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Comparison of Family Function and Mental Emotional Health of Adolescents in a State Junior High School, Modern and Traditional Boarding Schools

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ABSTRACT
Background: Emotional and mental disorders can be experienced by all adolescents in both state junior high schools and in boarding schools. Students live with their parents and relatives at home in the state junior high schools. In contrast, in boarding schools, students must live independently, away from their parents, adapt to different boarding school environments, and are obliged to obey regulations. **Objectives**: To find out whether there are differences in family functions as well as emotional and mental disorders of adolescents in state junior high schools and modern and traditional boarding schools. **Subjects**: 433 adolescents aged 12-16 years were categorized into 191 adolescents in state junior high schools, 136 adolescents from modern boarding schools, and 106 adolescents from traditional boarding schools. This study used descriptive analytic designs with multivariate comparative approach methods. **Instruments**: Using the Family APGAR (*Adaptability, Partnership, Growth, Affection, and Resolve)* and Strength and Difficulty Questionnaire (SDQ) questionnaires, the total difficulty score was a combination of hyperactivity score, emotional score, behavior score, and peer score. A power score was considered a pro-social (behavior that supports others) score. **Results**: Function measurement of adolescents' families in state junior high schools and modern and traditional boarding schools showed a highly functional Family APGAR score, p=0.265 (p>0.05). The adolescent SDQ score in state junior high schools was abnormal in the total score of difficulty and the hyperactivity score classification but borderline on peer score. The adolescent SDQ score in modern boarding schools showed abnormal results in a total difficulty and hyperactivity score, with a borderline peer score. SDQ scores of adolescents in traditional boarding schools were abnormal on the total score of difficulty and borderline on peer score. **Conclusion**: There was no significant difference in function between adolescents in the state junior high schools and modern and traditional boarding schools. However, there were significant differences between emotional and mental disorders of adolescents in state junior high schools and modern and traditional boarding schools. This mental health concern requires promoting and preventive efforts of a holistic family approach between adolescents, parents, teachers, and family doctors.

Keywords: *family function, emotional mental health of adolescents, modern and traditional boarding school, State Junior High School*

BACKGROUND

The family life cycle is a fundamental key in understanding a patient's health and disease problems and their family. The family life cycle also describes the various developmental stages in family status and explains how well the family functions. According to the Evelyn Duvalls' scheme about the eight stages of a family's life cycle, stage IV-V is the adolescent stage of aged 6-19 years. Adolescence is a transitional period of development that occurs dynamically and rapidly, both physically and psychologically, as well as intellectually, socially, and behaviorally[1]. As a family physician, a holistic approach needs to be done when treating adolescents, including biological, psychological, and social assessments. A single factor never causes emotional and mental disorders since their etiology is connected to both biology and psychology as well as the environment. Mental disorders are characterized by changes in thinking, behavior, or moods and are associated with significant stress and dysfunction over a period of time[2].

All people can experience mental disorders, especially adolescent students in the state junior high schools or in boarding schools. In a state junior high school, students live with their parents and relatives at home, while students in boarding schools usually live independently, away from their parents, adapting to the boarding school environment, which is different from their home and the rules that must be obeyed. One recent study reported that emotional and mental disorders experienced by children in boarding schools include anxiety, stress, and symptoms of depression[3].

In Indonesia, many parents have sent their children to boarding schools lately, both modern and traditional boarding schools. Problems such as improper family functioning, persecution, poverty, single parenthood, and neglect or abuse of children contribute to the reasons for sending children to live in boarding schools[4].

Several previous studies, both domestic and overseas, support the findings of a study conducted in Iran by Moflehi *et al.*, which concluded that life with family members has a significant positive effect on the health and emotional processes of adolescents[4]. One case study conducted by Hartanto about adolescents' aggressive behavior in boarding schools showed adolescents are strongly influenced by family background. The intensity of parental communication with students also affects the adolescent's emotional, mental health, and behavior at school[5]. Idaiani mentions that the detection tools of mental disorders can be one of the efforts to help overcome mental health problems in Indonesia[6]. According to that research, most patients who present to the family and community health centers (*Puskesmas*) come with unclear complaints that are associated with psychological problems.

