

## *Influence of school factors on emotional disorder risk in Vietnamese middle school students*

### BACKGROUND

This study examined how school factors such as school violence, academic problems, problems with teachers, and discipline problems influence the risk of emotional disorders in middle school students.

### PARTICIPANTS AND PROCEDURE

Our sample included 1085 middle school students, whose age ranges from 11 to 14, from Hanoi, which is a major city, and Backan, which is a rural area. Measurements included: 1) an emotional disorder scale (EDS) that was developed by the authors and 2) a self-report questionnaire using a Likert scale about relevant school factors, including school violence, academic problems, problems with teachers, and discipline problems. We developed the EDS based on the stress, anxiety, and depression symptoms specified in the DSM-5 and the Conners Emotional Disorder Subscale that included somatic, affective, cognitive, and behavioral symptom manifestations.

### RESULTS

The results showed that school factors were significantly correlated with emotional disorder risk in middle school

students. School violence, academic problems, and problems with teachers could predict 39.6% of emotional disorder risk in middle school students, among which academic problems have the strongest effect and could best predict emotional disorder risk. These results suggest that future research should scrutinize academic pressure that middle school students face in order to develop emotional disorder prevention programs that help students.

### CONCLUSIONS

School factors, especially academic problems, had a negative influence on students. We suggest that educators should consider reducing the academic challenge and workload for prevention of emotional disorder risk in middle school students. Additionally, it is necessary to develop a curriculum that meets the cognitive and cultural needs of students from rural areas.

### KEY WORDS

emotional disorders; school violence; academic problems; problems with teachers; discipline problems

ORGANIZATION – 1: University of Social Sciences and Humanities – Vietnam National University, Hanoi, Vietnam · 2: Hanoi University of Education, Hanoi, Vietnam

AUTHORS' CONTRIBUTIONS – A: Study design · B: Data collection · C: Statistical analysis · D: Data interpretation · E: Manuscript preparation · F: Literature search · G: Funds collection

CORRESPONDING AUTHOR – Hang Thi Minh Nguyen, Ph.D., University of Social Sciences and Humanities – Vietnam National University, 336 Nguyen Trai, Thanh Xuan, 10000 Hanoi, Vietnam, e-mail: minhhangnt@gmail.com

TO CITE THIS ARTICLE – Nguyen, H. T. M., & Nguyen, N. T. A. (2019). Influence of school factors on emotional disorder risk in Vietnamese middle school students. *Health Psychology Report*, 7(4), 316–324. <https://doi.org/10.5114/hpr.2019.88664>

RECEIVED 15.07.2019 · REVIEWED 22.09.2019 · ACCEPTED 25.09.2019 · PUBLISHED 16.10.2019

## BACKGROUND

Adolescence is a stage of transformation, in which rapid bodily development and psychological and social changes take place, and thus a stage of prevalent psychological crises and disorders. Whereas behavioral problems receive a lot of attention as they are often obvious and have direct negative impacts on parents, teachers, and other people, emotional problems often do not display symptoms as clearly and thus adolescents may not obtain as much care and support as they do with respect to behavioral problems. However, emotional problems are not uncommon among adolescents, which has been well documented both around the globe and in Vietnam.

A study in England revealed that 15% of children and adolescents between four and eighteen years old had mental disorders, including emotional disorders (Meltzer, Gatward, Goodman, & Ford, 2003). A study in Egypt that included 1186 children between six and twelve years old showed that 20.6% had mental disorders, including emotional disorders (Elhamid, Howe, & Reading, 2009). Another study in the US showed that although 11% to 20% of children at any age had emotional disorders, 39% of adolescents at 16 years old had emotional disorders (Weitzman & Wegner, 2015).

In Vietnam, researchers have started to shift their attention to emotional issues in middle school students in the past decade and several studies suggest that a relatively large number of them are having emotional problems. A national survey on more than ten thousand adolescents and young adults between 14 and 25 conducted in 2008-2010 by the General Office for Population Family Planning and the General Statistics Office of Vietnam (2010) reported interesting figures. Specifically, the report revealed that 73.1% of participants indicated feeling sad, that 27.6% of participants felt very sad or did not feel useful and function normally, that 21.3% of participants felt disappointed about the future, and that 4.1% of participants had thought about suicide. Compared to a similar study conducted in 2003 by the same offices, the percentage of participants who felt sad increased from 32 to 73 (General Statistics Office of Vietnam, 2010). While reports by the General Statistics Office of Vietnam (2003, 2010) examined broad emotional issues, other authors focused on mental health with specific emotional disorders. A study by Hoang et al. (2007) surveyed 1727 middle school students in Hanoi and reported that between 15 and 25% of students showed different psychological disorders that included behavioral disorders, bipolar disorder, and emotional disorders. Nguyen (2014) studied 466 middle school students in Hanoi and Hai Phong and found that 19.5% of participants showed signs of moderate emotional disorders, while 5.1% showed severe signs.

