

# Mental health among Vietnamese urban late adolescents: The association of parenting styles

Health Psychology Open  
July-December 2020: 1–9  
© The Author(s) 2020  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/2055102920948738  
journals.sagepub.com/home/hpo



Thu-Thuy Thi La<sup>1</sup>, Hong-Van Thi Dinh<sup>2</sup>, Mai-Huong Thi Phan<sup>1</sup>, Le-Hang Thi Do<sup>1</sup>, Phuong-Hoa Thi Nguyen<sup>1</sup> and Quynh-Anh Ngoc Nguyen<sup>2</sup>

## Abstract

The aim of this study was to explore the correlation between parental styles and mental problems among Vietnamese high school students. In total, 16.4 percent of 757 eligible participants reported mental difficulties. Findings showed that being female and in grade 12 were risk factors to mental problems while living in Hue city was likely as a protective factor. The father's warmth reduced the risk of having mental problems among adolescents, while an overprotective mother increased the risk. There was no correlation between authoritarianism of both mother and father and mental difficulties. These results suggest that a parenting program for parents might reduce the risk of mental problems among Vietnamese youth.

## Keywords

adolescents, high school students, mental health, mental problems, parenting styles

## Introduction

Adolescence is a special stage that believed to have the most impact on an individual's mental and physical health in a long-life period (Sawyer et al., 2012; World Health Organisation, 2014). According to UNICEF (2018a), 20 percent of adolescents experience at least one mental disorder and this represents one of the greatest burdens of disease worldwide (UNICEF, 2018a).

Evidence has shown that parental styles have salient impact on the development of adolescents (Abu-Rayya, 2006; Ang, 2006; Cheah et al., 2009; Eisenberg et al., 2009; Garcia and Gracia, 2009). A recent systematic review in 59 studies conducted in 28 different countries from the USA, China, Mexico, Portugal, and Spain (sample size ranged from 27 (Le et al., 2016) to 71,891 (Donath et al., 2014)) concluded that parental warmth protected adolescents from depression, while parents who strictly controlled their children increased the risk of anxiety, depression, and suicidal ideation (Gorostiaga et al., 2019). It seems that in Western countries, authoritative parenting associated with positive adolescents' development such as self-reliance and achievement orientation (Lopez et al., 2008). However, when it

comes to Asian cultures, there has been inconsistency across countries. Some studies found that authoritarian parenting had a positive impact on adolescents' outcomes (Leung et al., 1998) and mental health (Abubakar et al., 2014), while others did not report the association (Dwairy, 2004). Warm parenting was found to have a positive influence on mental health of adolescents across cultures. In Vietnam, a recent analysis on the existing online data of 3331 students aged 12–17 years, obtained from the Vietnam Global School-based Student Health Survey (GSHS) in 2013, investigated the association between parenting styles and mental health problems. Findings showed that parental control increased the risk of being physically attacked, suicidal ideation, and loneliness (Nguyen et al., 2019). This

<sup>1</sup>Vietnam Academy of Social Sciences, Vietnam

<sup>2</sup>Hue University–University of Education, Vietnam

### Corresponding author:

Hong-Van Thi Dinh, Department of Education and Psychology, Hue University–University of Education, No. 32, Le Loi Street, Hue 54000, Vietnam.

Email: [dinhthihongvan@dhsphue.edu.vn](mailto:dinhthihongvan@dhsphue.edu.vn)



study, nonetheless, failed in shedding light on understanding the association between parenting styles and emotional and behavioral problems among adolescents. In addition, the 25-item PBI used in this study has not been validated for use among Vietnamese adolescents. Vietnam is an Asia country that is strongly impacted by the Confucianism and Feudalism for a long period of time. Within this power, the core values were family traditions, in which the man plays the most important role in a family and the obedience of children to parents, of wife to husband, and of the younger to the older is consistent (Phung et al., 2016).

Therefore, it is necessary to investigate more about the relation between parenting styles and psychological development among adolescents in Vietnam, where the parenting is strongly impacted by the Confucianism and Feudalism for a long period of time. We aim to investigate the association between parenting styles and mental health among public high school students in urban areas of Vietnam. The study was conducted at the end of 2019.

## Methods

### Study design

A cross-sectional study was conducted.

### Study setting

This study took place in three public high schools from three central cities presented for three specific and typical areas and cultures of Vietnam: Hanoi (current capital), Hue (old capital), and Ho Chi Minh City. Hanoi and Hue city are ancient cities with hundreds of years of history, while Ho Chi Minh City is a modern city with more than 50 years of development. In the era of urbanization, modernization, and globalization, Hanoi and Ho Chi Minh are cities with a higher pace of development than Hue. Hanoi and Ho Chi Minh are developed cities with the highest population density (2398 and 4363 persons/km<sup>2</sup>, respectively), while Hue is a small city with 230 persons/km<sup>2</sup> (General Statistics Office of Vietnam, 2019). In Hanoi, there were 21 public high schools in eight urban districts. In Hue, there were eight public schools, while in Ho Chi Minh City, there were 67 in 15 urban districts.

Data collection was conducted for 3 weeks from the end of December 2019 to the beginning of January 2020, which was after the end of semester examination.

