescent mental health problems will increase the suitability of prevention and promotion efforts for better mental health outcomes.

2. RESEARCH METHOD

2.1. Sampling Method

The subjects were 1218 adolescents aged 15–18 years in East Java Province. Obtained through random sampling by the random.org site. The randomization process was carried out in three stages: the researcher defined the population that would become the research sample, collected data on the population for the sampling frame, and determined the research subjects through a randomization process [10].

2.2. Research subject

The research population is defined as adolescents aged 15–18 years and registered as active students in Muhammadiyah schools at both junior and senior high levels in East Java. The selection of Muhammadiyah schools was due to their large number and accessibility. The second stage was to record the number of junior and senior high schools and obtain a list of schools. There are 29 districts, nine cities, 180 Muhammadiyah junior high schools, and 85 Muhammadiyah senior high schools [11]. The final stage, with the help of the random.org site, carried out randomization and obtained nine regencies, namely Gresik, Sidoarjo, Lamongan, Surabaya, Malang, Nganjuk, Lumajang, Tulungagung, and Banyuwangi. Based on the nine selected districts, the researchers carried out the licensing process for the following randomly selected schools:

Table 1: Demographic Data.

No	Districts	The school
1	Gresik	2 SMAM (SMAM 10 Gresik, SMA 1 Gresik)
2	Lamongan	2 SMAM (SMAM Babat 1 Lamongan, SMAM 4 Lamongan)
3	Sidoarjo	2 SMAM (SMAM 1 Taman, SMAM 2 Sidoarjo)
4	Surabaya	3 SMAM (SMAM 2, SMAM 3, SMAM 7 Surabaya)
5	Malang	2 SMPM (SMPM 2 Malang, SMPM 6 Dau, Malang)
6	Nganjuk	1 SMPM (SMPM 1 Nganjuk)
7	Lumajang	1 SMPM (SMPM 1 Lumajang)
8	Tulungagung	1 SMPM (SMPM 1 Tulungagung)
9	Banyuwangi	1 SMPM (SMPM 3 Banyuwangi)

2.3. Research Instruments

This study used the Indonesian version of the Strengths and Difficulties Questionnaire (SDQ) developed by Goodman [12,13,14]. SDQ identified five domains, which are emotional problems (5 items), conduct problems (5 items), hyperactivity (5 items), peer problems (5 items), and prosocial behaviors (5 items) [15]. The reliability of the SDQ Indonesian version is $\alpha = 0.77$, and the ROC score limit is $\geq$ five as a screening instrument. While the sensitivity value is 0.67 and the specificity value is 0.68, with LR (+) = 2.09 and LR (–) = 0.49 [16]. This questionnaire is equipped with three answer choices that best describe the conditions to be filled in, namely: Not True (0), Somewhat True (1), and Certainly True (2). In addition to revealing the five aspects mentioned, the SDQ

also reveals mental health status in general through its total score in three categories: 1). normal, 2). borderline, and

3). abnormal. The reason for using this scale is that it has been translated into various languages, including Indonesian.

2.4. Research Ethics

This research has obtained ethical clearance from the University of Muhammadiyah Malang Ethics Committee (Reg. No.: E.5.a/048/KEPK-UMM/III/2022). A set of informed consent forms was obtained from the schools and students before the data collection began.

2.5. Data Analysis

The data obtained were then analyzed using JASP for Windows. The data analysis in this study uses descriptive statistics to obtain a profile and identify patterns of adolescent mental health problems in East Java.

3. RESULT

A total of 1218 adolescents actively participated as subjects in this study, with details of 496 males (40.72%) and 722 females (59.28%). Then the subjects in junior high school were 515 (42.29%) and 703 (57.71%) senior high school students. Table 2 shows the profile mapping of adolescent mental health problems in East Java.

Table 1 shows that more adolescents in junior high school were categorized as having borderline total difficulties

(N = 126, 24.47%) compared to seniors in high school (N = 128, 18.21%). More male adolescents were categorized as having borderline total difficulties (N = 136, 27.42%) compared to females (N = 118, 16.34%). The total difficulties in the abnormal category indicated a slightly different trend, with more adolescents in senior high school (N = 529, 75.25%) and females (N = 562, 77.84).

In junior high school, some adolescents indicated emotional problems in the borderline-abnormal range. In sequence, the most to least common problems at the junior high school level are peer problems (N = 233, 45.25%), emotional problems (N = 184, 35.73%), conduct problems (N = 163, 31.65%), hyperactivity (N = 101, 19.64%), and prosocial behavior (N = 70, 13.59%). A similar trend was found among the senior

Table 2: Profile of Adolescent Mental Health Problems.