According to the studies mentioned above, family status has an essential role in the occurrence of emotional and mental disorders in adolescents. This study focused on the comparison of family functions which included Adaptability, Partnership, Growth, Affection, and Resolve (APGAR), and the comparison of emotional and mental disorders of adolescents who were assessed using the Strength and Difficulty Questionnaire (SDQ) scores in state junior high schools, compared with adolescents living in both traditional and modern boarding schools who only met their families regularly for a limited time. This study aimed to determine any significant differences by comparing the family functions and emotional and mental disorders of adolescents in the state junior high schools with those in modern and traditional boarding schools.

METHODS

Subjects: The study was conducted with a descriptive-analytic design, using multivariate comparative approach methods. The study was conducted to compare adolescents' family function and mental and emotional health in state junior high schools with students of modern and traditional boarding schools in Purworejo. Data were collected by quantitative methods, i.e., surveys and questionnaires. Data retrieval was done by direct filling in the study place by study respondents. The subjects of the study were adolescents aged 12-16 years old in the state junior high schools in Purworejo and modern and traditional boarding schools. The sampling method in this study used purposive sampling. The study used several inclusion - exclusion criteria in the population who were respondents in this study.

Inclusion criteria: Grade VII-IX students aged 12-16 years old who have been studying in one of the junior high schools in Purworejo but do not live in a traditional boarding school in Purworejo; students who live in the traditional boarding schools in Purworejo; students who live in modern boarding schools in Purworejo; and willing to be a respondent.

Exclusion criteria: Absent students when we took the data; and students living in a traditional boarding school but studying in a state junior high school in Purworejo.

The course of study: The period of this study began by gathering respondents at one time and in one room. Furthermore, researchers provided explanations related to this study and asked for approval from the respondents. Previously the researchers had explained to respondents to ask for the consent of each parent (respondents were given parental informed consent forms). After the respondents (and parents) gave their permission, the researchers distributed the SDQ questionnaire (for children) and the Family APGAR questionnaire. After the respondents filled out the distributed questionnaires, the researcher collected the questionnaires. Next, the researchers made a recap of the questionnaire data and analyzed the data obtained. The data obtained were then analyzed using univariate and multivariate analysis.

RESULTS

The study was conducted for two months at a state junior high school and both modern and traditional boarding schools in November and December 2017. The study was conducted in Purworejo Regency, Central Java Province, Indonesia. Data retrieval was performed after obtaining an approval certificate from the Medical and Health Research Ethics Committee of Universitas Gadjah Mada, Faculty of Medicine, Public Health and Nursing and permission from the Head of the local Education Research Office called *Kantor Penanaman Modal Perijinan Terpadu* (KPMPT) of Purworejo and the Headmaster of the state junior high school, and the leaders of the modern and traditional boarding schools of Purworejo as the three sites of the study. A total of 433 respondents were willing to be a study sample after being given an explanation and completing informed consent forms. The total sample included 191 respondents (44.1%) from the state junior high school, 136 respondents (31.4%) from modern boarding schools, and 106 respondents (24.5%) from traditional boarding schools. Based on the inclusion and exclusion criteria, the number of study subjects from the initial planning at the beginning of the study, and finally, the number of the study subjects are as follows:

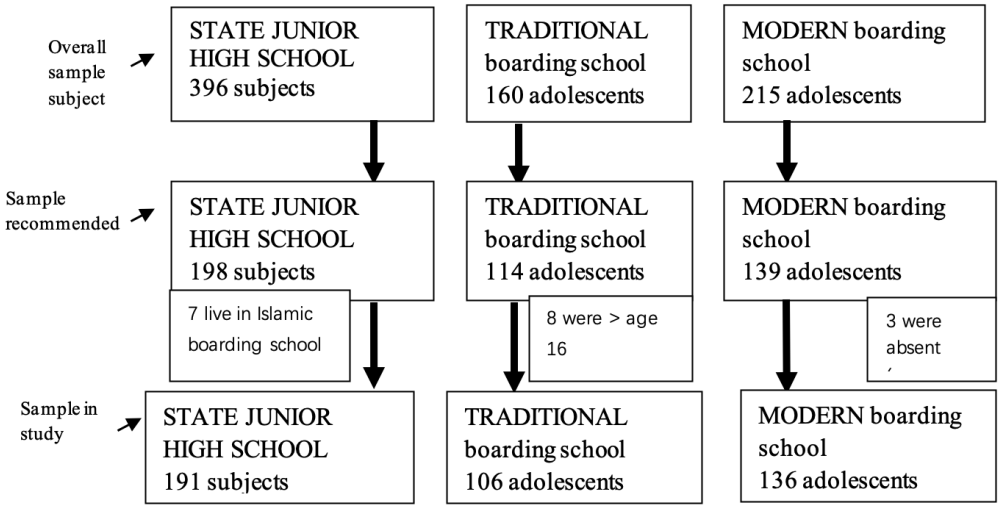

Figure 1. Research Subjects

Based on the above chart, from 198 students in the junior high school, 191 students met the inclusion criteria if they studied in State Junior High School, lived at home, did not live in boarding school, and were willing to be respondents in the study. But there were seven students excluded due to the exclusion criteria if the students live in boarding schools and do not go home to meet their families. While of 114 students in traditional boarding schools, eight were excluded due to the exclusion criteria because their age was more than 16 years, and some were less than 12 years old. In the sample with 139 students in modern boarding schools, three were excluded due to varicella, and as a result, those students were either not in the junior high school or not in the boarding schools.

Characteristics of study subjects include gender, age, mother, father, family, school motivation, meeting up with the family every day /week/month, and mode of communication with family at home using mobile-phone or face-to-face meetings, especially for the students who are living in boarding schools, can be seen descriptively in Table 1.

Table 1. Characteristics of subjects

Characteristic	Variable	State junior high school n (%)	Modern Boarding school n (%) *	Traditional Boarding school n (%) *
Sex	Male	70 (36.6)	76 (55.9)	59 (55.7)
	Female	121 (63.4)	60 (44.1)	47 (44.3)
Age	Mean - SD	13.2 years (SD 1.04)	13.6 years (SD 1.39)	13.6 years (SD 1.39)
	Minimum	12 years	12 years	10 years
	Maximum	15 years	15 years	16 years
Mother still alive	Yes	186 (97.4)	132 (97.1)	104 (98.1)
	No	4 (2.1)	4 (2.9)	1 (0.9)
	Unidentified	1 (0.5)	0 (0)	1 (0.9)
Father still alive	Yes	186 (97.4)	132 (97.1)	104 (98.1)
	No	4 (2.1)	4 (2.9)	1 (0.9)
	Unidentified	1 (0.5)	0 (0)	1 (0.9)
Live with family	Yes	176 (92.1)	135 (99.3)	102 (96.2)
	No	15 (7.9)	1 (0.7)	4 (3.8)
School Motivation	Self-motivation	182 (95.3)	70 (51.4)	24 (22.6)
	Family	8 (4.2)	65 (47.9)	82 (77.4)
	Friend	1 (0.5)	1 (0.7)	0 (0)
Meet with the family	Everyday	174 (91.1)	2 (1.5)	2 (1.9)
	Every week	5 (2.6)	64 (47.1)	44 (41.5)
	Every 2 weeks	0 (0)	5 (3.7)	4 (3.8)
	Every 1 month	1 (0.5)	22 (16.2)	35 (33)
	Every 2 month	0 (0)	1 (0.7)	3 (2.8)
	Every 3 month	0 (0)	37 (27.2)	3 (2.8)
	Every 5 month	0 (0)	0 (0)	4 (3.8)
	Every 6 month	3 (1.6)	5 (3.5)	1 (0.9)
	Every year	6 (3.1)	0 (0)	4(3.8)
	Never	2 (1)	0 (0)	1 (0.9)
Communication with family	Mobile phone	18 (9.4)	83 (61)	77 (72.6)
	Directly	172 (90.1)	53 (3)	29 (27.4)
	Never	1 (0.5)	0 (0)	0 (0)

There were more female subjects in the study than males, specifically 121 adolescents (63.4%) in the junior high school and in modern boarding school 76 adolescents (55.9%), while females in traditional boarding schools were also more than males, with 59 (55.7%). The average age of the study subjects in the state junior high schools and modern and traditional boarding schools was 13 years old. The existence of mothers and fathers and adolescents

living in the same house with parents also indicated that the majority of adolescents in the junior high school and the modern and traditional boarding schools still have their father and mother and live together with their family. However, regarding their school motivation, adolescents in the state junior high school and the modern boarding school, 95.3% and 51.4%, respectively, are self-motivated. This finding is in contrast to adolescents in traditional boarding schools, where the motivation of 82 students (77.4%) mentioned it was because of the desire of the family.