### Study participants

*Inclusion criteria:* Students in grade 10, 11, and 12, age ranging from 15 to 18 years were invited to participate voluntarily in this study.

*Exclusion criteria:* (a) students who were not willing to participate in the study, (b) students in specialized classes, (c) students whose aged above 18 years, and (d) any student

**Table 1.** Characteristics of participants.

Variables		Value—N* (%)
<b>N</b>		757
<b>Individual characteristics</b>		
Sex	Male	329 [43.5%]
	Female	428 [56.5%]
Grade	Grade 10	253 [33.4%]
	Grade 11	267 [35.3%]
	Grade 12	237 [31.3%]
<b>Family characteristics</b>		
Order of birth	Eldest	288 [38.0%]
	Middle child	110 [14.5%]
	Youngest	291 [38.4%]
	Only child	57 [7.5%]
	<b>Missing—N (%)</b>	11 [1.5%]
<b>Environmental characteristics</b>		
Living area	Hanoi	248 [32.8%]
	Ho Chi Minh City	268 [35.4%]
	Hue	241 [31.8%]
<b>Total</b>		<b>757 [100%]</b>

\*Number of participants.

who was unable to understand or fill out the questionnaire independently, as determined by the investigators.

### Sample size and sampling

In the Vietnamese education system, public schools are implicitly ranked according to the entrance exam results, in which, top schools often concentrate many good students, whose parents are interested in their children's studying. Students with limited academic ability often attend lower ranked schools. This study aims to investigate normal students, so we focused on middle ranked schools. Three high schools were randomly selected among the schools that ranked in average on the entrance exam score in 2 years compared to other public schools in the same city, such as the schools in Hanoi that ranked 11th and 10th among 21 schools in 2018 and 2019; the schools in Ho Chi Minh City that ranked 29th (2018) and 27th 2019) among 67 schools; and the school in Hue that ranked at 5th among eight schools. In each school, two 10 grade classes, two 11 grade classes, and two 12 grade classes were randomly selected. In total, 18 classes were selected randomly. In each class, all students were invited to participate in the study by the researchers. In fact, nobody refused to participate. In total, there were 757 students voluntarily participating in this study (Table 1).

### Data collection

Data collection was conducted by the researcher groups and trained research assistants. Each student was given a self-completed questionnaire. Instruction was conducted clearly by the research assistants. All students completed

the questionnaire voluntarily, quietly, and independently in the classrooms. Time to complete the questionnaire ranged from 25 to 35 minutes.

### Measurements

The dependent variable was mental health difficulty among participants. We used self-reported strengths and difficulties questionnaire (SDQ—Goodman, 1997) to measure this variable. It is a reliable tool in predicting mental disorders in adolescents (Goodman and Goodman, 2009) that has been translated into 40 languages, including Vietnamese. It consists of 25 items, 20 of which describe difficulties relating to four areas: emotional symptoms, conduct problems, inattention–hyperactivity, peer problems, and five of which describe the strength relating to prosocial behaviors. Items were rated on 0–2 scale (not true, somewhat true, and certainly true). The SDQ was validated for use in Vietnamese children (Amstadter et al., 2011; Dang et al., 2017; UNICEF, 2018b; Weiss et al., 2014). Cronbach's alpha of measure for mental difficulties in our data was .70.

The mental health difficulty score was calculated by summing all 20 items related to the difficulties in the SDQ. Children with higher total difficulty scores have greater risk to psychopathology (Goodman and Goodman, 2009). This score then collapsed to a binary variable (absence/presence), in which “presence” cases were abnormal group (with high risk of having mental difficulty). To identify a case, we used the abnormal cut-off score for self-report from several normative samples (e.g. Australia, UK, USA). For adolescent-report, the total difficulty score  $\geq 20$  was identified as a case. This method has been used widely (Dang et al., 2017).

The independent variables included parenting styles of both father and mother and some demographic characteristics of individual and family in our samples. Parental bonding instrument short-form (PBI) (Parker et al., 1979) is a reliable and effective tool to measure parenting styles in relate to their children. There were two separated questionnaires for mother and father. PBI has been validated for use in Vietnamese adolescents (Nguyen et al., unpublished-a). PBI short-form consists of 16 items, which follows four-point Likert-type-scale from 0 (very unlikely) to 3 (very likely) measuring three parenting styles as three independent measures: warmth, overprotectiveness, and authoritarianism. In this study, the reliability ranged from .655 (mother's authoritarianism) to .769 (father's warmth).

Parenting style scores were calculated separately for mothers and fathers by summing all items in each subscale (in which seven items for warmth, five items for overprotection, and four items for authoritarianism). These scores were then classified in two groups with low/high score by mean of each subscale (overall means reported in Table 2). Therefore, independent variables included father's warmth (low/high), father's overprotectiveness (low/high), father's authoritarianism (low/high), mother's warmth (low/high),

mother's overprotectiveness (low/high), mother's authoritarianism (low/high), sex (boy/girl), grade (10, 11, and 12), order of birth (eldest, middle, youngest, and only child) and living city (Hanoi, Ho Chi Minh City, and Hue).