Previous studies also suggested psychological factors that may affect emotional disorders in adoles-

cents, including low self-esteem (Chapman & Mullis, 1999; Van, 2005; Phan, 2007; Do, 2013; Dinh, 2014; Nguyen, 2014), and family and school factors (Dang & Hoang, 2007; Emerson & Hatton, 2007; Landman-Peters et al., 2008; Shakuntala Walker & Melvin, 2010; Dang, Weiss, & Nguyen, 2013; Taylor & Wood, 2013; Nguyen, 2014; Nguyen, B. D., 2014; Rudolph, 2014; Montagner et al., 2016), among which school factors received the most attention. However, these studies often scrutinized individual aspects of school factors such as school violence and academic pressure, and thus there has not been any study that examined the influence of multiple school variables on emotional disorder in adolescents. Therefore, the present study aims to examine to what extent school factors, which we elaborate on in the next section, influence the emotional disorder risks in middle school students.

*Schools factors  
and emotional  
disorder risk*

## OBJECTIVE OF RESEARCH

Emotional disorders are considered abnormal and unstable emotional symptoms, which upset and affect personal life (Beck, 1979). In this study, we consider emotional disorders to include somatic, cognitive, affective, and behavioral symptoms but without any psychotic symptoms. We reference DSM-5 (American Psychiatric Association, 2013) and the Conners Emotional Distress Subscale (Conners, 2010) for emotional disorder symptoms in middle school students. Additionally, we include several emotional disorder manifestations of Vietnamese middle school students, including fear of academic and life failure and not wanting to attend school.

This research did not assess clinically emotional disorders for each participant and thus did not follow precisely diagnostic criteria and differential diagnosis of the DSM-5 (American Psychiatric Association, 2013). The main purpose of this study is to determine students who show symptoms of emotional disorders and calculate the frequency of different levels of symptom manifestations. Therefore, we refer to these manifestations as emotional disorder risks. In other words, the current study examines the spectrum of emotional disorder risks that range from none to high.

School factors include school violence, academic problems, problems with teachers, and discipline problems, which are the main issues of Vietnamese students. Specifically, school violence is assessed with items that inquire about bullying, social isolation, deprecation, rumors, blackmail, and fighting. Academic problems include lack of interest in learning, challenging academic curriculum, lack of learning goals, time management, overwhelming amount of homework, and study results below expectations. Problems with teachers include intense relationships with teachers, being ignored by teachers, and being

treated unfairly. Discipline problems includes violation of school rules, examination cheating, and suspension.

The following research questions were asked accordingly:

1. What is the rate of emotional disorder risk among middle school students?
2. How do demographic factors (gender, grade, region) influence emotional disorder risk and school problems in middle school students?
3. What is the relationship between school factors and emotional disorder risk in middle school students? We hypothesized that school factors are correlated with and could predict emotional disorder risks in middle school students.

## PARTICIPANTS AND PROCEDURE

### PARTICIPANTS

Participants were drawn from middle school populations in Hanoi and Backan, a less developed region that is to the north of Hanoi ( $N = 1085$ ,  $M_{\text{age}} = 12.40$ ,  $SD = 1.20$ ). Students from Hanoi comprised 62.3% of the sample and 54% were male. There were 286 (26.3%) sixth graders, 328 (30.6%) seventh, 277 (25.4%) eighth, and 194 (17.8%) ninth.

All sampled participants answered the survey in a group of approximately 15 students under guidance of a research assistant. The total survey time was about 20 minutes but participants could choose to stop at any time. Furthermore, we recruited 28 students for group discussion that lasted about an hour in order to gain knowledge about their thoughts, feelings, and behaviors.

