The Relationship between Academic Performance, Peer Pressure, and Educational Stress as It Relates to High School Students' Openness to Seeking Professional Psychological Help

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Abstract

Adolescents, especially high school students, are more susceptible to stress and encounter other mental health issues. This is linked to extrinsic causes like academics, family, and friends. However, previous studies have shown low rates of students seeking professional psychological help for their problems. This study investigate the relationship among factors including academic performance, educational stress, peer pressure and openness to seeking professional psychological help. We conducted this study with 471 high school students (grades 10–12) engaged. The questionnaire was based on three measurements: peer pressure short form (PPSF), educational stress scale for adolescents (ESSA), and openness to seeking professional psychological help (ATSPPH_O). The Mann-Whitney U test, Kruskal-Wallis test and The PLS-SEM method were used to evaluate this research. The results showed that: (i) students with a higher level of peer pressure have a greater openness to seeking professional psychological help; (ii) the more open to seeking professional psychological help, the higher educational stress that students got; (iii) students with a higher level of peer pressure have greater educational stress; (iv) the openness to seeking professional psychological help would mediate the relationship between peer pressure and educational stress; (v) there was a significant difference between academic performance of peer pressure. On the one hand, counselors, clinicians, and therapists must identify students who are experiencing educational stress in the context of peer pressure as vulnerable groups in need of early mental health interventions. On the other hand, educators and teachers must consider the impact of peer pressure on students' academic performance and devise appropriate teaching strategies.

Keywords: adolescents, educational stress, high school students, peer pressure, academic performance psychological help

1. Introduction

1.1 General

The primary and most significant developmental objectives for adolescents are to resolve the identity versus role confusion crisis, to establish their distinctive sense of identity, and to find a social setting in which they can belong and have meaningful connections with others (Chen et al., 2007). A positive interaction with peers is associated with identity formation and socialization (Ragelienė, 2016). However, this is not just a time when peer interactions become more important but also when adolescents are more susceptible to peer pressure (McCoy et al., 2019). Changes in adolescents are associated with their mental health (Cook & Furstenberg Jr, 2002). Academic is one of the main sources of impact on adolescent mental health. Previous studies also found that education issues are the most common source of stress for adolescents in Western and Asian nations and have been linked to mental health issues such as depression, anxiety, and suicidal thinking (Anderman, 2002; Ang & Huan, 2006; Assana et al., 2017; Shankar & Park, 2016).

1.2 Peer Pressure

Peer influence significantly rises during adolescence and is viewed as a characteristic of this developmental period (Clasen & Brown, 1985; Smetana et al., 2006). Adolescents are susceptible to peer influence because they typically seek comfort among their peers and mimic what their friends do without knowing whether it is good or harmful for them (Adeniyi & Kolawole, 2015). In previous studies, peer pressure was mentioned as verbal encouragement from a peer to engage in a certain behavior (Arnett, 2007). Through peer pressure, modeling, and behavioral reinforcement, peers, directly and indirectly, encourage specific behaviors within their friendships (Bandura, 1973). Nevertheless, recent theoretical developments have revealed that peer pressure has been associated with suicide risk, substance use, risk-taking, binge behaviors, and delinquency behaviors (Harakeh & de Boer, 2019; Inguglia et al., 2019; Santor et al., 2000; Schlagbaum et al., 2021; Zakaria et al., 2022). Peer relationships are also linked to adolescents' mental health instability, including eating disorders (Swanson et al., 2011), symptoms of depression (Gao et al., 2021), substance abuse (Jelsma & Varner, 2020), and social anxiety (Bică, 2023). Although the impact of peer pressure on adolescents has not been widely researched in Vietnam, there are still findings indicating that peer pressure has detrimental implications. A previous study found that people under the age of 25 used drugs due to peer pressure (Thao et al., 2006). Apart from that, peer pressure increases the rates of smoking, heavy drinking, and violence among young Vietnamese (Arunachalam & Nguyen, 2016). Adolescents who have friends drink are five times more likely to do the same (Jordan et al., 2013).