### Data analysis and statistical method

Both descriptive and inference statistics were performed using SPSS 22.0 (Corp, 2012). We used frequency and proportions for categorical variables; mean, *SD*, and median for continuous variables of interest to identify the status of dependent and independent variables. Bivariable analysis and binary multivariate logistic regression modeling were carried out to define the significant/non-significant role of independent variables to predict mental health problems in high school students. 95% confidence interval (CI) for statistics of interest was calculated. A significance level of .05 was used.

## Results

### General characteristics of the study sample

Table 1 shows the general characteristics of the study sample. A total of 757 students (grade 10–12) completed the questionnaire, with 56.5 percent being female. All students in public sector schools of three cities represent three typical regions of Vietnam: north (Hanoi city), center (Hue city), and south (Ho Chi Minh City). Students reported as eldest, middle, and youngest child were 38.0, 14.5, and 38.4 percent, respectively; only 7.5 percent of students were the “only child” in family (1.5% missing the order of birth) (Table 1).

### Main findings

Table 2 illustrated statistical summary of father's and mothers' “warmth,” “overprotection,” and “authoritarianism” and mental health difficulty scores in this samples. The mean score of mental difficulty among student was 14.55 (4.69). Distributions of parenting style scores of fathers and mothers showed a wide range which covers the whole range of scale when considering the maximum and minimum scores. Distribution was standard with mean approximately equal to median. These data showed the variety of parenting styles of this sample. Mothers' mean score of “warmth” and “overprotect” were higher than those from fathers. Mean “authoritarianism” scores of fathers was higher than those from mothers overall.

Table 3 presents the prevalence of mental difficulty among high school students. In total, 16.4 percent of the students reported having mental difficulty. The proportion of students with mental difficulty was higher among girls than boys (19.9% vs. 11.9%,  $p = .003$ ). The percentage of Ho Chi Minh City students who experienced mental difficulty was 22.4 percent, higher than that in other living areas

**Table 2.** Summary statistics of parenting style scores of mothers and fathers and score of mental health difficulties among the adolescents.

Variables	Scale range	Mean (SD)	Median	Minimum	Maximum
Mental health difficulties ( <i>n</i> = 757)	0–40	14.55 (4.69)	14.0	2	28
Father's warmth ( <i>n</i> = 149, missing = 8)	0–21	11.0 (4.41)	11.0	0	21
Father's overprotection ( <i>n</i> = 748, missing = 9)	0–15	5.11 (3.51)	5.0	0	15
Father's authoritarianism ( <i>n</i> = 749, missing = 8)	0–12	5.33 (3.0)	5.0	1	12
Mother's warmth ( <i>n</i> = 755, missing = 2)	0–21	13.04 (4.28)	13.0	1	21
Mother's overprotection ( <i>n</i> = 755, missing = 2)	0–15	6.03 (3.63)	6.0	0	15
Mother's authoritarianism ( <i>n</i> = 755, missing = 2)	0–12	5.10 (2.93)	5.0	0	12

SD: standard deviation.

**Table 3.** Distribution of prevalence of mental difficulty among high school students (defined by collapsing total mental difficulty score to a binary variable).

	Presence	Total	<i>p</i> -value	95% CI
<i>n</i> * (%)	124 (16.4)	757 (100.0)		
<b>Gender, <i>n</i> (%)</b>				
Male, <i>n</i> (%)	39 (11.9)	329 (100.0)		[1.22, 1.78]
Female, <i>n</i> (%)	85 (19.9)	428 (100.0)	.003	[1.00, 1.00]
<b>Grades, <i>n</i> (%)</b>				
Grade 10, <i>n</i> (%)	34 (13.4)	253 (100.0)		[.36, .94]
Grade 11, <i>n</i> (%)	40 (15.0)	267 (100.0)		[.42, 1.04]
Grade 12, <i>n</i> (%)	50 (21.1)	237 (100.0)	.054	[1.00, 1.00]
<b>Order of birth, <i>n</i> (%)</b>				
Eldest, <i>n</i> (%)	52 (18.1)	288 (100.0)		[.60, 3.02]
Middle child, <i>n</i> (%)	18 (16.4)	110 (100.0)		[.49, 2.95]
Youngest, <i>n</i> (%)	45 (15.5)	291 (100.0)		[.50, 2.52]
Only child, <i>n</i> (%)	8 (14.0)	57 (100.0)	.805	[1.00, 1.00]
<b>Living area, <i>n</i> (%)</b>				
Hanoi, <i>n</i> (%)	32 (12.9)	248 (100.0)		[.32, .82]
Hue, <i>n</i> (%)	32 (13.3)	241 (100.0)		[.33, .85]
Ho Chi Minh City, <i>n</i> (%)	60 (22.4)	268 (100.0)	.004	[1.00, 1.00]
<b>PBI—parenting style</b>				
<b>Father's warmth, <i>n</i> (%)</b>				
Low, <i>n</i> (%)	86 (20.7)	416 (100.0)		[1.34, 3.06]
High, <i>n</i> (%)	38 (11.4)	333 (100.0)	.001	[1.00, 1.00]
<b>Father's overprotectiveness, <i>n</i> (%)</b>				
Low, <i>n</i> (%)	51 (11.9)	430 (100.0)		[.31, .67]
High, <i>n</i> (%)	73 (23.0)	318 (100.0)	.000	[1.00, 1.00]
<b>Father's authoritarianism, <i>n</i> (%)</b>				
Low, <i>n</i> (%)	57 (14.4)	397 (100.0)		[.48, 1.05]
High, <i>n</i> (%)	67 (19.0)	352 (100.0)	.086	[1.00, 1.00]
<b>Mother's warmth, <i>n</i> (%)</b>				
Low, <i>n</i> (%)	76 (18.4)	412 (100.0)		[.94, 2.06]
High, <i>n</i> (%)	48 (14.0)	343 (100.0)	.100	[1.00, 1.00]
<b>Mother's overprotectiveness, <i>n</i> (%)</b>				
Low, <i>n</i> (%)	49 (11.0)	445 (100.0)		[.26, .58]
High, <i>n</i> (%)	75 (24.2)	310 (100.0)	.000	[1.00, 1.00]
<b>Mother's authoritarianism, <i>n</i> (%)</b>				
Low, <i>n</i> (%)	57 (13.6)	419 (100.0)		[.43, .93]
High, <i>n</i> (%)	67 (19.9)	336 (100.0)	.020	[1.00, 1.00]

