

Conduct Disorders in Senior High School Student and Integrated Islamic Boarding School Using the Strengths and Difficulties Questionnaire (SDQ)

Nurmaines Adhyka¹, Popy Arwin², Ramadoni Ramadoni³, Sevilla Ukhtil Huvaidd⁴

¹Baiturrahmah University, Padang, Indonesia. Email: nurmaines.adhyka@staff.unbrah.ac.id

²Solok District Health Office, West Sumatera, Indonesia. Email: phi111184@gmail.com

³Badan Riset dan Inovasi Nasional (BRIN), Jakarta, Indonesia. Email: ramadoni@brin.go.id

⁴Baiturrahmah University, Padang, Indonesia. Email: sevillaukhtilhuvaidd@fkm.unbrah.ac.id

Artikel Diterima: (12 Januari 2025)

Artikel Direvisi: (17 Mei 2025)

Artikel Disetujui: (05 Juni 2025)

ABSTRAK

Strengths and Difficulties Questionnaire (SDQ) merupakan alat skrining yang banyak digunakan untuk mendeteksi masalah kesehatan mental pada anak dan remaja usia 4–18 tahun. Respon perilaku remaja terhadap masalah dapat berbeda tergantung lingkungan tempat tinggal, seperti tinggal bersama orang tua atau di asrama. Penelitian ini bertujuan membandingkan kondisi kesehatan mental siswa sekolah menengah atas (SMA) umum dan siswa pondok pesantren terpadu di dua kota berbeda di Sumatera Barat. Penelitian ini menggunakan desain potong lintang dengan 120 siswa berusia 15–17 tahun yang dipilih melalui *incidental random sampling*. Data dikumpulkan menggunakan kuesioner SDQ secara daring di SMA dan secara cetak di pesantren. Analisis dilakukan menggunakan uji-t independen. Dari hasil penelitian terlihat bahwa terdapat perbedaan signifikan pada dimensi masalah perilaku ($p = 0,010$) dan masalah teman sebaya ($p = 0,046$). Korelasi kuat juga ditemukan antar dimensi SDQ, seperti masalah perilaku dengan hiperaktivitas ($r = 0,289^{**}$) dan masalah teman sebaya dengan gejala emosional ($r = 0,295^{**}$) serta hiperaktivitas ($r = 0,356^{**}$). Lingkungan sosial, seperti pola pengasuhan dan keterbatasan interaksi dengan orang tua, dapat mempengaruhi kesehatan mental remaja. Penelitian ini penting untuk memberikan gambaran empiris tentang bagaimana perbedaan sistem pendidikan dan tempat tinggal mempengaruhi kondisi psikologis siswa, yang dapat menjadi dasar bagi intervensi kesehatan mental berbasis sekolah.

Kata Kunci: Pesantren, SDQ, Gangguan Tingkah Laku

ABSTRACT

*The Strengths and Difficulties Questionnaire (SDQ) is widely used to screen for mental health problems in children and adolescents aged 4–18. Adolescents' behavioral responses to challenges may differ based on their living environment, such as living with parents or in a boarding school. This study aimed to compare the mental health status of general high school students and integrated Islamic boarding school students in two cities in West Sumatra, Indonesia. A cross-sectional study was conducted involving 120 students aged 15–17 years selected through incidental random sampling. SDQ data were collected online in public schools and using printed questionnaires in boarding schools. Independent t-tests were used for analysis. Significant differences were found in conduct problems ($p = 0.010$) and peer relationship problems ($p = 0.046$). Strong correlations were identified between conduct problems and hyperactivity ($r = 0.289^{**}$), as well as between peer problems and emotional symptoms ($r = 0.295^{**}$) and hyperactivity ($r = 0.356^{**}$). Social environments, including parenting patterns and limited parental interaction, play a crucial role in adolescent mental health. This study provides empirical evidence on how differences in school systems and living arrangements affect students' psychological conditions, supporting school-based mental health interventions.*

Keywords: Islamic Boarding School, SDQ, Conduct Disorders

Penulis Koresponden:

Nama : Nurmaines Adhyka

Email : nurmaines.adhyka@staff.unbrah.ac.id

Introduction

There is a consensus that schools are well positioned in early identify children and young people at risk of mental illness. It is due to the how immerge the scale of risk factor and the impact, it is naturally both parents and schools conduct examination on child emotional health (Anderson et al., 2019; Bakare et al., 2010). Parents and teachers should collaborate to prevent this. This self-determination questionnaire is a useful tool for assessing the prevalence of emotional disorders such as anxiety and depression in both males and female students. It can be assessed during childhood, adolescence, and adulthood, with a focus on depression (Armitage et al., 2023).

