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Adolescents' Anxiety in the Coastal Region of Central Java, Indonesia

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Background: Emotional problems are commonly reported among children, adolescents, and adults. It is known that emotional problems in children who are not treated properly can continue to cause disorder in adolescence and adulthood. This study aimed to investigate anxiety on adolescents, particularly high school and undergraduate students, and to compare different subscales of anxiety across educational level. **Method:** A total of 378 adolescents (286 high school students and 99 undergraduate students; $M_{age} = 16.75$; $SD = 1.547$) participated in this study. Data were collected using the Indonesian version of the Screen for Child Anxiety Disorders (SCARED; 26 items; $\alpha = .880$). Total score and subscale scores were compared between high school students with undergraduate students. **Results:** The results of independent samples *t*-test showed that anxiety disorder and panic disorder/school avoidance were more frequently reported by undergraduate students than high school students. However, no significant differences were found in view of generalized anxiety disorder (GAD) and social anxiety. **Conclusion:** The study findings indicate different profile of anxiety reported by students in the higher level of education that warrant early prevention and intervention program tailored to the educational setting. Awareness on early referral of anxiety problems among students should be raised among school principals as well as dean faculties prior to the escalated emotional problems. The study findings also recommend the need to design a psycho-educational program to reduce anxiety on the undergraduate as well as high school students.

Keywords: Anxiety, Adolescents, Emotional Problems, Undergraduate, High School, Students, Coastal Region.

1. INTRODUCTION

Anxiety disorders are among the most common and functionally impairing mental health disorders that occur in childhood and adolescence.¹⁻³ Anxiety and depression are not only associated with limitations in children's functioning e.g., poor social relations, academic performance, low self-esteem, but these disorders can also impact negatively on children's emotional and social development in a long term. Previous studies revealed childhood anxiety and depression are important predictors of psychopathology in adulthood.^{4,5} When left untreated, childhood anxiety and depression are likely to deteriorate.⁶

Young children who develop anxiety disorders have learned dysfunctional thoughts, feelings, and behaviors through their experiences before and during adolescence.⁷ Unlike many studies reporting childhood anxiety, studies reporting adolescents' anxiety and depression are rare. School refusal was defined as difficulties in attending school due to emotional distress.⁸ It can also take form as youth who are completely absent from school, who initially attend school but then leave during the school day, and who display marked distress on school days.⁸

This study aimed to investigate adolescents' anxiety, particularly high school students and undergraduate students, and to compare different subscales of anxiety across educational level. In this study, students of vocational high school were involved. They are mainly different compared to regular high school students because in Indonesia, usually teens go to vocational high school if they failed to enter regular high school. Previous study on emotional problems among regular high school students in Semarang revealed gender differences in which adolescents boys reported more likely rule-breaking behavior and externalizing behavior whereas adolescent girls reported more likely internalizing behavior.⁹ It was assumed that adolescents in the high school and adolescents who study in the college/university level encountered different challenges and expectation. Adolescents as high school students encountered strong social expectation to pass the national exam which often cause anxiety, whereas adolescents as university students had to cope with academic as well as social adjustment which often bring emotional struggle. The following research question was addressed: is there any different profile of adolescents' anxiety reported by high school students and freshmen? Are there any differences across different sub scales of anxiety?

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2. METHOD

This study involved 385 adolescents registered as high school students ($n = 286$) and undergraduate students ($n = 99$) aged between 17 and 20 years old ($M = 16.75$; $SD = 1.547$). Participants were recruited from one high school and one university in Semarang city (the coastal region of Central Java province). Consents were obtained from the school principal and the dean of the faculty. Participants received information about the study, the confidentiality and the anonymity, prior to join the study. The participants do not required to write their names but they were asked to respond the measure honestly. It is a common practice in the psychological study to conduct research by obtaining consent or approval from the targeted school principal or deans as the ethical review board only available in the Faculty of Medicine. Data were collected using the Indonesian version of the Screen for Child Anxiety Disorders (I-SCARED; 26 items; $\alpha = .880$). The SCARED has been widely known as a brief screening measure of anxiety in children and adolescents.⁷ Although SCARED initially developed to measure anxiety in children,^{1,10} previous studies recommended the application of the SCARED to measure adolescents' anxiety.^{7,11} The I-SCARED comprised three factor models:

- (1) general anxiety disorder (7 items; $\alpha = .774$);
- (2) social anxiety (8 items; $\alpha = .821$);
- (3) Panic disorder/school avoidance (11 items; $\alpha = .813$).