CI: confidence interval; PBI: parental bonding instrument.

\*Number of participants.

**Table 4.** Multiple logistic regression analysis of parental styles and demographic factors associated with mental difficulties among adolescents in Vietnam.

Independent variables	Levels	Dependent variable = Having mental difficulties OR [95% confidence interval]			
		Model 1	Model 2	Model 3	Model 4
Father's warmth	Low	1.89** [1.23–2.89]		1.85** [1.16–2.97]	1.83* [1.13–2.96]
	High				
Father's overprotectiveness	Low	.47*** [.32–.71]		.72 [.43–1.20]	.68 [.40–1.15]
	High				
Father's authoritarianism	Low	.89 [.59–1.33]		.95 [.58–1.54]	.86 [.51–1.44]
	High				
Mother's warmth	Low		1.23 [.82–1.85]	.93 [.59–1.47]	.95 [.59–1.52]
	High				
Mother's overprotectiveness	Low		.41*** [.27–.61]	.50** [.30–.83]	.50** [.29–.85]
	High				
Mother's authoritarianism	Low		.74 [.49–1.10]	.80 [.49–1.30]	.75 [.45–1.23]
	High				
Gender*	Male				.57* [.36–.89]
	Female				
Grade*	10				.56* [.33–.94]
	11				.59* [.36–.96]
	12				
Order of birth	Eldest				1.73 [.73–4.08]
	Youngest				1.34 [.50–3.59]
	Middle child				1.37 [.57–3.25]
	Only child				
Living city*	Hanoi				1.34 [.74–2.43]
	Ho Chi Minh City				2.03** [1.19–3.48]
	Hue				
Constant		.20***	.32***	.27***	.25**
<b>Nagelkerke R<sup>2</sup></b>		.06	.06	.08	.13
<b>-2 Log likelihood</b>		645.41	647.72	636.01	604.10
Percentage of correct prediction		83.4	83.6	83.4	83.4
<b>N (% of total)</b>		748 (98.8%)	755 (99.7%)	747 (98.7%)	737 (97.4%)

OR: odds ratio.

Exponentiated coefficients; 95% confidence intervals in brackets.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

(Hanoi and Hue students were 12.9% and 13.3%, respectively,  $p = .004$ ). The prevalence of 12 grade students having mental difficulties was quite higher than 10 and 11 grade ( $p = .054$ ). There was no significant correlation in terms of order of birth.

The data in Table 3 show that there were significant relationships between some parenting styles (father's warmth, father's overprotectiveness, mother's overprotectiveness, and mother's authoritarianism) and mental health problems. Students who had warm father had lower score in mental difficulties (11.4% and 20.7%,  $p = .001$ ). Student who had high overprotective parents had higher mental difficulties than those had low overprotective parenting (23% vs. 11.9%,  $p < .001$  in fathers and 24.2% vs. 11%,  $p < .001$  in mothers). Students with high authority mother had higher mental difficulties score than those with low authority

mother (19.9% vs. 13.6%,  $p = .020$ ). This relationship was not found in father's authoritarianism and mother's warmth.

Table 4 reports the outcome of the multiple logistic regression analysis with different independent variables, in which models 1 and 2 described separate parenting styles of mother and father; model 3 included parenting style of both mother and father; and model 4 was the same as model 3 and added demographic variables. Odds ratios (ORs) and 95% CI from relationships between mental difficulty among high school students and their parent's parental style and demographic factors were reported in this table.

After adjusting for the father's parental styles in model 1, the statistically significant correlates of mental difficulty among high school students were (1) father's warmth: students who received less warm from father were at two times higher risk of having mental difficulties than those



received warm from father (OR=1.891, 95% CI: 1.236–2.891); (2) father's overprotectiveness: students who received less overprotection from father had lower risk of having mental difficulty than those with high overprotective father (OR=.477, 95% CI: .320–.710). This model explained 5.9 percent of having mental difficulty among adolescents in this study.

