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Emotional Problems in High School Students in Jakarta

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Abstract

A 2007 Indonesia survey reported emotional mental disorders was 11.6%. Its prevalence in the population aged 15 to 24 years was nearly 9%, and increasing in older age. Markedly, emotional problems may lead to depression associated with suicide, which is the most frequent cause of death among youths. Early detection of emotional problems in adolescence is, therefore, important for improving future general health. Since Jakarta was included in the big five proportion of this disorder (14.1%), the study objective was to describe the frequency and factors of emotional problems among high school students in Jakarta. An analysis employed polynomial logistic regression using 941 students obtained by a survey purposively conducted in one vocational and two public high schools in 2015 by the Ministry of Health. All first- and second-grade students, in similar numbers per school, were assessed using a self-administered SDQ questionnaire that measured emotional problems. Results showed that emotional problems were differentiated by gender on the questionnaire: Girls measured 19% abnormal and 16.7% borderline, and boys measured 6.2% abnormal and 5.4% borderline. Likewise, girls were almost three-times more likely to score "abnormal" than were boys (95% CI was 1.7 to 4.8). Vocational school students were at double the risk, compared to public school students, of having emotional problems. To conclude, based on these findings, a school-based program in Jakarta addressing emotional disorders must utilize a gender-based design. Follow-up study is needed to explore different mental health problems that occur in public and vocational high schools, as well as ethnicity factors in emotional disorders.

Keywords: emotional problem, high school, prevention, Jakarta

1. INTRODUCTION

The burden of morbidity and mortality due to noncommunicable disease has increased worldwide while the burden of infectious diseases has decreased. These transitions reinforce the importance of disease prevention for reducing juvenile mortality [8]. Importantly, Target 3.4 of the 2015 Sustainable Development Goals is to diminish

the number of premature deaths due to noncommunicable diseases with mental health and well-being by 30%. The significance of mental health concerns is also reflected in Target 3.1 of 2013-2020 WHO Action Plan, which urges each member state to have at least two mental health promotion programs that are rational, preventive, multisector, and expected to work well by 2020 [34].

Regarding mental health in Indonesia, the 2007 Basic Health Research disclosed that 11.6% of Indonesians suffer from emotional disorders. The prevalence of such disorders at ages 15 to 24 was nearly 9%, and likely increasing in older age. The WHO reported that emotional problems' prevalence in adolescents globally was between 10% and 20% 32,5 with a median of 12% [9]. These disorders in adolescence need attention as key health issues and should be included into public health concerns [16]. Emotional problems in adolescence may lead to depression (Balluerka 2013) and suicidal ideation (Ardilla-Herrero et al. 2013). Nanayakkara (2013) reported there was an association between major depression and teen suicide; furthermore, the WHO predicted that depression will be the second highest cause of illness by 2020. In addition to influencing individual development and quality of life, emotional disorders impose a great economic burden on families and society [1, 22].

Adolescence is a transitional stage of physical and mental health development to adulthood, and adolescent health status has major impacts on later life [7]. Providing appropriate interventions for at-risk adolescents will improve their overall quality of life and increase their chances of having long, healthy, and productive lives. The challenge is to establish the best way to ensure early detection of emotional problems and to identify teenagers at risk (Guttierrez 2006).

Indonesia's Mental Health Law number 18/2014 underlines the importance of mental health efforts conducted through promotion, prevention, rehabilitation, and curative services. These efforts, among others, are within the education institution setting, and include (1) creating a learning atmosphere that is conducive to the growth and development of mental health, and (2) improving mental health-related life skills for learners in accordance with the stages of development. Notably, the United Nations Children's Fund [32] understands life skills to be personal, interpersonal, and cognitive psychosocial skills, and therefore people can engage in appropriate interactions, make the right decisions and choices, and manage their emotional states. Eventually, this study sought to confirm emotional problems at school, where adolescents spend most of their time.

2. METHODS

The analysis used a complete 941 data of 1,387 students who were surveyed in two favourite public high schools and one vocational school in South Jakarta. The schools were purposively chosen in 2015 by the Ministry of Health based on recorded evidence of brawling. All students in the first and second grades—similar in size per school—were assessed using a self-administered Strength and Difficulties Questionnaire (SDQ), known as a benchmark in screening for emotional problems. The SDQ consists of a 3-point scale (i.e., 0 to 2) and 25 items measuring four difficulties (i.e., hyperactivity, emotional symptoms, conduct problems, and peer problems), as well as prosocial behaviour. The total score is then grouped into three following SDQ categorization (http://www.sdqinfo.com). The statistical analysis utilized polynomial logistic regression to perform adjusted odds ratio.