### RESEARCH TOOLS, PROCEDURE AND STATISTICAL ANALYSES

*Emotional Disorder Risk Scale.* We developed this scale to assess risk of emotional disorder in students based on symptoms of stress, anxiety, depression, and other mood disorders specified in the DSM-5 (American Psychiatric Association, 2013). Our scale consists of four subscales, including (a) a 12-item somatic problem subscale (e.g. "I gain/lose weight abnormally"), (b) a 14-item affective problem subscale (e.g. "I feel lonely"), (c) an 11-item cognitive problem subscale (e.g. "I lose concentration"), and (d) an 11-item behavioral problem subscale (e.g. "I do not want to go to school"). Responses were given on a 4-point Likert scale from *never* to *frequently*. Students could score up to 144 points and were asked to read items carefully and to determine to what extent each item described them accurately for the last three months.

We conducted a preliminary study on 53 students to examine the reliability of our scale. The results showed that Cronbach's  $\alpha$  of the whole scale was .93 and that of the somatic problem subscale, affective problem subscale, cognitive problem subscale, and behavioral problem subscale was .74, .83, .84, .65, respectively. We modified some items of the scale to match students' understanding and the final analyses on 1085 participants showed improved results. Specifically, reliabilities for the scales in the current study were adequate to good: somatic problems,  $\alpha = .76$ ; affective problems,  $\alpha = .82$ ; cognitive problems,  $\alpha = .86$ ; and behavioral problems,  $\alpha = .76$ . Factor analysis resulted in the KMO (Kaiser-Meyer-Olkin) index = .945, the Bartlett's test  $p$ -value  $< .001$ , and four factors with eigenvalue greater than 1, explaining 50.72% of variance of emotional disorder risk. Based on the item loading pattern matrix, we named these factors somatic problems, affective problems, cognitive problems, and behavioral problems. Because this study did not aim to assess clinically emotional disorders in students, we adopted the term emotional disorder risks and based on the mean score and standard deviation we categorized four risk levels: no risk (i.e. sum score equal to zero), low risk (i.e. sum score between 1 and 20.75), moderate risk (i.e. sum score between 20.76 and 63.27) and high risk (i.e. sum score is greater than 63.28).

*School Problem Questionnaire.* We developed this 20-item questionnaire in order to study school problems that included school violence (6 items), learning problems (6 items), problems with teachers (4 items), and discipline problems (4 items). Items included in this study were drawn from a pilot study on student problems. A sample school violence item is: "I am bullied". A sample learning problem item is: "The school curriculum is beyond my capacity." A sample teacher problem item is: "I feel that teachers do not pay attention to me". A discipline-problem item is: "I violate school rules". Responses were given on a 4-point Likert scale from *never* to *frequently*. The reliability of this scale in this study was good:  $\alpha = .87$ . Factor analysis resulted in the KMO index of .893, Bartlett's test  $p$ -value  $< .001$  and four factors with eigenvalue greater than 1 that could explain 51.55% of variance of school problems.

*Group discussion.* We conducted a group discussion among 45 participants (28 students from Backan, others from Hanoi) in three approximately equal groups in order to gain insights on how students understand negative emotions, as well as their possible causes. For each regional sample of interviewees, approximately half of the students scored highest and the other half scored low on the Emotional Disorder Risk Scale. We selected students from both lowest and highest groups to follow the ethical guideline that prohibits discrimination against students with mental health problems. Specific questions involved

recognizing negative emotions, symptoms of negative emotions, causes of negative emotions, relationship between negative emotions and school performance, well-being and relationships with other people, and coping with negative emotions.

## RESULTS

### EMOTIONAL DISORDER RISK IN MIDDLE SCHOOL STUDENTS

The results showed that the average emotional disorder risk score was  $M = 39.76$ ,  $SD = 20.05$ , in which the average affective score was the highest ( $M = 13.79$ ,  $SD = 7.54$ ), followed by that of somatic score ( $M = 10.10$ ,  $SD = 5.27$ ), that of cognitive score ( $M = 8.45$ ,  $SD = 5.88$ ), and that of behavioral score ( $M = 7.74$ ,  $SD = 5.28$ ). Only two students showed no emotional disorder risk, 15.76% low risk, 67.65% moderate risk, and 16.41% high risk (Figure 1).