The following items were used to measure general anxiety disorder: *I worry about being as good as other teens; I worry about things working out for me; I am a worrier; People tell me that I worry too much; I worry about what is going to happen in the future; I worry about how well I do things; I worry about things that have already happened.* Social anxiety was evaluated using the following items: *I am nervous; I feel nervous with people I don't know well; It is hard for me to talk with people I don't know well; I feel shy with people I don't know well; I feel nervous when I am with other teens or adults and I have to do something while they watch me; I feel nervous when I am going to parties, dances, or any place where there will be people that I don't know well; I am shy.* The following items measured Panic disorder and school avoidance as a joint factor: *When I feel frightened, it is hard to breathe; When I get frightened, I feel like passing out; When I get frightened, I feel like I am going crazy; When I get frightened, I feel like things are not real; I get really frightened for no reason at all; When I get frightened, I feel like throwing up; When I get frightened, I feel dizzy; I get headaches when I am at school/campus; I worry about going to school/campus; I am scared to go to school/campus.* Following the original SCARED,¹ the I-SCARED provides three response options: 0 = *not true or hardly ever true*; 1 = *somewhat true or sometimes true*; 2 = *very true or often true*. The total score of the I-SCARED ranged from 0 to 52. The comparative analysis was done using independent samples *t*-test. The Pearson's product moment correlation analysis was applied to test the correlation between subscales and total score of the I-SCARED.

3. RESULTS

The majority of participants were girls (378/98.2%) and high school students (74.3%). The results of independent sample *t*-test analysis revealed significant differences in the comparisons of the total scores and Panic Disorder/School Avoidance scale.

Table I. Results of comparison analysis.

Scales	N	M	SD	df	<i>t</i>	<i>p</i>
Total scores						
—High schools	286	14.482	6.050	383	-3.424	.001
—Undergraduate	99	17.111	7.936			
Generalized anxiety disorders (GAD)						
—High schools	286	6.248	2.627	383	-.953	.341
—Undergraduate	99	6.556	3.137			
Social anxiety (SA)						
—High schools	286	6.472	3.269	383	-1.697	.091
—Undergraduate	99	7.121	3.314			
Panic disorder/school avoidance (PD/SA)						
—High schools	286	1.762	2.024	383	-5.819	<.001
—Undergraduate	99	3.434	3.438			

Notes: M = mean; SD = standard deviation. Data were analyzed using independent sample *t*-test.

Table I summarized the results of comparison analysis between data obtained from the high school and undergraduate students. Based on Table I, it can be inferred that undergraduate students reported general Anxiety Disorder and Panic Disorder/School Avoidance more frequently than the undergraduate students did.

Following this comparison analysis, Figure 1 showed that undergraduate students had wider range of total score that indicates more students reported higher general anxiety problem among undergraduate students participated in the study.

Further analysis showed the correlations between subscales and total scores of the I-SCARED that revealed positive and significant correlations between each subscale with the total score, as summarized in the Table II.

Table II summarized the results of correlation analysis between subscales and total score of the I-SCARED. It can be concluded that all three subscales (Generalized Anxiety Disorder, Social Anxiety, and Panic Disorder/School Avoidance) have significantly positive correlations with the Total score of the I-SCARED ($r = .790$; $.821$; $.697$, subsequently; $p < .001$ in all correlations analysis).