Domain	Junior HS N=515 (42.29%)	Senior HS N=703 (57.71%)	MaleN = 496 (40.72%)	FemaleN= 722 (59.28%)
Total Difficulties				
Normal	52 (10.10%)	46 (6.55%)	56 (11.30%)	42 (5.9%)
Borderline	126 (24.47%)	128 (18.21%)	136 (27.42%)	118 (16.34%)
Abnormal	337 (65.34%)	529 (75.25%)	304 (61.30%)	562 (77.84%)
***Emotional problem**				
Normal	331 (64.28%)	340 (48.36%)	370 (74.59%)	301 (41.69%)
Borderline	57 (11.07%)	78 (11.10%)	46 (9.29%)	89 (12.32%)
Abnormal	127 (24.66%)	285 (40.54%)	80 (16.12%)	332 (45.9%)
***Conduct problem**				
Normal	352 (68.36%)	506 (71.93%)	335 (67.54%)	523 (72.43%)
Borderline	69 (13.40%)	88 (12.51%)	66 (13.30%)	91 (12.61%)
Abnormal	94 (18.25%)	109 (15.50%)	95 (19.16%)	108 (14.96%)
***Hyperactivity**				
Normal	414 (80.38%)	545 (77.34%)	409 (82.45%)	550 (76.16%)
Borderline	67 (13.03%)	98 (13.96%)	60 (12.10%)	105 (14.55%)
Abnormal	34 (6.61%)	60 (8.70%)	27 (5.45%)	67 (9.29%)
***Peer problem**				
Normal	282 (54.75%)	423 (60.18%)	269 (54.23%)	436 (60.39%)
Borderline	157 (30.50%)	188 (26.73%)	164 (33.07%)	181 (25.07%)
Abnormal	76 (14.75%)	92 (13.09%)	63 (12.71%)	105 (14.54%)
***Prosocial behavior**				
Normal	445 (86.41%)	625 (88.90%)	418 (84.28%)	652 (90.31%)
Borderline	40 (7.77%)	50 (7.11%)	52 (10.48%)	38 (5.26%)
Abnormal	30 (5.825%)	28 (3.99%)	26 (5.24%)	32 (4.43%)

high school students, which indicated emotional problems in the borderline-abnormal range. In sequence, from most to least common problems at the senior high school level are emotional problems (N = 363, 51.64%), peer problems (N = 280, 39.82%), conduct problems (N = 197, 28.07%), hyperactivity (n = 158, 22.66%), and finally prosocial behavior (N = 78, 11.1%). Peer, emotional, and conduct problems are junior and senior high schools' three most prominent mental health problems.

Furthermore, male and female adolescents indicated symptoms of mental health problems at the borderline of an abnormal level. The patterns fit the current knowledge that females tend to be more problematic with emotional problems and hyperactivity, while a higher percentage of conduct problems occurs among males. Both male and female adolescents suffered adequately from peer problems. Sequentially, mental health symptoms that are in the borderline-abnormal range among female adolescents are emotional problems (N = 421, 58.31%), peer problems (N = 286, 39.61%), conduct problems (N = 199, 27.57%), hyperactivity (N = 172, 23.84%), and prosocial behavior (N = 70, 9.69%). In male adolescents, mental health symptoms in the borderline-abnormal range from most to least common are peer problems (N = 227, 45.78%), conduct problems (N = 161, 32.46%), emotional problems (N = 126, 25.41%), hyperactivity (N = 87, 17.55%), and prosocial behavior (N = 78, 15.72%). The same trend of emotional,

peer, and conduct problems is also identified as the most common adolescent mental health problems based on gender.

4. DISCUSSION

A study's results on mapping adolescents' mental health problem profiles in East Java do not indicate differences based on educational level or gender. Both senior and junior high school students have the same difficulties, with majorities at an abnormal level. The mapping uses a scoring norm guide developed by Goodman on [12,13]. The term "borderline" refers to a situation where the experienced mental health problems are either approaching or surpassing the threshold of typical conditions. This suggests that the symptoms and ramifications of these mental health problems are just beginning to manifest. Furthermore, "abnormal" refers to a state where the degree of mental health problems exceeds the parameters set by standard benchmarks or normal circumstances. In such cases, there exists a significant issue that demands immediate attention and intervention. Upon evaluating the collective mental health issues using SDQ, it is evident that all profiles are contributing to the notable prevalence within the abnormal category of mental health problems, with each profile exhibiting a prevalence rate of more than half a percentage.