Communication with the family was done on a regular schedule for the adolescents who are living in boarding schools. Students in both the modern and traditional boarding schools meet with their families each week for many (47.1% and 41.5%) of the adolescents, with most using mobile communication media (61% and 72.6%), respectively.

A comparison of family functions based on APGAR scores of adolescent families in the state junior high school and modern and traditional boarding schools showed a minimum score of 1 and a maximum value of 10, and an average of 6.94; 7.06; and 8.14, respectively, which means that the data indicated the good family function (interpretation of APGAR score of the family between 7-10: good). The statistical test showed the results with a significance *of* p=0.265 (p> 0.05), meaning there was no significant difference between the function of the adolescent families in the three study sites. This comparison can be clearly seen in Table 2.

SDQ scores showing adolescents' emotional and mental health pictures are described in the classification of prosocial (behavior that tend to support others) strength score, total difficulty score, hyperactivity score, emotional score, peer score, and behavioral score. There are six classification scores used to explain the results and determine any difference. Of the six score classifications, the prosocial score is an adolescent strength score, whereas the total score of difficulty is the sum of the hyperactivity, emotional, peer, and behavioral scores. In the prosocial score classification/youth strength score in the state junior high school, and modern and traditional boarding schools, scores indicate averages of 7.48 (SD 1.5), 7.16 (SD 1.75), and 8.18 (SD 1.84), respectively, which means that based on the interpretation of the prosocial score, adolescents in these three sites were in the normal category (normal: 6-10). Table 2 shows the modes in the state junior high school, modern boarding school, and traditional boarding schools are 8, 7, and 10, respectively, and the results of the statistical test for the prosocial scores indicate the significance of p=0.005 (p<0.05), meaning that even though the average adolescent strength score is in the normal category, there are still significant differences in adolescent strength scores in these three study sites. The smallest strength score mode (7) was in adolescents in the modern-day boarding schools, and the highest score (10) was in the traditional boarding schools.

In the total score classification of adolescent difficulties in the state junior high school, modern and traditional boarding schools' scores showed the following averages: 18.06; 19.73; and 18.26, respectively, which means that the average adolescent difficulty score in the three study sites is the borderline category (based on the interpretation of SDQ score 16-19: borderline). In addition, the mode of difficulty scores in the state junior high school, modern and traditional boarding schools were 13, 19, and 15, respectively. The statistical test for the total difficulty score showed the significance of p= 0.009 (p<0.05). The scores are all in the borderline category, but there was a significant difference between the total scores of adolescent difficulties in the three sites of this study. The score with the slightest difficulty (13) was in junior high school adolescents, and the most significant score (19) was in adolescents in modern boarding schools.

The classification of adolescent age hyperactivity score at the state junior high school, and modern and traditional boarding schools showed an average of 6.16; 6.26; and 5.96, respectively, meaning that the average was in the borderline category. In the statistical test for hyperactivity score classification, the results were not significant with p=0.213 (p>0.05), while the mean of adolescent age hyperactivity scores in the three study sites was borderline and there was no significant difference between hyperactivity scores in the three sites.

The classification of adolescent emotional scores in the state junior high school, and modern and traditional boarding schools show an average of 4.01; 4.97; and 4.41, respectively, which means that based on the interpretation of the SDQ score of the adolescent emotional score in the three sites of this study, they are in the normal category. In the statistical test, the emotional score showed the results of p=0.001 *(*p<0.05), meaning that although the three adolescent scores in the study areas were included in the normal category, and there were still significant differences in emotional scores of adolescents in these three study sites.