After adjusting for the mother's parental styles in model 2, mother's overprotectiveness was found to be significant correlated with mental difficulty among high school students. Mother with low overprotected style negatively correlated with mental difficulties among students (OR=.408, 95% CI: .274–.608). This model explained 5.9 percent of having mental difficulty.

Model 3 added behaviors and attitudes of both mother and father. This model explained 7.8 percent of having mental difficulties among adolescents. Compared with model 1 and 2, this model showed that father's "overprotection" was not correlated with mental health of students while controlling for other variables. Two factors were father's low "warmth" (adjusted OR 1.859 (1.161–2.976)) and mother's low "overprotect" (adjusted OR: .500 (.301–.830)) were associated with high risk of experiencing mental health problem of late adolescents, in which the former was positive and the latter was negative.

Model 4 explained 13.3 percent of mental difficulty among adolescents. The result shows that while controlling for all other variables in the model, the following variables have significantly impact on mental health among students: the father's low "warmth" (adjusted OR: 1.833 (1.133, 2.965)), mother's low "overprotection" (adjusted OR: .502 (.297–.850)), male students (adjusted OR .569 (.362, .894)), grade (OR<sub>(grade 10)</sub>: .563 (.335, .944); OR<sub>(grade 11)</sub>: .588 (.360, .960)), and living city. From Model 4, it is observed that the estimated OR of 2.034 indicated that students of Ho Chi Minh City were 2.034 times more likely to have mental problems than Hue students (adjusted OR 2.034 (1.189, 3.479)). In addition, findings also showed that students in grades 10 and 11 were at lower risk for mental difficulties than those in grade 12. Males were at lower risk than females. Students who had a father with a low warmth score were more likely to have mental problems, while a student who had a mother with a high overprotective score is more likely to have mental problems.

## Discussion

This study is a robust study with large sample size representatives of three typical cultural regions of Vietnam. The main scales used in this study were validated for use among adolescents in Vietnam. Importantly, our study adds to the existing evidence about the essential role of parents in children's development.

Findings from our study demonstrated the prevalence of mental health problems among adolescents in Vietnam and the influence of parenting styles to adolescents' mental health.

## Mental health problems among adolescents in Vietnam

These data revealed that approximately 16 percent of adolescents were at high risk of experiencing mental problems. This proportion was higher than previous studies conducted in Vietnam. The prevalence of 1368 adolescents (11–18 years of age) from the central Vietnam, who had mental problems based on the parent-report SDQ, was 9.1 percent (Amstadter et al., 2011), while the result from a 2014 survey in 10 provinces among 591 children (age ranged from 12 to 16 years) using the adolescent-report SDQ was 10.7 percent (Weiss et al., 2014). The higher proportion in our study than others might come from the differences in sample size and the age range of the participants.

Female students were more likely to experience mental health problems than their counterparts. This was in line with the findings from previous research conducted in the United States (Marcus et al., 2008) and Singapore (Picco et al., 2017). Previous studies in Vietnam also reported similar findings (Le et al., 2016; Nguyen, 2006; Nguyen et al., 2013; Nguyen et al., unpublished-b; Pham, 2015; Stratton et al., 2014). Birth order was found not to be correlated with mental problems among adolescents. Our findings were different from other studies, such as study by Chandola and Tiwari (2016) found that birth order significantly affects the mental health emotionally and psychologically. A study by Lombardo and colleagues also revealed that higher birth order was associated with high rate of suicidal attempts (Lombardo et al., 2018). The disparity might due to the difference in age ranges of participants among studies.

Our study found that grade 12 students were more likely to have problems in mental health than others. To explain this, it is necessary to understand the educational system in Vietnam. Grade 12 was considered as the most important stage in a school-life of children as they were required to pass a graduation exam to enter a university which was believed as the only path to success. It gave quite strong pressure to students. Furthermore, the curriculum for high school students, especially for those in grade 12 was quite heavy and academic. Therefore, students felt stress in studying in grade 12 (Tran et al., 2014). Furthermore, the high expectation from parents and teachers has increased the pressure and stress among students.

It is interesting in our study that adolescents in Hue city were less likely to experience mental problems than those in Ho Chi Minh City. The association, however, did not duplicate between those in Hue city and Hanoi or Hanoi and Ho Chi Minh City. Hue city is the old capital of Vietnam where the Royal Citadel was set up by the old King. Traditional cultures strongly influenced by Confucianism and Feudalism have remained until nowadays. Among the three randomly selected cities, Hue is the less developed city with slow pace and natural-oriented lifestyles. In contrast, Ho Chi Minh City was the most developed economic city of Vietnam with high pace and modern lifestyles.

Meanwhile, Hanoi is the current capital of Vietnam with more than 1000 years of history with many traditional values remains nowadays; in addition, the economic development was quite rapid as well. In words, Hanoi was a kind of combination style of the two above cities. It is likely that slow pace lifestyle and traditional values might protect adolescents from mental health problems. However, further studies should be conducted regarding this point of view.