Refining the analysis, table 2 shows that emotional problems were the most prevalent among high school students, with prevalence rates of more than half (51.64%) of the population that ranged from borderline to abnormal. The finding aligned with prior studies conducted in India and Sri Lanka, indicating that adolescents, regardless of their middle or high school levels, experience a substantial prevalence of emotional problems [17,18]. However, a different study from Iran using the SDQ questionnaire produced different results, with emotional problems among adolescents aged 6 to 18 contributing to the third most prevalent problem adolescents experience [19]. The variations may stem from distinctive characteristics of the residence area, culture, and educational level. Emotional problems in SDQ may not necessarily indicate the presence of anxiety or depressive disorders. However, the SDQ components of emotional problems include some symptoms of anxiety and depressive disorders, such as "often unhappy," "has many worries," "feeling nervous or clingy in new situations," "easily scared," and "often complains of headaches."

Following current findings, peer-related problems are the most common problem among younger adolescents, affecting nearly half of them. Peer problems that were most commonly identified among adolescents were difficulties or challenges in peer

interactions and relationships. Peer problems can manifest in a variety of ways, including peer rejection, exclusion, and bullying by other kids [20,21,22,23,24,25]. A study from a Finnish middle school reported that 20% of 4447 students had experienced bullying by their peers [23]. Another study in China found that around 2-17% of adolescents reported peer victimization [26]. The most common reasons for peer rejection and bullying are interpersonal. However, it is essential to acknowledge that these cases can also arise from negative intergroup dynamics or interactions with peers who do not share the same group membership [27]. For example, cultural background, socioeconomic status, beliefs, and behaviors differ. These peer problems can have detrimental effects on emotional and behavioral health [28,21,29,30,31], learning difficulty at school [32,33,34], a decrease in prosocial behavior [35], and low self-esteem [36]. In addition to peer problems, emotional problems demonstrated the second highest prevalence rate, affecting more than a third of the younger adolescents. Conduct issues came in second place, with a slight difference of about 4%, or 31.65%.

Based on gender, the difficulty patterns between males and females are different. Males tend to be dominant in peer and conduct problems, while females tend to be prevalent in emotional and peer problems. In the male version, the manifestation of conduct problems is shown by inappropriate behavior, such as rule-breaking and aggressive behavior, that harms individuals, families, and communities and is a severe public health concern [37,38]. Thus, CD is a serious mental health concern associated with a substantial risk of both current and future impairments. Gender analysis in previous studies found conflicting results. Consistent with the findings of this study, white adolescent boys are more likely to have behavioral problems than female adolescents, in contrast to the case of black African and black Caribbean groups, where there is no difference between male adolescents [37]. This indicates a gender pattern in the appraisal problem caused by putative risk factors by ethnicity. However, to what extent the ethnicity factor can contribute needs further investigation.

Further research findings show that the high prevalence of conduct disorder in male adolescents in this study is intimately linked to peer problems. This is because adolescents spend a lot of time with their peers at school. Psychological research suggests an intimate link between peer relationships and mental health. Roughly half of the children with conduct disorders have problems with peers [39]. Gender composition creates constraints for socialization and friendship formation, affects self-image, and shapes conflict. This is why teenage boys tend to develop both mental health problems and peer problems [40].

One contributing factor to the high prevalence of emotional and peer distress experiences by female adolescents is their tendency to adopt negative coping styles such as [41], relationship problems with peers and parents [42], especially when approaching puberty, which is influenced by hormonal factors and the developmental transition period they experience [43]. The forms of emotional problems experienced by women are generally in the form of sadness and anxiety [44]. The existence of emotional problems experienced by adolescent girls is closely related to peer problems because, according to the stages of development, both female and male adolescents tend to interact more with their peers at school. However, girls were more likely to experience peer problems by mid-adolescence than boys [45].

5. CONCLUSION

Based on research findings, it can be concluded that the prevalence of adolescent mental health issues applied to both in junior and senior high school, as well as among both female and male students, exhibit a high prevalence of mental health problems, exceeding half a percent. Among older adolescents, emotional problems were the most prevalent, while peer problems ranked highest among junior high school students. In terms of gender, it is evident that the highest prevalence rates among female students were associated with emotional problems and peer-related issues, whereas male students exhibit the highest rates in conduct problems. Since the main objective of this research is to perform a descriptive survey concerning adolescent mental health, we did not involve comparisons based on levels of education among adolescents or conduct gender-based analyses. Therefore, in the future, it is necessary to carry out education level and gender-based comparisons alongside prevalence surveys to provide a more comprehensive credibility of the findings. The implications of this study emphasize the importance of addressing gender-based emotional and behavioral problems among adolescents in educational settings. This approach is pivotal in promoting a healthy mental state among these individuals.

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Author Contributions

All author conduction concept of the research design, writing introduction, data collection, data processing, and writing discussion.

Conflict of interest:

The authors declare there is no conflict of interest.

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