Strengths and Difficulties Questionnaire (SDQ) has been developed to meet the need for identify early conduct disorder using in the screening instrument. The SDQ is a 25-item questionnaire about the positive and negative attributes of children and adolescents (4—16 years old) by self-report or parents and teachers' perspective on the child's symptoms. The application of the SDQ in Indonesian has been tested for validity and reliability as a screening instrument by Oktaviana in 2014 with satisfactory results (Oktaviana & Wimbari, 2014).

High school students are students at the upper secondary level with an age range of 15—18 years old at which period this is better known as adolescence. This age range is often associated with deviations due to developmental incongruence, emotional disturbances and behavioral disturbances due to changes that occur to oneself and changes in the environment (Yurizali et al., 2024). These changes are related to puberty, changes in social and environmental roles that lead to deviations in emotional behaviors such as aggressive behaviors, excessive fear, apathy and self-harm behavior (Sun et al., 2023). The differentiation among high school students (SHS) and integrated high school (HIS) students is where they live. High school students generally live and spend time with their families with different regulations, while Islamic boarding school students will spend more time in the dorm, with friends and away from family. Adding to this, integrated Islamic boarding schools which is in Indonesia known as *pesantren* is educational institution with boarding system in which the dominant character of the institution (as teacher, educator, and adviser) is a *kyai* or religious leader, the mosque is its core aspect, and its activities are shaped by Islamic teaching activities (Izfanna, 2020; Ramadoni & Mustofa, 2022).

The Strengths and Difficulties Questionnaire (SDQ) is a fast and brief screening instrument used to screen for behavioral disorders in children and adolescents. The accuracy levels of SDQ were consistent while performing Attention-deficit/hyperactivity disorder (ADHD) cases in UK and to describe psychopathology (Algorta et al., 2016). SDQ includes 25 item items as well as five clinical sub-scales: Emotional Symptoms, Conduct Problems, Hyperactivity, Peer Problems, and Ignorance Behavior. The SDQ has five scales (scored 0–10); emotional problems, conduct problems, hyperactivity, peer problems and ignorance scale. The scales are combined into a 'total difficulties' score (0–40). Research on the factor structure of the SDQ has found inconsistent factor structures with the number of factors ranging from 3–5. The proposed three factor structure includes two broad factors 'internalizing' (consisting of the peer and emotional sub-scales) and 'externalising' (consisting of the conduct and hyperactivity sub-scales), with an additional pro-social factor. The five-factor structure consists of the five sub-scales (Goodman, 1997, 1999; Goodman et al., 2003).

The SDQ is a good screening tool for behavioral issues in kids and teenagers. SDQ has also been used in different demographic samples to screen for behavioral disorders in children and adolescents, and it has been shown to have good psychometric qualities. The SDQ diagnostic prediction algorithm generates ‘unlikely’, ‘possible’, or ‘probable’ ratings for all dimensions. Among the population samples were the general population, the regular senior high school, and modern integrated Islamic boarding school. In this paper, we sought to synthesize comparison in different schools in assessing mental health issues such as conduct disorders (Goodman, 1997; Goodman et al., 2003).

In other studies, it is stated that there are differences between older adolescents in Greece (aged 15 to 17 years) reported more hyperactivity/inattention and conduct problems than younger ones (aged 11 to 14 years) in the relationship between x, and y, z (Giannakopoulos et al., 2009). However, there has been no research that has compared the SDQ of high school students with Islamic boarding school students. For that reason, the researcher decided to focus on comparing and examining the relevance between these two samples (SHS and Boarding School Students) and determining which of the variables has a strong intercorrelation.

Methodology

This study employs quantitative comparative research that aims to: (1) examine the level of psychological difficulties among students in regular senior high schools and Integrated Islamic Boarding Schools (pesantren) in West Sumatra using the *Strengths and Difficulties Questionnaire* (SDQ); (2) compare SDQ subscale scores between the two student groups across five dimensions, namely emotional symptoms, conduct problems, hyperactivity, peer relationship problems, and prosocial behavior; and (3) analyze the correlations between dimensions of psychological difficulties within each group to identify distinctive psychosocial patterns. This research is driven by a significant gap in the existing literature, as prior studies have predominantly focused on general school populations without addressing the distinct characteristics of students in Islamic boarding schools. These institutions exhibit markedly different social structures, disciplinary frameworks, and interaction patterns, necessitating a comparative analysis. Therefore, this study plays a crucial role in bridging the gap in understanding adolescent psychological well-being within two distinct educational systems in Indonesia.