3. RESULTS

The percentage of girls in the sample (36.88%) was lower than that of boys (63.12%), and the percentage of participants 16 years of age or younger was 91.50%, while the percentage over 16 years old was 8.50% (Table 1). The findings showed emotional problems occurred in around 21% of the sample, differentiated by gender (i.e., 35.33% of girls and 11.62% of boys). In more detail, girls had a higher prevalence of abnormal (19.02%) and borderline (16.71%) emotional disorders than boys (6.23% abnormal and 5.39% borderline). Compared to the percentage of the public schools' sample with emotional disorders (11.3%), vocational school students had a higher proportion of emotional disorders (28.3%), either borderline (5.8% public vs. 12.8% vocational) or abnormal (5.6% public vs. 15.5% vocational). Ethnic group analysis showed no significant association, although non-Javanese ethnic students tended to have more emotional problems (23.53%) than Javanese students (18.29%).

Table 2 presents the final logistic regression, which shows that girls had three times greater likelihood (95% CI 1.74 – 4.79) of being abnormal than boys. Vocational school students had up to twice the risk of suffering emotional problems compared to public school students, and the effect was clearer for risk of abnormal emotional disorder.

TABLE 1: Characteristics of Research Subjects

Variable	Category	Total N (%)	Prevalence (%)		P Value [a]
			Abnormal	Borderline	
Gender	Boy	594 (63.12)	37 (6.23)	32 (5.39)	0.001
	Girl	347 (36.88)	66 (19.02)	58 (16.71)	
Age (year)[b]	Mean	15.56	15.55	15.6	0.712
	Min/Max	13/18	14/17	14/17	
Age group	≤ 16 years	861 (91.50)	96 (11.15)	78 (9.06)	0.202
	> 16 years	80 (8.50)	7 (8.75)	12 (15.00)	
School type	Public	432 (45.91)	24 (5.56)	25 (5.79)	0.001
	Vocational	509 (54.09)	79 (15.52)	65 (12.77)	
Ethnicity	Javanese	514 (54.62)	51 (9.92)	43 (8.37)	0.607
	Non-Java	68 (7.23)	9 (13.24)	7 (10.29)	
	Mixed	306 (32.52)	38 (12.42)	31 (10.13)	
	Missing	53 (5.63)	5 (9.43)	9 (16.98)	
Total		941 (100.00)	103 (10.95)	90 (9.56)	

Note. (a) Chi-square test; (b) Age is treated as continuous scale.

TABLE 2: Polynomial Logistic Regression of Emotional Problems

Variable	Category	Borderline		Abnormal	
		OR	95 % CI of OR	OR	95 % CI of OR
Gender	Male	1		1	
	Female	3.67	2.08 – 6.47	2.89	1.74 – 4.79
Age (year)[a]		1.14	0.82 – 1.58	1.11	0.83 – 1.51
School	Public	0.69	0.37 – 1.25	0.5	0.28 – 0.87
	Vocational	1		1	
Ethnicity	Javanese	1		1	
	Non-Javanese	1.22	0.51 – 2.92	1.29	0.58 – 2.82
	Mixed	1.12	0.68 – 1.85	1.15	0.73 – 1.83

Note. (a) Age is treated as continuous scale. OR = odds ratio; CI = confidence interval.

4. DISCUSSION

The total number of high schools in Jakarta since 2011 are 29 public and 70 private schools (http://data.go.id/dataset?tags=sekolah). Notably, the data analysed were from a survey done in three purposively selected high schools having evidence of brawls; yet, this sample was not representative of high schools in Jakarta. In addition, the study had a very limited studied variable number. Nevertheless, the study's result could be useful as an initiative for developing mental health programs in school settings, especially those with identified evidence of brawling, violence, drug use, or other adolescent problems (Shavers 2014). Moreover, since Abdel-Fattah (2014) found