### *Parenting styles and mental health problems among adolescents in Vietnam*

This study found that paternal warmth has been negatively associated with the risk of experience mental problems among correspondents. Our result was duplicated in studies related to this area locally and globally. For example, Nguyen's study conducted among 1913 adolescents in Central Vietnam showed that adolescents received the warmth from fathers were at lower risk of having symptoms of depression, anxiety, and stress (Nguyen et al., unpublished-b). A study among 298 US adolescents shared the same result (Kim and Cain, 2008). The explanation for this outcome might come from the Confucianism cultures, in which father rarely spent time sharing ideas, expression emotions, and feelings to their children. Father was more strict and disciplined than mother (Chao, 1994). This finding shows the evidence that paternal warmth played an essential role in protect Vietnamese adolescents from mental problems. However, maternal warmth did not show significant correlation with adolescents' mental health problems. In Vietnamese family, mother spent more time with children while father played core role in earning money and making decisions for all members in a family. It has become as unconscious awareness among Vietnamese that mother was the one who should take care of, talk to, listen to, and shows deep empathy to children. In this way, the warmth from mother might become neutral and did not impact on adolescents' mental health.

Our study demonstrated that adolescents who received the overprotection from mother were more likely to experience mental problems. This finding was in line with a study by Luyckx and colleagues (2011) and Eun group (Eun et al., 2018). Under the perspective of overprotection, Vietnamese mothers considered adolescents as children and tried to control behaviors as well as emotions of their children. In this way, adolescents were deeply dependent on their mothers to complete every task. Therefore, a group of youth lack of emotional-social skills was born. Evidence has shown that limitation in emotional and social skills was strongly associated with higher mental health problems (Ong et al., 2010).

Adolescents with overprotective mothers were likely to have more problems in emotions and behaviors. This outcome was duplicated with study by Luyckx and colleagues (Luyckx et al., 2011). Other evidence has also shown that the overprotection in parenting associated with anxiety

symptoms/disorders (McLeod et al., 2007; Van der Bruggen et al., 2008) or the delay functional brain in regulating responses among children (Farber et al., 2019). Possible explanation might be that overprotective mothers usually want to keep children as close as possible and tend to put pressure on their children to behave and think under their controls. This causes the delay in developing psychosocial and coping skills (Luyckx et al., 2011; Ong et al., 2010; Soenens and Vansteenkiste, 2010). In addition, overprotection may lead the child think that the world is always unsafe which in turns forms an avoidance attitude in the child and limit them from engaging in various opportunities to develop skills and confidence (Clarke et al., 2013). Nonetheless, our study found no correlation between paternal overprotection and mental problems among adolescents.

It is quite interesting in our study that authoritarianism parents had no significant correlation to mental health problems among Vietnamese adolescents. Our finding was the same as Dwairy's (2004) study among Arab adolescents. However, it was different from others conducted in Western countries, in which authoritarianism was associated with higher symptoms of depression, substance use, aggressiveness, problems with intimate relationships, or lower self-esteem and initiative (Baumrind, 1991; Buri et al., 1988; Lipps et al., 2012; Luyckx et al., 2011). As Vietnam had a history of 100 years under the power and cultural control of Feudalism from Chinese, parenting styles were quite similar in both countries. In this line, according to Chao, authoritarianism may have a positive meaning for Chinese people (Baumrind, 1971), which shared the same meaning in you study. However, this prediction needs to examine further in future. While Western culture devotes for the individualistic society, in which parents usually encourage children to make their own decisions, Asian culture is more likely to control and force children to live and work following a family rules and customs. Children in Eastern countries might consider attentive parenting monitoring and controlling as indicative of parental love and warm. In other words, different from Western countries, adolescents in this sample might have expectations for strictness and authoritarianism in their parents, which in turns might lead to the normal feeling of having authoritarianism parents (Bush et al., 2002).

### *Limitations*

We acknowledge some limitations in this study. First, this is a cross-sectional snapshot of the available data. Therefore, we are unable to report the causal relationships. Second, the used questionnaire is self-reported; therefore, recall bias could occur. Third, other factors which might be potential factors to adolescents' mental health were not included and controlled in our analysis such as parental education, age, and careers. Fourth, participants in this study were students at schools in urban areas. As going to high school is not

compulsory in Vietnam; hence, those from rural areas or out-of-school were not included. Further studies are highly recommended to have a broader picture of this association among Vietnamese adolescents.

## Conclusion

This study complements existing literature about the significant impact of parenting styles on emotional and behaviors among late adolescents in Asian countries. In summary, our results have demonstrated that the paternal warmth plays an essential role in reducing risk of having mental health problems among adolescents, while overprotective mother increased the risk. Evidence from this study can yield useful insights developing appropriate program responses both in Vietnam and other similar settings in the world about the role of parenting styles in adolescents' mental health, in which the essential warmth of the parent plays as the key element.

## Acknowledgements

The authors deeply thank all students for their participating in this study. The authors would like to express their appreciation to teachers, principals at three high schools, and all research assistants for supporting them in collecting the data. The authors would like to thank Prof Hoang Van Minh (Hanoi University of Public Health, Vietnam) and Prof Timothy John Brennen (University of Oslo, Norway) for their valuable comments on this article.