The peer-score classification showed the average scores in the state junior high school, and modern and traditional boarding schools 2.92 (SD 1.4); 3.23 (SD 1.56) and 2.83 (SD 1.28), respectively, which means that based on the interpretation of the SDQ score, the score belongs to the normal category. In the statistical test, the adolescent emotional score in the three study sites showed a p value of 0.072 (p>0.05), and while the average adolescent emotional score in these three places was normal, there still was no significant difference in adolescent peer scores in these three sites. The classification of adolescent behavior scores in the state junior high school, and modern and traditional boarding schools, was an average of 4.94 (SD 1.4); 5.27 (SD 1.36); and 5.05 (SD 1.47), respectively. The data shows that the interpretation of the SDQ score was not normal. In the statistical test of adolescent behavior score the result shows the significance value of p=0.097 (p>0.05), which means even though the mean score of adolescent behavior in the three places of study was not normal still there was no significant difference between adolescent behavior scores in the three places. In summary, the most important concern is the adolescent SDQ scores at the state junior high school, and modern and traditional boarding schools, showing the

Table 2. Descriptive analysis of mean, median, modus, standard of deviation (SD), lowest and highest of Family APGAR, SDQ score in state junior high school, modern and traditional boarding school in Purworejo

No	Variable	Statistic	State Junior High School	Modern Boarding school	Traditional Boarding school	Significance *P*
1	Family APGAR	Mean	6.94	7.06	8.14	0.265
		Median	7	7.5	8	
		Modus	6	8	9	
		SD	1.63	1.70	1.34	
		Lowest	3	1	5	
		Highest	10	10	10	
2	Pro-social /Strength score	Mean	7.48	7.16	8.18	0.0005*
		Median	8	7	9	
		Modus	8	7	10	
		SD	1.5	1.75	1.84	
		Lowest	4	4	4	
		Highest	10	10	10	
3	Total Difficulty Score	Mean	18.06	19.73	18.26	0.009*
		Median	18	19	18.5	
		Modus	13	19	15	
		SD	4.42	4.23	4.4	
		Lowest	9	9	10	
		Highest	30	32	27	
3a	Hyperactivity Score	Mean	6.16	6.26	5.96	0.213
		Median	6	6	6	
		Modus	5	6	6	
		SD	1.5	1.45	1.53	
		Lowest	2	2	2	
		Highest	10	10	10	
3b	Emotional Score	Mean	4.01	4.97	4.41	0.001*
		Median	4	5	4.5	
		Modus	3	5	6	
		SD	2.1	2.24	2.43	
		Lowest	0	0	0	
		Highest	10	10	9	
3c	Peer Score	Mean	2.92	3.23	2.83	0.072
		Median	3	3	2	
		Modus	2	3	2	
		SD	1.4	1.56	1.28	
		Lowest	0	0	0	
		Highest	8	8	6	
3d	Conduct Score	Mean	4.94	5.27	5.05	0.097
		Median	5	5	5	
		Modus	4	5	5	
		SD	1.4	1.36	1.47	
		Lowest	1	1	2	
		Highest	9	9	8	

* Significant ($p < 0.05$) Kruskal Wallis test.

average as normal adolescent strength score but there were significant differences across the three sites. With the average score of adolescent difficulty as borderline still there were significant differences in the three places. Also, while the average adolescent behavior score was not normal in all three places, there was no significant difference, which means there are some problems of adolescent behavior in all of the three study sites.

In summary, the important aspect of concern is the adolescent SDQ in junior high school, modern and traditional boarding school showed mean problem results on difficulty score, hyperactivity score, and teenage behavior scores in all three places. This finding means that there is a problem of adolescent difficulties in the state-junior high school, modern, and traditional boarding schools, especially the problem of hyperactivity and adolescent behavior problems, but there is no problem in the 'emotional' and 'peers' aspects.

Besides the descriptive picture, SDQ scores of adolescents in the three places of this study are as follows: SDQ score of adolescents in the state junior high school was not normal on difficulty score and hyperactivity, and borderline on peer score. For subjects in modern boarding schools, the adolescent SDQ score was not normal on difficulty scores and hyperactivity scores, and borderline on peer scores. Also, for subjects in traditional boarding schools, the adolescent difficulty score was not normal and borderline on peer score.