The average emotional disorder risk score in the high risk group was  $M = 72.10$ ,  $SD = 12.25$ , in which the average affective score was the highest ( $M = 26.20$ ,  $SD = 5.28$ ), followed by that of cognitive score ( $M = 16.53$ ,  $SD = 4.87$ ), that of somatic score ( $M = 16.10$ ,  $SD = 4.95$ ), and that of behavioral score ( $M = 14.97$ ,  $SD = 5.32$ ). Common somatic symptom manifestations included frequent sweating (31.4%), fatigue (30.4%), and stomachache and headache (19.8%). Common cognitive symptom manifestations included frequent feeling inferior and useless (34.3%), feeling it difficult to make decisions (33.7%), feeling that I will fail in school and life (33.7%), and not concentrating on study or anything else (29.7%). Common affective symptom manifestations included frequent worrying about other people's judgments on myself (54.1%), feeling unconfident (47.1%), not being able to control emotions (39%), feeling lonely (36.6%), and feeling easily agitated (36%). Common behavioral symptom manifestations included frequent falling behind with school (39%), social withdrawal (30.2%), uncontrolled repeated actions (27.3%), and not wanting to attend school (15%). Table 1 shows that correlations among aspects of emotional disorder risk range from moderate to high.

Table 1

Correlations between aspects of emotional disorder risk

	Emotional disorder risk	(1)	(2)	(3)	(4)
Somatic symptom manifestation (1)	.74**	1			
Cognitive symptom manifestation (2)	.87**	.54**	1		
Affective symptom manifestation (3)	.91**	.59**	.74**	1	
Behavioral symptom manifestation (4)	.82**	.49**	.67**	.68**	1

Note. \*\* $p < .01$ .

*Gender.* Independent samples *t*-test showed that emotional disorder risk differed by gender, as female students were more likely to score higher than did male students (Table 2).

*Grade.* One-way ANOVA analyses showed that there was a significant effect of grade on emotional disorder risk, but follow-up post hoc analyses indicated that ninth graders had higher risk than did sixth graders ( $p = .034$ ) and that other differences were non-significant.

*Region.* Independent sample *t*-test showed that the average risk score of students from Hanoi was significantly higher than that of those from Backan. Additionally, 19.23% of students in Hanoi had high emotional disorder risk, while the rate for Backan was only 11.73%, which was confirmed to be statistically significant by the  $\chi^2$  test ( $p < .001$ ).

Chi-square test analyses showed that among those who had high emotional disorder risks ( $N = 178$ ), 42.7% of students were male ( $p = .006$ ) and 73% come from Hanoi ( $p = .001$ ). Female and Hanoian students were more vulnerable and sensitive to emotional disorder risk in comparison with their counterparts.

Schools factors and emotional disorder risk

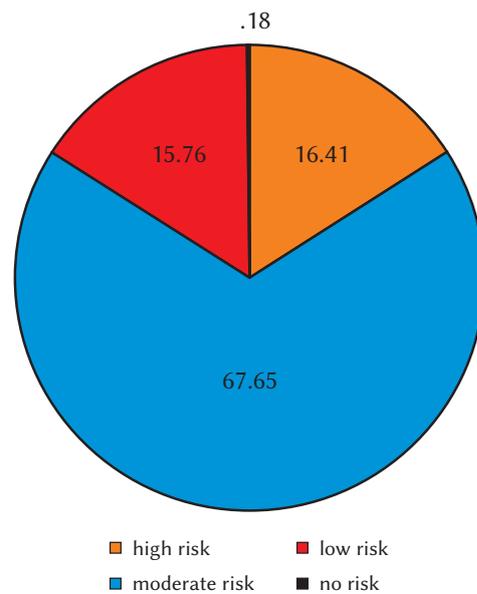


Figure 1. Emotional disorders risk of middle school students.

Table 2

Mean, standard deviation, *t*-test or ANOVA mean comparisons between groups

Variable	Category	<i>M</i>	<i>SD</i>	<i>F/t</i>	<i>p</i>
Gender	Male	39.56	20.15	964.93	< .001
	Female	44.88	22.17		
Grade	6 <sup>th</sup> grade	36.60	18.89	1069.00	.014
	7 <sup>th</sup> grade	43.09	21.17		
	8 <sup>th</sup> grade	43.02	20.90		
	9 <sup>th</sup> grade	44.10	22.97		
Region	Hanoi	44.22	21.58	918.18	< .001
	Backan	38.37	19.73		