## Author contributions

All the authors shared the same role in preparing this article.

## Ethical approval

The protocol of this study was approved by the Ethical Committee, Vietnam Psychological Association (Protocol No. 02-HDDD/HTLVN). All human subjects in the study were asked for their consent before collecting data, and all had complete rights to withdraw from the study at any time without any threats or disadvantages.

## Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## ORCID iDs

Hong-Van Thi Dinh  <https://orcid.org/0000-0002-1665-9083>

Mai-Huong Thi Phan  <https://orcid.org/0000-0001-5759-2906>

## References

Abubakar A, Van de Vijver FJR, Suryani AO, et al. (2014) Perceptions of parenting styles and their associations with

- mental health and life satisfaction among urban Indonesian adolescents. *Journal of Children and Family Studies* 19: 23–29.
- Abu-Rayya HM (2006) Acculturation and well-being among Arab-European mixed-ethnic adolescents in Israel. *Journal of Adolescent Health* 39: 745–751.
- Amstader AB, Richardson L, Meyer A, et al. (2011) Prevalence and correlates of probable adolescent mental health problems reported by parents in Vietnam. *Social Psychiatry and Psychiatric Epidemiology* 46: 95–100.
- Ang RP (2006) Effects of parenting style on personal and social variables for Asian adolescents. *American Journal of Orthopsychiatry* 76: 503–511.
- Baumrind D (1991) The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence* 11: 56–95.
- Baumrind DU (1971) Current patterns of parental authority. *Developmental Psychology* 4: 1–103.
- Buri JR, Louiselle PA, Misukanis TM, et al. (1988) Effects of parental authoritarianism and authoritarianism on self-esteem. *Personality and Social Psychology Bulletin* 14: 271–282.
- Bush KR, Peterson GW, Cobas JA, et al. (2002) Adolescents' perception of parental behaviors as predictors of adolescent self-esteem in mainland China. *Sociological Inquiry* 72: 503–526.
- Chandola R and Tiwari SC (2016) Birth order significantly affects the mental health emotionally as well as psychologically. *The International Journal of Indian Psychology* 3: 2348–5396.
- Chao RK (1994) Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development* 65: 1111–1119.
- Cheah CSL, Leung CYY, Tahseen M, et al. (2009) Authoritative parenting among immigrant Chinese mothers of preschoolers. *Journal of Family Psychology* 23: 311–320.
- Clarke K, Cooper P and Creswell C (2013) The parental overprotection scale: Associations with child and parental anxiety. *Journal of Affective Disorders* 151: 618–624.
- Corp I (2012) *SPSS Statistics for Windows, Version 22.0*. Armonk, NY: IBM Corp.
- Dang H-M, Nguyen H and Weiss B (2017) Incremental validity of the Child Behaviour Checklist (CBCL) and the Strengths and Difficulties Questionnaire (SDQ) in Vietnam. *Asian Journal of Psychiatry* 29: 96–100.
- Donath C, Graessel E, Baier D, et al. (2014) Is parenting style a predictor of suicide attempts in a representative sample of adolescents? *BMC Pediatrics* 14: 113.
- Dwairy M (2004) Parenting styles and mental health of Palestinian-Arab in Israel. *Transcultural Psychiatry* 41: 233–252.
- Eisenberg N, Chang L, Ma Y, et al. (2009) Relations of parenting style to Chinese children's effortful control, ego resilience, and maladjustment. *Development and Psychopathology* 21: 455–477.
- Eun JD, Paksarian D, He JP, et al. (2018) Parenting style and mental disorders in a nationally representative sample of US adolescents. *Social Psychiatry and Psychiatric Epidemiology* 53: 11–20.
- Farber MJ, Kim MJ, Knodt AR, et al. (2019) Maternal overprotection in childhood is associated with amygdala reactivity