The cross-sectional study was used to collect data from students in two different schools across two cities. In collecting data, the proportion of population senior high school students in which they live with their parents in Solok City compare with boarding school student in Padang City. Both are urban areas that look alike in terms of city ambience and total population and the economic growth. The population in this study consisted of students students aged 15 to 17 years without considering gender differences. The total sample in this study consisted of 120 students, representing each selected school, chosen through incidental random sampling.

The selection of schools in Solok City, Indonesia was carried out using purposive sampling. The selected public schools were believed to have similarities with the image of Islamic boarding school students in Padang City, Indonesia. Data collection in general high school was carried out using a Google Form, while in boarding schools, a paper-based questionnaire was used. This is because the students in Islamic boarding schools are not allowed to use mobile phones during study hours. This is one of the main points in the comparison. In general public

schools, students live close to their parents and have freedom in internet access and gadget use. In contrast, Islamic boarding school students spend more time with friends and teachers in a dormitories and have minimal communication with their parents.

The instrument used was the SDQ questionnaire, which contained 25 questions to assess the incidence of depression in adolescents. These questions are divided into five subscales, each describing five psychological attributes: Emotional Symptoms, Conduct Problems, Hyperactivity-Inattention, Peer Relationship Problems, and Ignorance. Ignorance is considered an adaptation of prosocial behavior, which is defined as actions aimed at help others. Prosocial behavior is a positive attribute that children and adolescents should develop. Without prosocial behavior, individuals may become indifferent and lack concern (ignorance) for their surroundings. Each subscale ranges from 0 to 10, derived from five statements, which is divided into positive and negative statements.

Tabel 1. Interprets of SDQ Scale

Dimensions	Normal	Borderline	Abnormal
Emotional symptoms	0 – 5	6	7 – 10
Conduct problems	0 – 3	4	5 – 10
Hyperactivity-inattention	0 – 5	6	7 – 10
Peer problems	0 – 3	4 - 5	6 – 10
Ignorance (Prosocial)	6 – 10	5	0 – 4

The data were analyzed using the Statistical Package for Social Sciences (SPSS), version 16. The analysis began by examining the frequency distribution of each variable, followed by an independent samples t-test. The independent samples t-test was used to compare the mean scores of students from both schools. The analysis stage begins by looking at the population variations of the two samples with the Levene Test, this test is used to see variances in both population whether identical or not (Santoso, 2001).

The significance value in this research is determined based on the results of Levene's Test for Equality of Variances. If the significance value in t-test >0.05 then it is assumed that the two variances are identical. Equal variances indicate that the comparison of population means is based on the assumption of homogeneity of variances (Santoso, 2001).

The correlation value is represented in the **Sig. (2-tailed)** column (p-value) along with the correlation coefficient (r). The r value indicates the strength of the relationship between the variable and the overall SDQ score. A positive r value means that an increase in the variable is associated with an increase in the SDQ score. The larger the r value, the stronger the influence of the variable on the SDQ (Hardisman, 2020; Santoso, 2001).

Results and Discussions

1. Social Demographic

A total of 120 respondents participated in the study, divided equally between two schools located in different cities. Each school contributed 60 respondents, aged between 15 and 17 years, with a mean age of 16.59 ± 1.24 years. The sample consisted of 17 males (14.2%) and

103 females (85.8%). Each respondent answered 25 questions based on their daily experiences and perceptions. For each positive question, a score of 0 is given if the statement does not apply, 1 if it is slightly true, and 2 if it clearly applies to the respondent. The total score is then interpreted using three categories: **normal** (scores between 0–15), **borderline** (16–19), and **abnormal** (20–40). The mean scores on total difficulties and other sub-scales of SDQ are; 1.65 ± 0.85 for Emotional Symptoms; 1.59 ± 0.82 for Conduct Problem; 1.29 ± 0.63 Hyperactivity-Inattention; 1.47 ± 0.67 for Peer Problems and 1.21 ± 0.55 for Ignorance and 1.62 ± 0.79 .