that students over age 15 (compared to those younger than 15) had an odds ratio of 1.85 to suffer from behavioural or emotional disturbances. This study of high school students with an average age of 15.6 years, therefore, was aligned with the purpose of exploring and describing adolescents' emotional problems. This Jakarta study revealed the prevalence of emotional problems among approximately 21% of students. Taking into consideration the limitations on comparison with other studies' results due to different assessment tools and time frames, it seems the Jakarta study's figures were lower than the 30% prevalence in India adolescents, as measured by YSRTM (Pathak et al. 2011), and much higher than the 12.2% prevalence of emotional disorders—measured using the SDQ tool—in children aged 11 to 17 years in Germany [24], and the 8.3% of Saudi children aged 6 to 18 years, as measured with a CBCL tool (Abdel-Fattah et al. 2004). This difference of prevalence might also relate to socioeconomic status, since Germany and Saudi Arabia are categorized as countries with a very high Human Development Index (HDI), while India and Indonesia are from medium HDI countries (http://hdr.undp.org/en/countries/profiles/DEU). At an individual level, Knopf, Park, and Mulye (2008), who utilized SDQ, supported the information on socioeconomic disparity; they analysed low-income adolescents, and found them more likely to suffer mental health difficulties compared to higher-income adolescent groups.

As disclosed by this analysis, gender plays a role in the prevalence of emotional problems, since girls (36.33%) tended to have emotional problems more frequently than boys (12.96%). Similar findings were reported by Pathak et al. (2014) in India regarding internalizing syndrome—a psychiatric disorder—where prevalence in females (32%) was higher than in males (25.8%). This pattern could likely be explained by a theory that hormonal changes influence females at reproductive periods (Shavers, 2014). The opposite finding, however, was presented by Knopf, Park, and Mulye (2008), who found males were slightly more likely to have mental health difficulties (12.3%) than females (10.9%). Ravens-Sieberer (2008) also found that boys aged 11 to 17 years tended to have borderline or abnormal mental health problems more frequently than girls (14.8% vs. 9.5%), including suffering from abnormal (7.8% vs. 5.3%). Costello (2003) confirmed the higher prevalence of any psychiatric diagnosis in boys (15.8%) than in girls (10.6%) in the state of North Carolina in the United States. Murphy and Fonagy reported the UK statistics: 13% of boys and 10% of girls had mental health problems. This different pattern might be caused by different types of mental health problems, or by the interaction of genetic and environmental factors [31].
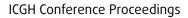
The low missing data on ethnicity (5.63%) indicates the ability of students to disclose their ethnic group root. Confessed ethnicity as a social identity, therefore, probably relates to genetic factors [2]. Although the analysis results demonstrate no association between ethnicity and emotional problems, there is a need for further exploration. Other studies also could not directly explain both variables, but among children presenting with emotional problems, there was an association between ethnicity and care pathway in reasons for referral and case closure [10]. Another research study concluded that racial/ethnic composition of schools and perceptions of belongings have strong links with emotional problems and may represent important targets for intervention (http://web.a.ebscohost.com/ehost/detail/detail).

This study revealed that students in vocational schools (16.70%) were more vulnerable to suffering the emotional problems compared with students in public schools (6.51%). The higher risk in vocational school probably is due to students' intentions to continue studies to get jobs, while students in public schools focused only on academic achievement (Listiara & Alsa, 2011).

Looking deeply at the result, it emphasizes the need for screening of emotional disorders among students on a larger scale. The government, through the Ministry of Health, has operated a Mobile Mental Health Service program since 2012, equipped with the SDQ instrument as well; however, the program needs a more comprehensive plan developed together with all stakeholders at school—including teachers and parents—especially for follow-up actions to tackle the emotional disorders [26]. Referral of the screened cases to nearby Community Health Centres (puskesmas) can be made, since the Ministry of Health has determined that one of puskesmas development programs is a mental health program [18].

Monitoring physical symptoms (e.g., headaches, stomach ache, and others, accompanied by excessive worry, unhappiness, constant crying, feeling nervous, easily losing confidence, and easily becoming frightened) that relate to absences at school activities most probably are associated with emotional problems [26]. A joint program on Health School Program (Usaha Kesehatan Sekolah), which has operated since 1984 and was reformulated in 2003, could cover this monitoring of physical and mental health problems [19]. Academic achievement could also be at stake when emotional problems go unnoticed. It is useful as an entry point, therefore, to detect possible emotional problems hindering the process of learning. Additionally, since vocational and public schools had different patterns of emotional disorders, different challenges faced by the students could possibly end with different mental health problems. As a result, a follow-up study needs to be done to screen different type of mental health disorders

occurring in both types of high schools. Further exploration is expected to lead to better understanding of ethnicity or cultural factors contributing to the emotional problems among students as explored in this study.

5. Conclusion

A school-based program in Jakarta addressing emotional disorders must be developed comprehensively—including its follow-up actions—using a gender-based design; in addition, the existing school health program should be strengthened through links with puskesmas. Further studies are needed to explore the effect of ethnicity and other types of mental health disorders.

Acknowledgements

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