Table 3

School factors and demographic variables

Variable	Category	<i>M</i>	<i>SD</i>	<i>F/t</i>	<i>p</i>
School violence	6 <sup>th</sup> grade	4.59	3.47	2.41	.041
	7 <sup>th</sup> grade	5.14	3.78		
	8 <sup>th</sup> grade	4.81	3.43		
	9 <sup>th</sup> grade	4.30	3.79		
	Hanoi	5.09	3.36		
Academic problems	Backan	4.22	3.35	5.41	.001
	6 <sup>th</sup> grade	6.23	3.86		
	7 <sup>th</sup> grade	6.87	3.85		
	8 <sup>th</sup> grade	7.18	4.06		
	9 <sup>th</sup> grade	7.66	4.20		
Problems with teachers	Hanoi	7.24	4.09	3.60	< .001
	Backan	6.35	3.82		
Problems with teachers	Hanoi	2.58	2.63	3.53	< .001
	Backan	2.02	2.41		
Discipline problems	Male	2.05	1.92	3.88	< .001
	Female	1.60	1.86		
Discipline problems	6 <sup>th</sup> grade	1.34	1.71	14.60	< .001
	7 <sup>th</sup> grade	1.71	1.84		
	8 <sup>th</sup> grade	2.11	1.91		
	9 <sup>th</sup> grade	2.37	1.95		

SCHOOL PROBLEMS OF MIDDLE SCHOOL STUDENTS

The results showed that academic problems had the highest average score ( $M = 6.92$ ,  $SD = 4.00$ ), followed by school violence ( $M = 4.76$ ,  $SD = 3.62$ ), followed by problems with teachers ( $M = 2.37$ ,  $SD = 2.54$ ),

and followed by discipline problems ( $M = 1.83$ ,  $SD = 1.88$ ).

*Gender.* Independent sample *t*-test analyses showed that there was a significant difference between male and female students with regard to discipline problems, in which male students were more likely to get involved (Table 3).

*Grade.* One-way ANOVA analyses revealed that there was a significant difference between grade levels with regard to school violence and academic problems (Table 3). Specifically, post hoc test analysis showed that seventh graders were more likely to have problems with school violence than did ninth graders ( $p = .012$ ). Ninth graders scored higher in academic problems than did sixth graders ( $p < .001$ ) and seventh graders ( $p = .029$ ), while eighth graders scored higher than sixth graders ( $p = .005$ ). These results suggest that students at a higher grade level are more likely to have academic problems and a similar pattern was also observed regarding discipline problems. On average, ninth graders scored higher than sixth graders ( $p < .001$ ) and did seventh graders ( $p < .001$ ). Additionally, eighth graders scored higher than seventh graders ( $p = .008$ ) and sixth graders ( $p < .001$ ). Seventh graders scored higher than sixth graders ( $p = .015$ ).

*Region.* Independent sample *t*-test showed that on average students from Hanoi scored higher than their Backan counterparts in school violence, academic problems, and problems with teachers. This result may explain partly previous results indicating that students from Hanoi scored higher in emotional disorder risks than those from Backan (Table 3).

Group interviews provided insights on most common specific problems that students were likely to experience, including overwhelming study schedule and workload (25%), academic performance below expectations (14.1%), time management (12.4%), and difficult curriculum (9.3%). On the one hand, eight of eleven students from Backan who came from ethnic minorities reported that the standard curriculum was very difficult for them. One student stated that he felt pressure and fear when teachers assigned a lot of homework that included difficult subjects such as English, Math, and Physics. On the other hand, a group interview with 17 students from Hanoi revealed that their academic problem had something to do with the busy study schedule that includes taking extra curriculum classes and doing too much homework. One ninth grader reported

that his current study program was overwhelming; he frequently was not able to finish his homework even when he stayed up late till midnight and that he did not have time for a break. Thus, the academic problem of students from Hanoi involved workload, while that of students from Backan was related to academic difficulty.

#### INFLUENCE OF SCHOOL FACTORS ON EMOTIONAL DISORDER RISK IN MIDDLE SCHOOL STUDENTS

Pearson bivariate correlation analyses showed that school problems and emotional disorder risks were highly correlated. Emotional disorder risks were also correlated with all school problem aspects including academic problems, school violence, problems with teachers, and discipline problems. School problems were also significantly correlated with all aspects of emotional disorder risks (Table 4).