Statistical analysis for family APGAR comparison was

Table 3. Summary of the results of this study

No	Variable	State junior high school	Modern boarding school	Traditional boarding school	Significance
1.	Family APGAR	Normal	Normal	Normal	No significant
2.	**Prosocial/Strength score**	Normal	Normal	Normal	Significant
3.	**Difficulty score**	*Borderline*	*Borderline*	*Borderline*	Significant
3a.	Hyperactivity score	*Borderline*	*Borderline*	*Borderline*	No significant
3b.	**Emotional score**	Normal	Normal	Normal	Significant
3c.	Peer score	Normal	Normal	Normal	No significant
3d.	Conduct score	Abnormal	Abnormal	Abnormal	No significant

used primarily to see if there were significant differences in the functioning of adolescent families in the state junior high school, and modern and traditional boarding schools and the groups were measured using Kruskal Wallis tests (comparison of categorical-numeric data in more than two groups). Similarly, the hypothesis test was used to determine the difference of the 6 SDQ score classifications in the state junior high school, and the modern and traditional boarding schools and were also analyzed by Kruskal Wallis test. Table 4 below displays the results of the statistical analyses.

Table 4. Comparison of adolescents in the Family APGAR and SDQ scores in state junior high school, modern and traditional boarding school in Purworejo

No	Variable	Category	State Junior High School n (%)	Modern Boarding School n (%) *	Traditional Boarding school n (%) *	Significance *P*
1	**Family APGAR Score**	Dysfunctional	5 (2.6)	6 (4.4)	0 (0)	0.265
		Moderate	71 (37.2)	37 (27.2)	16 (15.1)	
		Highly Function	115 (60.2)	93 (68.4)	90 (84.9)	
2	**Strength Score (Prosocial Score)**	Abnormal	2 (1.0)	6 (4.4)	5 (4.7)	0.005*
		Borderline	19 (9.9)	19 (14.0)	6 (5.7)	
		Normal	170 (89.0)	111 (81.6)	95 (89.6)	
3	**Total Difficulty Score**	Abnormal	68 (35.6)	64 (47)	42 (39.6)	0.009*
		Borderline	61 (31.9)	47 (34.6)	25 (23.6)	
		Normal	62 (32.5)	25 (18.4)	39 (36.8)	
3a	**Hyperactivity Score**	Abnormal	80 (41.9)	60 (44.1)	33 (33.1)	0.213
		Borderline	43 (22.5)	35 (25.7)	30 (28.3)	
		Normal	68 (35.6)	41 (30.1)	43 (40.6)	
3b	**Emotional Score**	Abnormal	28 (14.7)	33 (24.2)	20 (18.9)	0.001*
		Borderline	18 (9.4)	18 (13.2)	19 (17.9)	
		Normal	145 (75.9)	85 (62.5)	67 (63.2)	
3c	**Peer Score**	Abnormal	68 (35.6)	60 (44.1)	37 (34.9)	0.072
		Borderline	95 (49.7)	64 (47.1)	52 (49.1)	
		Normal	28 (14.7)	12 (8.8)	17 (16.0)	
3d	**Conduct Score**	Abnormal	25 (13.1)	29 (21.3)	10 (9.4)	0.097
		Borderline	33 (17.3)	25 (18.4)	24 (22.6)	
		Normal	133 (69.6)	82 (60.3)	72 (67.9)	

* Significant ($p < 0.05$) Kruskal Wallis test.

DISCUSSION

The APGAR scores of families as described by the study subjects showed the majority of adolescents in good functioning families. This finding indicates that the family function in most of the subjects is functioning well for adolescents at the state junior high school, in the modern boarding schools, and in the traditional boarding schools in Purworejo. Analysis of the results is very likely influenced by the fact that most adolescents still have both of their parents. Communication with parents and families is also mentioned in a direct face-to-face meeting, so the function of adaptation, partnership, growth, compassion, and togetherness can be summed up in the APGAR scoring of family[1]. Comparisons of APGAR scores of families in the state junior high school and modern and traditional boarding schools showed no significant difference, as shown in Table 2, meaning that there was no significant difference in family function between the state junior high school and the modern and traditional boarding schools. This finding is likely to be very closely related to adolescents' answers in these three study sites filling in the adaptation function, partnership function, growth function, affection function, and function of togetherness with "always" during the survey questionnaire. The contents of the APGAR score questionnaire are closely related to adolescents' communication with parents, living with parents, and meeting with parents regularly, where parents here in Indonesia still play an essential role in guiding adolescents in their developmental phase[7].