- and structural connectivity in adulthood. *Developmental Cognitive Neuroscience* 40: 100711.
- Garcia F and Gracia E (2009) Is always authoritative the optimum parenting style? Evidence from Spanish families. *Adolescence* 44: 101–131.
- General Statistics Office of Vietnam (2019) *Brief Report of Population and Housing Census 2019*. Hanoi, Vietnam: General Statistics Office.
- Goodman A and Goodman R (2009) Strengths and difficulties questionnaire as a dimensional measure of child mental health. *Journal of the American Academy of Child and Adolescent Psychiatry* 48: 400–403.
- Goodman R (1997) The strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry* 38: 581–586.
- Gorostiaga A, Aliri J, Balluerka N, et al. (2019) Parenting styles and internalizing symptoms in adolescence: A systematic literature review. *International Journal of Environmental Research and Public Health* 16: 3192–3209.
- Kim E and Cain KC (2008) Korean American adolescent depression and parenting. *Journal of Children and Adolescent Psychiatry Nursing* 21: 105–115.
- Le M, Holton S, Nguyen H, et al. (2016) Poly-victimisation and health risk behaviours, symptoms of mental health problems and suicidal thoughts and plans among adolescents in Vietnam. *International Journal of Mental Health Systems* 10: 66.
- Leung K, Lau S and Lam WL (1998) Parenting styles and academic achievement: A cross-cultural study. *Merrill-Palmer Quarterly-Journal of Developmental Psychology* 44: 157–172.
- Lipps G, Lowe GA, Gibson RC, et al. (2012) Parenting and depressive symptoms among adolescents in four Caribbean societies. *Child and Adolescent Psychiatry and Mental Health* 6: 31–43.
- Lombardo P, Jones W, Wang L, et al. (2018) The fundamental association between mental health and life satisfaction: Results from successive waves of a Canadian national survey. *BMC Public Health* 18: 342.
- Lopez ST, Calvo JVP and Menendez MDR (2008) Parenting styles: Bibliographical revision and theoretical reformulation. *Teoria De La Educacion* 20: 151–178.
- Luyckx K, Goossens E, Missotten L, et al. (2011) Adolescents with congenital heart disease: The importance of perceived parenting for psychosocial and health outcomes. *Journal of Developmental and Behavioural Pediatrics* 32: 651–659.
- Marcus SM, Kerber KB, Rush AJ, et al. (2008) Sex differences in depression symptoms in treatment-seeking adults: Confirmatory analyses from the sequenced treatment alternatives to relieve depression study. *Comprehensive Psychiatry* 49: 238–246.
- McLeod BD, Wood JJ and Weisz JR (2007) Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review* 27: 155–172.
- Nguyen D, Dedding C, Pham T, et al. (2013) Depression, anxiety, and suicidal ideation among Vietnamese secondary school students and proposed solutions: A cross-sectional study. *BMC Public Health* 13: 1195–1195.
- Nguyen H (2006) *Child Maltreatment in Vietnam: Prevalence and Associated Mental and Physical Health Problems*. Brisbane, QLD, Australia: Queensland University of Technology.
- Nguyen HTL, Nakamura K, Seino K, et al. (2019) Impact of parent-adolescent bonding on school bullying and mental health in Vietnamese cultural setting: Evidence from the global school-based health survey. *BMC Psychology* 7: 16.
- Nguyen NQ-A, Fisher J, Tran DT, et al. (under review-a) Psychometric properties of a shortened parental bonding instrument among a population-based sample of Vietnamese adolescents. *Current Psychology*.
- Nguyen NQ-A, Tran TD, Tran T-A, et al. (under review-b) Emotional intelligence and mental health problems among adolescents in Vietnam.
- Ong L, Nolan RP, Irvine J, et al. (2010) Parental overprotection and heart-focused anxiety in adults with congenital heart disease. *International Journal of Behavioral Medicine* 18: 260–267.
- Parker G, Tupling H and Brown L (1979) A parental bonding instrument. *British Journal of Medical Psychology* 52: 1–10.
- Pham B (2015) *Study Burden, Academic Stress and Mental Health Among High School Students in Vietnam*. Brisbane, QLD, Australia: Queensland University of Technology.
- Phung MD, Tran T-A, Nguyen PCT, et al. (2016) *Hue Youth's Characteristics in the Setting of Integration and Development*. Hue, Vietnam: Hue University Publisher.
- Picco L, Subramaniam M, Abidin E, et al. (2017) Gender differences in major depressive disorder: Findings from the Singapore mental health study. *Singapore Medicine Journal* 58: 649–655.
- Sawyer SM, Afifi RA, Bearinger LH, et al. (2012) Adolescence: A foundation for future health. *The Lancet* 379: 1630–1640.
- Soenens B and Vansteenkiste M (2010) A theoretical upgrade of the concept of parental psychological control: Proposing new insights on the basis of self-determination theory. *Developmental Review* 30: 74–99.
- Stratton K, Edwards A, Overstreet C, et al. (2014) Caretaker mental health and family environment factors are associated with adolescent psychiatric problems in a Vietnamese sample. *Psychiatry Research* 220(1–2): 453–460.
- Tran VH, Nguyen PCT and Dinh THV (2014) The relationship between time management skills and stress in studying among grade-12 students. In: *The 4th School Psychology Conference: Develop and Quantity Management in School Psychology Training Program and Practical Institutions in Vietnam*, 14–15 August 2014, pp. 395–404. Hanoi, Vietnam: Hanoi National University.
- UNICEF (2018a) *A Conceptual Framework and Roadmap: Measurement of Mental Health Among Adolescents at the Population Level (MMAPI)*. Geneva: UNICEF.
- UNICEF (2018b) *Mental Health and Social Psychology of Children and Youths in Some Provinces and Cities of Vietnam*. Geneva: UNICEF.
- Van der Bruggen CO, Stams GJ and Bogels SM (2008) Research review: The relation between child and parent anxiety and parental control: A meta-analytic review. *Journal of Children Psychology and Psychiatry* 49: 1257–1269.
- Weiss B, Dang M, Lam TT, et al. (2014) A nationally-representative epidemiological and risk factor assessment of child mental health in Vietnam. *International Perspective Psychology* 3: 139–153.
- World Health Organisation (2014) *Health for the World's Adolescents*. Geneva: World Health Organisation.