Multivariate regression analyses were used to examine the influence of school factors on emotional disorder risks (Table 5). The tolerance  $> 0.5$ , VIF  $< 2.0$ , and the Durbin-Watson statistic is 1.86; therefore there was no multi-collinearity and autocorrelation among school factors.

School violence, academic problems, and teacher problems could predict 39% of variance of emotional disorder risks in middle school students,  $F(4, 1080) = 179.01, p < .001$ , among which academic problems had the largest  $\beta$  coefficient, followed by school violence, and teacher problems. Discipline problems could not predict emotional disorder risk variance.

#### DISCUSSION

Our study yielded insights on emotional issues in Vietnamese middle school students, including high risk rate, the influence of demographic variables, and the effect of school factors. First, our results

Table 4  
*Correlation between emotional disorder risk and school factors*

	School factors	School violence	Academic problem	Teacher problems	Discipline problem
Emotional disorder risk	.61**	.48**	.59**	.40**	.30**
Somatic symptom manifestation	.42*	.36**	.38**	.28**	.23**
Affective symptom manifestation	.52**	.43*	.37**	.35**	.23**
Cognitive symptom manifestation	.54**	.42**	.53**	.36**	.27**
Behavioral symptom manifestation	.58**	.43*	.40**	.37**	.29**

Note. \* $p < .05$ , \*\* $p < .01$ .

Table 5

*Correlation between emotional disorder risk and school factors*

	$R^2$	$R^2\Delta$	Unstandardized coefficients		Standardized coefficients	$t$	$p$	Collinearity statistics	
			$B$	$SE$	$\beta$			Tolerance	VIF
	.40	.40	17.17	1.02		16.79	< .001		
School violence			1.42	0.15	.25	8.98	< .001	.72	1.38
Academic problem			2.25	0.15	.43	14.87	< .001	.65	1.53
Problem with teachers			0.65	0.30	.06	2.10	.032	.65	1.51
Discipline problem			0.03	0.30	.01	0.12	.902	.73	1.36

Note. The Durbin-Watson test = 1.86.

showed that the rate of students with high risk of emotional disorders (16.4%) corresponded to that obtained in other aforementioned research in Vietnam (between 15% and 25%). However, this rate should not be confused with the emotional disorder rate as we did not perform clinical assessment on students.

Second, gender, grade level, and region had an influence on emotional disorder risk. Specifically, female students are more likely to have higher risk than their male counterparts, which is consistent with what was found in other studies of Hoang et al. (2007), Nguyen (2014), and Nguyen and Nguyen (2009). Senior students (i.e. ninth graders) were more likely to have higher emotional disorder risks such as school violence, academic problems and discipline problems, suggesting that students will face more complex and larger problems as they advance in their education. One reason may be that all middle school students will have to take a national entrance examination in order to get a place in high school, which is similar to high school students participating in a national examination for college. Because the public middle school system can only provide education for approximately 62% of students (Hanoi Department of Education and Training, 2019), many will have to enroll in private schools whose tuition and fees are significantly more expensive than those of public schools. Another reason involves decisions made by parents, especially those in big cities such as Hanoi, to have their children competing for a spot in high schools for gifted students – highly competitive schools with a renowned reputation. We think that participating in such a competition brings tremendous pressure to senior students, which increases their emotional disorder risks. Students from Hanoi have greater emotional disorder risks than those from Backan,

which is consistent with a study by Nguyen (2014), which found that students from Hanoi had more emotional disorders than did those from Hai Phong – a slightly less developed region than Hanoi. Future research should examine differences between developed and less developed regions to determine the exact causes.

Third, our results provided evidence for the influence of school factors on emotional disorder risks in middle school students. Among the school factors examined, academic problems seem to be the most important factor that could best predict emotional disorder risks, which is consistent with other studies. For example, studies in Vietnam yielded similar results that stress and negative emotions in students were correlated with academic problems, especially examination (Do, 2013; Dinh, 2014; UNICEF Vietnam, 2018). One interesting insight that we gained through this research was that there is a difference in academic problems across regions. While academic problems of students from Hanoi were caused by taking too many classes and doing a large amount of homework, those of students from Backan were caused by the difficult academic curriculum. Backan is a region populated by multiple ethnic groups with indigenous languages and diverse cultures. Thus, academic challenges and consequent emotional disorder risks for students from this region arise when indigenous students have to learn Vietnamese and follow a curriculum that is alien to their cultures and their unique ways of perceiving the world. Future research should find additional and clearer evidence for differences in academic problems of multi-ethnic students across regions in Vietnam, which can later be used as a basis for developing multiple curricula that meet the needs of different student groups.