1.3 Educational Stress

At school, adolescents endure a variety of obstacles, which cause them stress, and school-related stress is collectively known as educational stress (Jones, 1993). Educational stress is described as mental suffering caused by expected academic obstacles/failure or simply the threat of academic failure (Verma & Gupta, 1990). It is a sense of stress caused by a student's assessment of high academic requirements (e.g., excessive assignments and an excessive number of exams) (Lee & Larson, 2000; Weiqun & Iris, 2000). School-related problems, such as examinations, grades, studying, and self-imposed and externally generated pressure to achieve, are high school students' primary sources of stress (Kouzma & Kennedy, 2004). According to Sun et al. (2011), educational stress is demonstrated in the following five issues: pressure from study, workload, worry about grades, self-expectation, and despondency.

Adolescents' only task in certain societies is to develop academic aspects; as a result, adolescents are prone to vulnerability, and it appears to be more pronounced among Asians (Rentala et al., 2019; Ye et al., 2019). Mental health problems among adolescents, including suicide, depression, and anxiety, were reported to be caused by academic aspects in some Asian nations like Korea, Singapore, Thailand, and Vietnam (Ang & Huan, 2006; Assana et al., 2017; Juon et al., 1994; Lee et al., 2020; Truc et al., 2015). Students reported high rates of psychological distress and anxiety regarding academic matters; however, students did not seek psychological services due to not having time (Robinson et al., 2016). The absence of diagnostic, treatment, and preventative resources may explain why adolescents' mental health has gotten little attention in Vietnam (Niemi et al., 2010). Therefore, educational stress negatively impacts students' personal, emotional, and physical well-being (Liu & Lu, 2012), their levels of learning and performance (Fan et al., 2016), and mental health (Hosseinkhani et al., 2020). Similarly, Vietnamese high school students reported significant levels of stress, sadness, and anxiety, as well as medium levels of mental health literacy, they selected non-professionals for seeking help as friends, classmates, relatives, or family members (Thai et al., 2020).

1.4 The Impact of Peer Pressure on Educational Stress

Beginning in adolescence, adolescents become less reliant on their parents for assistance and turn to their peer group for support (Roach, 2018). They provide a source of companionship and entertainment, help solve problems, provide personal validation and emotional support, and provide a foundation for identity development (Wentzel, 2017). Besides, these changes' form, pace, and scope increase the perceived need for similarity with peers, leaving adolescents vulnerable to peer influence (Laursen & Veenstra, 2021). The academic aspect is also influenced by peer pressure. On the one hand, the supportive connections of adolescents with peers were investigated concerning academic motivation (school- and class-related interest, academic goal orientations, and social goal pursuit) (Wentzel, 1998). In learning, students with the necessary peer support tend to flourish and exceed their capabilities, concentrating more on their studies and performing well in academic activities at school (Olalekan, 2016). On the other hand, peer influence or peer pressure also has adverse effects on adolescents in the academic aspect. Students who are bullied by their peers or who are the victims of aggressive behavior have a more unfavorable perception of school and academics, which can influence their motivation and academic progress (Wentzel & Asher, 1995). Additionally, when adolescents associate with close friends who indulge in risky behaviors, their academics are harmed (Stanard et al., 2010).

1.5 The Impact of Peer Pressure on Attitude Toward Seeking Professional Psychological Help

According to Fischer and Turner (1970), the help-seeking attitude is a multi-faceted notion that includes: firstly, awareness of the need for psychotherapy help; secondly, acceptance of the stigma associated with obtaining mental health care; thirdly, expressing information openly about the issue; and fourthly, faith in professionals. When adolescents recognize negative behavior and mental health effects, they have help-seeking behavior (van den Toren et al., 2020). Seeking help behavior includes interacting with and communicating with both informal (friends, family,...) and formal (doctors, psychologists, psychiatrics,...) sources to obtain knowledge, advice, information, treatment, and general support in response to issues or troubling experiences (Rickwood et al., 2005). Previous studies on adolescent help-seeking revealed that they prefer informal bits of help (Aguirre Velasco et al., 2020; Raviv et al., 2009). Adolescents tend to ask their friends and family for help when they have depression, and only a few seek help from psychologists, psychiatrists, or doctors (Burns & Rapee, 2006). In Vietnam, adolescents also selected non-professionals to seek help as friends, classmates, relatives, or family members while feeling stress, sadness, and anxiety (Thai et al., 2020). Even so, they might obtain formal help through informal support. When having mental health problems, adolescents prefer to seek help from peers (Olsson & Kennedy, 2010), and they greatly influence the orientation of adolescents (Singer et al., 2019). Peers have a considerable impact on adolescents seeking professional mental health care (Shin, 2018).