Table 2. Social Demographic Distribution

Sex:		
Female	f = 14.2%	
Male	f = 85,8%	
	Mean	SD
Age	16.59	1.24
SDQ	1.65	0.85
Emotional Symptoms	1.59	0.82
Conduct Problem	1.29	0.63
Hyperactivity-Inattention	1.47	0.67
Peer Problems	1.21	0.55
Ignorance	1.62	0.79

The SDQ has been used widely with groups of children with developmental problems. This is necessary due to the frequency of depression, anxiety and other mental health difficulties in children and adolescents is growing (Marcheselli et al., 2018). Previous study found that SDQ rating could describe prevalence of behavioral problems among children with intellectual abilities in Nigeria. Male children had higher mean score and exhibit more conduct and hyperactivity behavioral problems compared to female, but gender were not statistically significant in statistic (Bakare et al., 2010). Even though, some studies imply difference due to variety of children population studies or "methodologies used". The behavioral problems which happened childhood period and tend to persist into adulthood. Chronological age showed a near significant negative correlation with scores on hyperactivity clinical scale of SDQ, indicating that behavioral problems relating to hyperactivity may be attenuated with increasing age of the children (Bryant et al., 2020).

Research found that establishing school-based mental health programs can significantly address behavioral problems (Bakare et al., 2010). In addition, parental monitoring and family relationships each play important preventive roles in reducing youths' engagement in antisocial behavior. In a longitudinal study, parental monitoring, parent–youth relationships, and sibling conflict were found to be important predictors of the onset and progression of youth problem behaviors (Fosco et al., 2012).

2. Prevalence of Behavior

Table 1 presents the differences in SDQ clinical scales of SDQ between SHS students and boarding school students. The results show that mostly (more than 50%) of student has normal behavior in term of emotional, hyperactivity, peer problem and ignorance in both schools. It excludes, conduct problem in boarding schools who only 40% (n = 24). Adding to this, this group get the highest in percentage, both in borderline (25%) and abnormal (35%). In contrast,

student in SHS get the highest score in peer problems (26,7%) in borderline status and emotional (26,7%) in abnormal.

Table 3. Prevalence Of Behavioral Problems in Different Clinical Scales Of SDQ

SDQ Scale	Abnormal N (%)		Borderline N (%)		Normal N (%)		Total N (%)	
	SHS	Boarding	SHS	Boarding	SHS	Boarding	SHS	Boarding
Emotional	16 (26,7)	11 (18,3)	9 (15,0)	7 (11,7)	25 (58,3)	42 (70,0)	60 (100,0)	60 (100,0)
Conduct Problem	11 (18,3)	21 (35,0)	11 (18,3)	15 (25,0)	38 (63,3)	24 (40,0)	60 (100,0)	60 (100,0)
Hyperactivity	7 (11,7)	5 (8,3)	4 (6,7)	7 (11,7)	49 (81,7)	48 (80,0)	60 (100,0)	60 (100,0)
Peer Problem	1 (1,7)	9 (15,0)	16 (26,7)	14 (23,3)	43 (71,7)	37 (61,7)	60 (100,0)	60 (100,0)
Ignorance	4 (6,7)	4 (6,7)	2 (3,3)	9 (15,0)	54 (90,0)	47 (78,3)	60 (100,0)	60 (100,0)
Total Difficulties	10 (16,7)	9 (15,0)	15 (25,0)	13 (21,7)	35 (58,3)	38 (63,3)	60 (100,0)	60 (100,0)
Score								

* Normal cut off points = 0-15

Borderline cut off points = 16-19

Abnormal cut off points = 20-40

This result is surprising, considering that students in Islamic High Schools (IHS) are accustomed to caring for and helping one another. They tend to form close relationships, as they spend 24 hours a day, 7 days a week with their roommates. These students spend more time with their peers and teachers than with their families, which is expected to positively influence their prosocial behavior and peer relationships (Izfanna, 2020).

Table 4 presents the comparative analysis between the two educational settings. The results of the independent-samples t-test show that among all SDQ components, significant differences were found only in the conduct problems and peer problems subscales, with p-values less than 0.05.

Table 4. The Comparison Statistics between Schools and SDQ

SDQ Scale	Sign. 2 tailed (t-score)	Interpretation
Emotional	0.191	Not significant
Conduct Problem	0.010	Significant
Hyperactivity	0.887	Not significant
Peer Problem	0.046	Significant
Ignorance	0.253	Not significant
Total Difficulties Score	0.630	Not significant

The data were analyzed with Pearson product-moment correlation based on data from both schools. Table 2 shows that the SDQ total score has a strong correlation with all dimensions (emotional, conduct problem, hyperactivity, peer problem, and prosocial behavior) with r respectively 0.513**; 0.438**; 0.552**; 0.494**; 0.223*. Looking deeply in intercorrelation among variable, the emotional factors have positively correlates with hyperactivity 0.213*($p < 0.05$) and peer problem $r = 0.295^{**}$ ($p < 0.01$). Moreover, hyperactivity factors shows significant correlations on all factors (emotional, conduct problem, peer problem) except ignorance with r value, 0.213*; 0.289**; 0.356**. Meanwhile, ignorance dimensions are connected along with peer problem in r value 0.182* ($p < 0.05$).