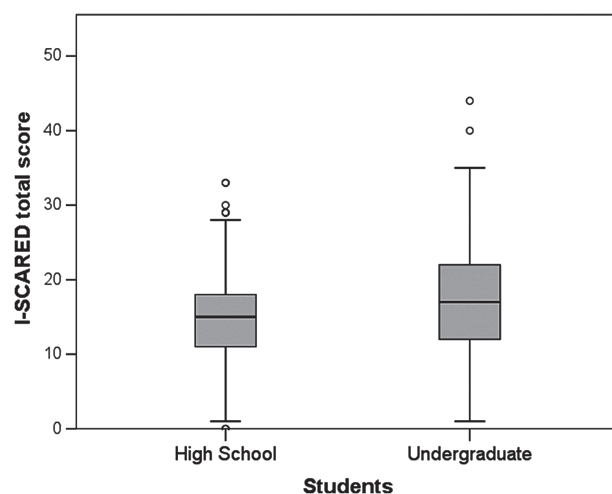


Fig. 1. Boxplot comparison between high school and undergraduate students' total scores of I-SCARED.

Table II. Correlations between subscales and total scores of the I-SCARED.

Scales	Generalized anxiety disorder	Social anxiety	Panic disorder/school avoidance
Total score			
<i>r</i>	.790**	.821**	.697**
<i>p</i>	.000	.000	.000
N	385	385	385
Generalized anxiety disorder			
<i>r</i>	–	.483**	.358**
<i>p</i>		.000	.000
N		385	385
Social anxiety			
<i>r</i>		–	.333**
<i>p</i>			.000
N			385

Note: **Correlation is significant at the .01 level (2-tailed).

4. DISCUSSION

This study aimed to explore the profile of anxiety on adolescent students in the coastal region of the Central Java province. The following research question was addressed: is there any different profile of adolescents' anxiety reported by high school students and freshmen? Are there any differences across different sub scales of anxiety? It was assumed that adolescents in the high school encountered different challenges and problems compared to adolescents who study in the college/university level. As high school students, adolescents encountered very strong social expectation to pass the national exam which often cause anxiety, whereas adolescents as freshmen had to cope with academic as well as social adjustment which often brought emotional struggle, particularly for adolescents who had to move from different island (outside Java island).

The study findings indicated different profile of anxiety that were reported by undergraduate students in comparison to high school students. Anxiety disorder and Panic Disorder/School Avoidance were reported more frequently by undergraduate students than those reported by high school students. Undergraduate students were also scored higher in the Total score than the high school students did, which indicated Anxiety Disorder among undergraduate students in this study warrant attention as well as early intervention from the college counselors. It should be assessed further whether adolescents' anxiety reported among university students was related to problem adjustment to the college life or it was a severe condition due to untreated anxiety developed earlier in life. Previous study reported symptoms of anxiety and depression in early childhood predicted emotional problem in the late adolescents.¹² Unfortunately, no data on emotional problem in early childhood were available among participants.

Findings from this study also revealed significantly positive correlations between the Generalized Anxiety Disorder (GAD), Social Anxiety (SA), and Panic Disorder/School Avoidance subscales with the Total scores of the I-SCARED. The more frequent participants reported generalized anxiety disorder, social anxiety, or panic disorder/school avoidance, the more likely participants experience Anxiety Disorders. These findings highlight the need to consider particular type of anxiety (i.e., social anxiety or school avoidance) as an important predictor of a more

complex anxiety problems. Therefore, once the symptom of anxiety is emerged, referral for psychological intervention is crucial to prevent from escalated problems.

Although the study on adolescents' anxiety is still scarce, it is now recognized the need to design a psychological intervention program to help adolescence in coping with their anxiety and depression. Previous studies reported such helpful prevention program could be done for teens at school. Involving school in preventing anxiety and depression is important because children and adolescents learned academically and socially at school.^{13–16} However, findings from this study showed that the increase of generalized anxiety disorder (GAD) or Social Anxiety, or Panic Disorders/School avoidance is significantly correlated with the overall Anxiety Disorder. The major limitation of the study was related to the possibility of participant bias due to lack of male adolescents participated in the study. Consequently, gender comparison analysis could not be performed.

5. CONCLUSION

The study findings indicate different profile of anxiety reported by students in the higher level of education that warrant early prevention and intervention program tailored to the educational setting. Awareness on early referral of anxiety problems among students should be raised among school principals as well as dean faculties prior to the escalated emotional problems. The study findings also recommend the need to design a psycho-educational program to reduce anxiety on the undergraduate as well as high school students.

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