Finally, our study suggests that a school psychology service system that helps students cope with school problems such as school violence, academic pressure, problem with teachers, and discipline is necessary and urgent. With regards to middle school students, school psychologists should pay special attention to ninth graders to help them cope with their problems.

## LIMITATION AND FUTURE STUDIES

With regards to methodology, we were unable to compare our emotional disorder scale with another established scale that measured the same construct to assess the concurrent validity of our scale. The reason was that there had not been, to the best of our knowledge, any emotional disorder scale that had been adapted for Vietnamese adolescents. With regards to research results, the current research was only able to find evidence for the difference in emotional disorder risks between Hanoian and Backan students and among students from different grades. Thus, future research needs to examine potential causes for such differences.

## CONCLUSIONS

The current study has determined the frequency of emotional disorder risks in middle school students, in which the rate of high risk is not insignificant. School factors such as school violence, academic problems, problems with teachers, and discipline problems all have impacts on emotional disorder risk, among which academic problems had the strongest effect and could best predict emotional disorder risk. These results suggest that future research should scrutinize academic pressure that middle school students face in order to develop emotional disorder prevention programs that help students. Additionally, we highly recommend further educational studies that examine reduction of academic workloads for students from Hanoi and it is necessary to develop a curriculum that meets the cognitive and cultural needs of students from rural areas.

## ACKNOWLEDGEMENTS

We would like to express our gratitude to students, their parents and teachers of six middle schools in Hanoi and Backan for fully supporting us during data collection. We thank the Child Fund for their enormous support in data collection in three middle schools in Backan. We also want to thank our anonymous participants for willingly taking part in this study. Without them, this manuscript could not exist.

## REFERENCES

- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders – DSM-5* (5th ed.). Arlington, VA: American Psychiatric Association.
- Beck, A. T. (1979). *Cognitive therapy and the emotional disorders*. New York: Meridian Book.
- Chapman, P. L., & Mullis, R. L. (1999). Adolescent coping strategies and self-esteem. *Child Study Journal*, 29, 69–77.
- Conners, C. K. (2008). *Conners Comprehensive Behavior Rating Scales: Conners CBRS-Self-Report*. Toronto: MHS Publishing.
- Dang, H. M., Weiss, B., & Nguyen, C. M. (2013). *Mental health of Vietnamese children: Current situation and risk factors*. Hanoi: Vietnam National University Press.
- Dang, H. M., & Hoang, C. T. (2007). Mental health situation of secondary school students in Hanoi and the need to counseling psychology. In *Proceedings of the International Conference on Intervention and Prevention of Mental Health of Vietnamese Children* (pp. 135–147). Hanoi: Vietnam National University Press.
- Dinh, T. H. V. (2014). *Coping with negative emotions in social relationships of adolescents in Hue city* (doctoral dissertation). Academy of Social Sciences, Hanoi, Vietnam.
- Do, T. L. H. (2013). *Stress in high school students* (doctoral dissertation). Academy of Social Sciences, Hanoi, Vietnam.
- Elhamid, A. A., Howe, A., & Reading, R. (2009). Prevalence of emotional and behavioural problems among 6-12 year old children in Egypt. *Social Psychiatry and Psychiatric Epidemiology*, 44, 8–14. <https://doi.org/10.1007/s00127-008-0394-1>
- Emerson, E., & Hatton, C. (2007) Contribution of socioeconomic position to health inequalities of British children and adolescents with intellectual disabilities. *American Journal on Mental Retardation*, 112, 140–150. [https://doi.org/10.1352/0895-8017\(2007\)112\[140:COPTH\]2.0.CO;2](https://doi.org/10.1352/0895-8017(2007)112[140:COPTH]2.0.CO;2)
- General Statistics Office of Vietnam (2003). *First national survey on Vietnamese adolescents and youth (SAVY-I)*. Retrieved from [http://www.youthpolicy.org/library/wp-content/uploads/library/2003\\_Survey\\_Assessment\\_Vietnamese\\_Youth\\_Eng.pdf](http://www.youthpolicy.org/library/wp-content/uploads/library/2003_Survey_Assessment_Vietnamese_Youth_Eng.pdf)
- General Statistics Office of Vietnam (2010). *Second national survey on Vietnamese adolescents and youth (SAVY-II)*. Retrieved from [http://www.wpro.who.int/topics/adolescent\\_health/vietnam\\_fs.pdf](http://www.wpro.who.int/topics/adolescent_health/vietnam_fs.pdf)
- Hanoi Department of Education and Training (2019). *Document for ten grade enrollment to public schools in Fall 2019*. Retrieved from <http://sogd.hanoi.gov.vn/van-ban-c578.aspx>
- Hoang, C. T., Cao, V. H., Quach, T. M., Nguyen, T. T., Tran, T. N., & Nguyen, T. M. H. (2007). Mental