Table 5. The Intercorrelation between Schools and SDQ

SDQ Scale	Emotional	Conduct Problem	Hyperactivity	Peer Problem	Ignorance	SDQ
Emotional	1	0.029	0.213*	0.295**	0.005	0.513**
Conduct Problem		1	0.289**	0.176	0.155	0.438**
Hyperactivity			1	0.356**	0.144	0.552**
Peer Problem				1	0.182*	0.494**
Ignorance					1	0.223*
SDQ						1

* p<0.05

** p<0.01

2.1. Emotional

The results of this study show that, in the emotional dimension, Senior High School (SHS) students (26.7%) have a higher rate of abnormality compared to students in Boarding Schools (18.3%). This finding supports previous research indicating that emotional disorders are the most common mental health issues among adolescents, with a prevalence rate of 5–10%. Such emotional disturbances may be attributed to the rapid biological and psychological changes that occur during adolescence, which can create complex challenges as individuals adjust to these developmental transitions. Additionally, the prevalence of emotional disorders is higher among teenage girls than boys (Hartanto & Selina, 2010).

In bivariate testing, it can be seen that in the emotional dimension there is no difference between SHS and boarding school students (p-value: 0.191 > 0.05). This result indicates that not all categories have interaction. However, Hall et al. (2019) reported otherwise. He found that emotional and peer-problem factors were weakly, but positively, correlated (Hall et al., 2019). A study conducted in Italy found that nearly one in ten adolescents was suspected of having emotional problems requiring psychological treatment. These issues were often accompanied by peer problems and low prosocial behavior levels (Corvasce et al., 2022). Given the importance of detecting emotional issues at an early stage, the development and implementation of early detection and preventive programs are both reasonable and necessary.

2.2. Conduct

In terms of the conduct problem variable, the prevalence among boarding school students (35%) is higher than that among Senior High School (SHS) students (18.3%). Research conducted in Sweden found that conduct problems are closely related to peer problems, both of which reflect the development of social skills (Gustafsson et al., 2017). Testing the differences between SHS and boarding school students shows that there are striking differences in these two research locations. It can be seen from the results of the p-value with the Sign value. 2-tailed 0.001 (<0.05).

2.3. Hyperactivity

A descriptive comparison between the two schools shows that there is little difference in the number of students within the normal range of the hyperactivity category: 49 students in SHS and 48 in the boarding school. This may be due to the fact that behavioral problems related to hyperactivity tend to diminish with increasing age (Bakare et al., 2010; Gustafsson et al., 2017).

In some cases, emotional problems and hyperactivity have been uniquely associated with anxiety and poor academic performance (Bryant et al., 2020). This finding is supported by the t-test results, which show no significant difference in hyperactivity scores on the SDQ between the two schools ($p = 0.887, > 0.05$).

2.4. Peer Problem

In the context of peer problems, only a small percentage of SHS students fall into the abnormal category (1.7%). However, 26.7% fall into the borderline category, while the majority (71.7%) are in the normal range. Similarly, a study in Nigeria found that children with intellectual disabilities experienced the highest levels of peer-related problems compared to other behavioral issues (Bakare et al., 2010). Longitudinal studies have shown that the relationship between bullying and depression is mediated by the quality of friendships, prosocial behavior, and peer support (Griese & Buhs, 2014; van Harmelen et al., 2016).

Students in Islamic High Schools (IHS) tend to develop strong peer relationships and prosocial behaviors through daily interactions with instructors, shared learning experiences, and living together with peers. Living in close proximity for an extended period with students from diverse backgrounds encourages the formation of deep and meaningful friendships. For instance, an educator described sharing food with friends or roommates when a student's parents visit or send packages, as an example of fostering a sense of community and care (Izfanna, 2020). This context may explain the significant difference found in peer problems between schools, as indicated by a p-value below 0.05 ($p = 0.046$).