Scores of adolescent strengths in the three study sites showed average results in the normal category, but there were differences in the pro-social score, difficulty score, and emotional score. Pro-social scores were higher in the traditional boarding school compared to the other modern one and the state junior high school sites. This difference is probably due to the boarding schools' environmental,

socio-economic, and cultural factors. In addition, the habit of being kind to others, caring for others, sharing with others, and offering to help others among adolescents in traditional boarding school, is found much better, which may be influenced by beliefs, awareness, and exemplary parenting with various forms of worship. The authors understand some limitations of this study at this point and recommend a more qualitative study to continue exploring the differences. Unlike the more structured curricula and school systems in the modern boarding school and the state school, traditional boarding school has a less structured system. Nevertheless, the impact of the unstructured system, for example, less structured learning activities, rest period, and meal choices, ultimately makes the students in the traditional boarding school more helpful towards their peers in regards to comparison with the less self-sufficient school system. It can also be argued that the students from traditional boarding school are mostly from the lower economic level families, so that instead of being more competitive, they tend to be helpful toward others. This kind of discussion can be interesting in further rigorous qualitative study.

The hyperactivity score and the behavior of children are greatly influenced by the exemplary conduct and parenting pattern of teachers/parents of adolescents in the three study sites, which can also affect the Intelligent Quotient (IQ) and Emotional Spiritual Quotient (ESQ) of the adolescents[8]. In this study, we found that students from traditional boarding school are more receptive and they handle difficulties as daily problems that should be faced and so they do not feel having more difficulties compared to their peers in the modern boarding and state junior high schools. It is indeed true that environment can make a person grow wiser. However, the results of this study should not be interpreted that less structured schools are better able to produce the wiser students. Improvement towards better curricula, accommodation facilities, resting time schedules, and meals should be continuously developed towards the student-centered learning approach.

The results of this study also showed that emotional difficulties occur more in the state-junior high school, then students in the boarding schools, and the least was in the traditional boarding school. These results are consistent with a study on family relationships and family monitoring as an early predictor of adolescent behavior problems, showing monitoring factors and the proximity of children with parents in junior high schools and modern and traditional boarding schools affect the risk of behavior problems in adolescents[9]. But out of all of these factors, the family environment and peers have been considered as the most influential factors in adolescent behavior[10].

The differences in the significance of abnormal adolescent difficulty scores in the state junior high school and the modern and traditional boarding schools may be due to two reasons: throughout childhood, children's problems are partially solved by parents and teachers, so most adolescents are not experienced in dealing with problems as well as adolescents should feel more self-sufficient to solve their own problems, and sometimes refuse the help of parents and teachers. Factors that may affect this likelihood are adolescent transition phases that cause emotional changes to become unstable[11]. It is interesting that again, the traditional boarding school students seemed to be having less difficulties compared to the state and modern boarding school students.

The advantages of this study are as a screening activity of family function and mental-emotional health screening in adolescents, which have never been done before in Indonesia. This study uses a sample of adolescents in a state junior high school and from modern and traditional boarding schools in Purworejo with all its diversity. One limitation of this study is that the number of samples is small compared to the total adolescent population in the Purworejo district, while some other factors that may influence the results in this study were not studied and examined statistically, such as social media and technology. In addition, many population samples require a longer study time. Suggestions for further research encourage additional studies with more qualitative methods so that factors that influence the results can be explored more optimally. The findings can better determine the relationship between family functions and family influence on emotional and mental disorders of adolescents.

CONCLUSIONS

The APGAR scores of the juvenile families in the state junior high school, and in the modern and traditional boarding schools in Purworejo show that the function of the family is good, and there was no difference in the function of adolescent families in the three study sites. As for emotional mental disorders especially measured by the strength score, and the adolescent difficulty score in the state junior high school, and in the modern and traditional boarding schools in Purworejo, there was a significant difference. This finding indicated that some emotional mental problems were being experienced by all of the adolescents in the three different study sites. Promotional and preventive efforts can be undertaken by family physicians for mental health screening in adolescents with the reliable SDQ. We recommend socialization of adolescent mental health screening for adolescents entering into the higher educational levels as part of a new admissions test, and promotion of a holistic family approach as part of a non-pharmacological curative effort for adolescents with emotional mental disorders.

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ETHICAL APPROVAL AND INFORMED CONSENT

This research has been approved by The Medical and Health Research Ethics Committee (MHREC) from the Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta with reference number: KE/FK/1199/EC/2017.

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CONFLICT OF INTEREST
None

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