- health of middle school. In *Proceedings of the International Conference on Intervention and Prevention of Mental Health of Vietnamese Children* (pp. 194–203). Hanoi: Vietnam National University Press.
- Landman-Peeters, K. M., Ormel, J., Van Sonderen, E. L., Den Boer, J. A., Minderaa, R. B., & Hartman, C. A. (2008). Risk of emotional disorder in offspring of depressed parents: Gender differences in the effect of a second emotionally affected parent. *Depression and Anxiety, 25*, 653–660. <https://doi.org/10.1002/da.20350>
- Meltzer, H., Gatward, R., Goodman, R., & Ford, T. (2003). Mental health of children and adolescents in Great Britain. *International Review of Psychiatry, 15*, 185–187. <https://doi.org/10.1080/0954026021000046155>
- Montagner, R., Mogg, K., Bradley, B. P., Pine, D. S., Czykiel, M. S., Miguel, E. C., Rohde, L. A., Manfro, G. G., & Salum, G. A. (2016). Attentional bias to threat in children at-risk for emotional disorders: Role of gender and type of maternal emotional disorder. *European Child & Adolescent Psychiatry, 25*, 735–742. <https://doi.org/10.1007/s00787-015-0792-3>
- Nguyen, B. D. (2014). *Psychological disorder of children living in families with domestic violence* (doctoral dissertation). Vietnam National University, Hanoi, Vietnam.
- Nguyen, T. M. H. (2014). Contemporary research on emotion disorders in children and adolescents in Vietnam. In *Proceedings of the Conference on Developing Training Programs and Managing Quality Assurance for Training and Services in School Psychology in Vietnam* (pp. 385–394). Hanoi: Vietnam National University Press.
- Nguyen, T. M. H., & Nguyen, T. N. (2009). School anxiety in grade 1 students. In *Proceedings of the International Conference on Need, Orientation and Training School Psychology in Vietnam*. Hanoi: Vietnamese Institute of Psychology.
- Phan, T. M. H. (2007). *Coping of adolescent with difficult circumstances*. Hanoi: Social Science Publishing House.
- Rudolph, K. E. (2014). Neighborhood disadvantage in context: The influence of urbanicity on the association between neighborhood disadvantage and adolescent emotional disorders. *Social Psychiatry and Psychiatric Epidemiology, 49*, 467–475. <https://doi.org/10.1007/s00127-013-0725-8>
- Shakuntala Walker, J., & Melvin, J. K. (2010). *Emotional disorders (in children and adolescents)* In J. H. Stone & M. Blouin (Eds.), *International Encyclopedia of Rehabilitation*. Retrieved from <http://cirrie.buffalo.edu/encyclopedia/en/article/7/>
- Taylor, P., & Wood, A. M. (2013). Discrepancies in parental and self-appraisals of prosocial characteristics predict emotional problems in adolescents. *British Journal of Clinical Psychology, 52*, 269–284. <https://doi.org/10.1111/bjc.12013>
- UNICEF Vietnam (2018). *Mental health and psychosocial wellbeing among children and young people in in selected provinces and cities in Vietnam*. Retrieved from [www.unicef.org/vietnam/reports/mental-health-and-psychosocial-wellbeing-among-children-and-young-people-viet-nam](http://www.unicef.org/vietnam/reports/mental-health-and-psychosocial-wellbeing-among-children-and-young-people-viet-nam)
- Van, T. K. C. (2005). Anxiety of street children in Hanoi. *Journal of Psychology, 9*, 13–16.
- Weitzman, C., & Wegner, L. (2015). Promoting optimal development: Screening for behavioral and emotional problems. *Pediatrics, 135*, 384–395. <https://doi.org/10.1542/peds.2014-3716>