2.5. Ignorance

There are notable differences in the distribution of scores within the prosocial (or ignorance) category across the three classifications—abnormal, borderline, and normal—at both schools. However, the p-value for this category is greater than 0.05 ($p = 0.253$), indicating no statistically significant difference between the two schools in the prosocial/ignorance dimension. Giannakopoulos et al. (2009) found that prosocial values did not significantly influence SDQ outcomes. Additionally, low levels of prosocial behavior and elevated peer problems have been shown to predict higher levels of depression among struggling learners (Bryant et al., 2020). This suggests that children who fall behind academically are at increased risk of being bullied (Twyman et al., 2010).

2.6. Comparison of High School and Boarding School Students

Based on the overall SDQ scores, SHS students are more likely to fall into the abnormal and borderline categories compared to their counterparts. In contrast, boarding school students show slightly higher representation in the normal category, with 63.3% compared to 58.3% for SHS. Despite these differences in specific dimensions, the overall SDQ score comparison between the two schools shows no statistically significant difference ($p = 0.630, > 0.05$).

2.7. Intercorrelation

The five-factor structure of the Strengths and Difficulties Questionnaire (SDQ) has been tested using Confirmatory Factor Analysis (CFA) and was confirmed as valid (Giannakopoulos et al., 2009), although some modifications were necessary to achieve an acceptable model fit. In the

present study, intercorrelations between conduct problems and emotional problems, as well as between conduct problems and peer problems, were found to be in the poor-to-fair range, with correlation values of 0.029 and 0.176, respectively. In the case of bully-victims, this measurement tended to yield significantly higher scores on the conduct problems scale. This may be due to the fact that the tool assesses bullying behavior by measuring the frequency of initiating or being exposed to violence. The SDQ revealed the highest abnormal scores in total difficulties, as well as in the emotional, conduct, and hyperactivity subscales among victimized students (Galal et al., 2019).

In this study, the greatest cross-factor loading was found in the ‘emotional’ factor, with a significant value of 0.295** ($p < 0.01$). A strong association was observed between emotional problems and peer relationship issues, including social isolation and bullying or victimization among peers. Peer groups play a significant role in adolescents’ lives, particularly in shaping their social development. Social interaction and peer affiliation contribute to the formation of various social skills. During adolescence, individuals often seek independence from their families and become more influenced by their peers. However, peer influence can also have negative consequences, such as encouraging antisocial behaviors like stealing, violating others’ rights, skipping school, and other forms of delinquency (Hartanto & Selina, 2010).

Strengths and Limitations of the Study

This study possesses several notable strengths. First, it addresses a relevant and underexplored topic by comparing the psychological well-being of students in two distinct educational settings—regular senior high schools and integrated Islamic boarding schools—in Indonesia. The use of the Strengths and Difficulties Questionnaire (SDQ), a globally validated and reliable instrument, enhances the methodological rigor of the research. By analyzing all five SDQ subscales (emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial behavior), the study provides a comprehensive overview of students’ mental health profiles. Furthermore, the analysis of intercorrelations between psychological dimensions offers deeper insight into the underlying psychosocial dynamics among adolescents. These findings have practical implications for the design of school-based mental health interventions that are sensitive to both cultural and institutional contexts.

Despite its strengths, this study has several limitations. First, its cross-sectional design limits the ability to establish causal relationships, as it captures associations at a single point in time. The generalizability of the findings is also constrained, as the research was conducted in only one province (West Sumatra), which may not represent the broader adolescent population in Indonesia. Additionally, the reliance on self-reported data introduces the possibility of response bias, particularly in sensitive domains such as emotional symptoms and prosocial behavior. The study also did not account for potential confounding variables—such as socioeconomic status, family background, academic stress, or prior psychological trauma—that could have influenced the outcomes. Moreover, some SDQ subscales, including hyperactivity and prosocial behavior, did not show significant differences between school types, indicating that educational setting alone may not fully explain variations in psychological functioning. Finally, the interpretation of intercorrelation results remains limited to statistical associations, without capturing the underlying psychological mechanisms, thereby highlighting the need for future research employing longitudinal or qualitative methods.

Conclusions and Recommendation

The Strengths and Difficulties Questionnaire (SDQ) has been widely used across numerous countries and continents. It is necessary to timely path to verify and monitor of SDQ in adolescence phase. It has been observed that 16 (27,6%) Public Senior High School Students (SHS) have abnormal scores in the emotional subscale, which followed by 21 (35%) boarding school pupils having problems in conduct problems. In term of borderline, peer problems have the highest number in SHS students, in contrast hyperactivity and ignorance (prosocial behavior) has the highest value for normal groups of students in 81,7% and 90% respectively. Allowing students to express themselves, watch their conduct, and communicate the results will be vital to develop students' strengths and lessen their shortcomings, as they are essential tactics for detecting emotional regulation difficulties. Similarly, because the impression of strengths and weaknesses is partially built by the family, training in regulation mechanisms in which they are also involved should be a primary goal in order to build emotional intelligence in their children. The recommendations of this article are:

1. Emotional: Implement early detection and gender-sensitive support programs for emotional issues among adolescents.
2. Conduct: Provide behavioral interventions and social skills training, particularly in boarding schools.
3. Hyperactivity: Train teachers in managing hyperactive behavior and regularly monitor students' development.
4. Peer Problems: Strengthen peer support systems and anti-bullying programs to improve social relationships.
5. Prosocial (Ignorance): Promote prosocial behavior through structured activities and support for at-risk learners.

Acknowledgments

The authors would like to express their sincere gratitude to the Directorate of Research, Technology, and Community Service – Directorate General of Higher Education, Research, and Technology, Indonesia, for their guidance in the preparation of this scientific article for international publication. The authors also extend their deepest appreciation to Baiturrahmah University for its support in both research funding and publication assistance.

Conflicts of Interest

The authors declare no conflict of interest.

References

- Algorta, G. P., Dodd, A. L., Stringaris, A., & Youngstrom, E. A. (2016). Diagnostic efficiency of the SDQ for parents to identify ADHD in the UK: a ROC analysis. *European Child and Adolescent Psychiatry*, 25(9), 949–957. <https://doi.org/10.1007/s00787-015-0815-0>
- Anderson, J. K., Ford, T., Soneson, E., Coon, J. T., Humphrey, A., Rogers, M., Moore, D., Jones, P. B., Clarke, E., & Howarth, E. (2019). A systematic review of effectiveness and cost-effectiveness of school-based identification of children and young people at risk of, or currently experiencing mental health difficulties. *Psychological Medicine*, 49(1), 9–19. <https://doi.org/10.1017/s0033291718002490>

- Armitage, J. M., Tseliou, F., Riglin, L., Dennison, C., Eyre, O., Jones, R. B., Rice, F., Thapar, A. K., Thapar, A., & Collishaw, S. (2023). Validation of the Strengths and Difficulties Questionnaire (SDQ) emotional subscale in assessing depression and anxiety across development. *PLoS ONE*, 18(7 July), 1–14. <https://doi.org/10.1371/journal.pone.0288882>
- Bakare, M. O., Ubochi, V. N., Ebigbo, P. O., & Orovwigbo, A. O. (2010). Problem and pro-social behavior among Nigerian children with intellectual disability: the implication for developing policy for school based mental health programs. *Italian Journal of Pediatrics*, 36, 37. <https://doi.org/10.1186/1824-7288-36-37>
- Bryant, A., Guy, J., & Holmes, J. (2020). The Strengths and Difficulties Questionnaire Predicts Concurrent Mental Health Difficulties in a Transdiagnostic Sample of Struggling Learners. *Frontiers in Psychology*, 11(November), 1–11. <https://doi.org/10.3389/fpsyg.2020.587821>
- Corvasce, C., Martínez-Ramón, J. P., Méndez, I., Ruiz-Esteban, C., Morales-Rodríguez, F. M., & García-Manrubia, M. B. (2022). Emotional Strengths and Difficulties in Italian Adolescents: Analysis of Adaptation through the SDQ. *Sustainability (Switzerland)*, 14(10), 1–12. <https://doi.org/10.3390/su14106167>
- Fosco, G. M., Elizabeth a. Stormshak, T. J. D., Fosco, C. W. M., & Elizabeth a. Stormshak, Thomas J. Dishion, and C. W. (2012). Family Relationships and Parental Monitoring During Middle School as Predictors of Early Adolescent Problem Behavior. *NIH Public Access*, 90(2), 133–154. <https://doi.org/10.1080/15374416.2012.651989>.Family
- Galal, Y. S., Emadeldin, M., & Mwafy, M. A. (2019). Prevalence and correlates of bullying and victimization among school students in rural Egypt. *Journal of the Egyptian Public Health Association*, 94(1). <https://doi.org/10.1186/s42506-019-0019-4>
- Giannakopoulos, G., Tzavara, C., Dimitrakaki, C., Kolaitis, G., Rotsika, V., & Tountas, Y. (2009). The factor structure of the Strengths and Difficulties Questionnaire (SDQ) in Greek adolescents. *Annals of General Psychiatry*, 8, 20. <https://doi.org/10.1186/1744-859X-8-20>
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: a research note. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 38(5), 581–586. <https://doi.org/10.1111/j.1469-7610.1997.tb01545.x>
- Goodman, R. (1999). The extended version of the Strengths and Difficulties Questionnaire as a guide to child psychiatric caseness and consequent burden. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 40(5), 791–799.
- Goodman, R., Ford, T., Simmons, H., Gatward, R., & Meltzer, H. (2003). Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *International Review of Psychiatry*, 15(1-2), 166–172. <https://doi.org/10.1080/0954026021000046128>
- Griese, E. R., & Buhs, E. S. (2014). Prosocial Behavior as a Protective Factor for Children's Peer Victimization. *Journal of Youth and Adolescence*, 43(7), 1052–1065. <https://doi.org/10.1007/s10964-013-0046-y>
- Gustafsson, B. M., Proczkowska-Björklund, M., & Gustafsson, P. A. (2017). Emotional and behavioural problems in Swedish preschool children rated by preschool teachers with the Strengths and Difficulties Questionnaire (SDQ). *BMC Pediatrics*, 17(1), 1–10. <https://doi.org/10.1186/s12887-017-0864-2>
- Hall, C. L., Guo, B., Valentine, A. Z., Groom, M. J., Daley, D., Sayal, K., & Hollis, C. (2019). The validity of the Strengths and Difficulties Questionnaire (SDQ) for children with ADHD symptoms. *PLoS ONE*, 14(6). <https://doi.org/10.1371/journal.pone.0218518>
- Hardisman. (2020). *Analisis Data: Basic dan Steps in Health Research* (Gueperdia (ed.)). Guepedia.
- Hartanto, F., & Selina, H. (2010). Masalah Mental Remaja di Kota Semarang. *Masalah Mental*

- Remaja Di Kota Semarang*, 44(3), 118–124.
- Izfanna, D. (2020). *Adolescent Mental Health; Identifying the need and Impact of Education in Pondok Pesantren on Mental Health*. <https://doi.org/10.4108/eai.8-10-2019.2294527>
- Marcheselli, F., Brodie, E., Yeoh, S. N., Pearce, N., McManus, S., Sadler, K., Vizard, T., Ford, T., Goodman, A., & Goodman, R. (2018). *Mental Health of Children and Young People in England, 2017: Behaviours, lifestyles and identities*. November 2018, 1–48. <https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2017/2017>
- Oktaviana, M., & Wimbari, S. (2014). Validasi Klinik Strengths and Difficulties Questionnaire (SDQ) sebagai Instrumen Skrining Gangguan Tingkah Laku. *Jurnal Psikologi*, 41(1), 101. <https://doi.org/10.22146/jpsi.6961>
- Ramadoni, & Mustofa. (2022). Enhancing Flipped Classroom with Peer Teaching to Promote Students' Conceptual Understanding and Self-Efficacy in Calculus Courses. *Pegegog Egitim ve Ogretim Dergisi*, 12(3), 154–168. <https://doi.org/10.47750/pegegog.12.03.17>
- Santoso, S. (2001). *SPSS : Statistic Parametric* (2nd ed.). PT. Gramedia, Jakarta.
- Suni, A., Umanailo, D., Muhammad, A. A., & Tololiu, T. A. (2023). Analisis Penerapan Instrumen Strengths And Difficulties Questionnaire (Sdq) Terhadap Deteksi Dini Kejadian Depresi Pada Remaja. *Jurnal Kesehatan*, 16(1), 25–28. <https://doi.org/10.32763/juke.v16i1.684>
- Twyman, K. A., Saylor, C. F., Saia, D., MacIas, M. M., Taylor, L. A., & Spratt, E. (2010). Bullying and ostracism experiences in children with special health care needs. *Journal of Developmental and Behavioral Pediatrics*, 31(1), 1–8. <https://doi.org/10.1097/DBP.0b013e3181c828c8>
- van Harmelen, A. L., Gibson, J. L., St Clair, M. C., Owens, M., Brodbeck, J., Dunn, V., Lewis, G., Croudace, T., Jones, P. B., Kievit, R. A., & Goodyer, I. M. (2016). Friendships and family support reduce subsequent depressive symptoms in at-risk adolescents. *PLoS ONE*, 11(5), 1–20. <https://doi.org/10.1371/journal.pone.0153715>
- Yurizali, B., Adhyka, N., & Aisyiah, I. K. (2024). *Peran dukungan orang tua , guru , dan teman sejawat terhadap pengetahuan kesehatan reproduksi dan sikap terhadap penyakit menular seksual pada pelajar putri*. 18(7), 887–894.