1.6 Academic Performance and Peer Pressure

Academic performance is one of the most significant concerns for high school students. It is challenging for them to avoid pressure when studying in order to acquire high grades. However, not only does studying put them under pressure, but their academic performance is also linked to peer pressure. According to Muraina and Adewuyi (2017), academic performance was significantly correlated with peer pressure. Adolescents with positive relationships with their peers are more likely to engage in and even excel at academic tasks than those with negative peer interactions (Wentzel, 2017). According to Bankole and Ogunsakin (2015), when compared to students who are not associated with a peer group, students who belong to a peer group are affected by their peers in academic and school-related aspects such as motivation to be on time for class, earning good grades, learning with peers after class, helping friends with learning challenges, and revising together after class before examination.

In summary, adolescents, especially students, are among the most vulnerable and stressed age groups. They are more susceptible to educational stress, peer pressure, and encounter mental health issues. Although high rates of mental health issues caused by various factors among Vietnamese high school students have been reported, seeking help from formal sources remains uncommon. These limitations affect the overall mental health of Vietnamese high school students, and also create a gap in the practice of counseling and therapy for Vietnamese adolescents. The resources and motivations that motivate adolescents to seek professional psychological support have not been explored. Furthermore, no research has studied the relationship between peer pressure, educational stress, and openness to seeking professional psychological help in Vietnam. For this reason, our research aims to explore the association between peer pressure, educational stress, and openness to seeking professional psychological help in Vietnam.

2. Materials and Methods

2.1 Research Hypothesis

Hypothesis 1 (H1): There is a significant difference in students' peer pressure levels between males and females.

Hypothesis 2 (H2): There is a significant difference between academic performance when considering the peer pressure levels of students.

Hypothesis 3 (H3): Students with a higher level of peer pressure have a greater openness to seeking professional psychological help.

Hypothesis 4 (H4): The more openness to seeking professional psychological help, the higher the educational stress that students get.

Hypothesis 5 (H5): Students with a higher level of peer pressure have greater educational stress.

Hypothesis 6 (H6): The openness to seeking professional psychological help would mediate the relationship between peer pressure and educational stress.

2.2 Procedures

Before beginning the survey, participants were provided information on the terms of anonymity and confidentiality,

and the information sheet addressed the topic of the right to withdraw from the study. Therefore, participants might withdraw from the study at any time. Participants were asked to complete questionnaires and offer data based on their self-reporting, which was done under the supervision of research instructors. For the questionnaires, the participants were informed of the research aims and asked to provide socio-demographic information, which is shown in Table 1. The collection of data took up to two months which ran from August 2022 to October 2022.

2.3 Translation Process

In this research, we use three scales: the subscale of The Peer Pressure Questionnaires & Vignettes including 11 items measuring perceived peer pressure (PPSF – Peer Pressure Short Form), the Educational Stress Scale for Adolescents (ESSA) including 16 items measuring level of education stress in five aspects (pressure from study, workload, worry about grades, self-expectation, despondency), and the subscale of Attitude Toward Seeking Professional Psychological Help to meaursing the openness to seek professional psychological help (ATSPPH-O). These scales used forward and back-translated method. To begin, all scale items were translated from the English version to the Vietnamese version by two Vietnamese native speakers. They are also psychologists who work in Vietnam and speak English fluently. After that, a professional translator who is a native English speaker and proficient in Vietnamese then back-translated the Vietnamese version into English. The study group examined the back-translation to the original scale to discover any inconsistencies or errors. Finally, the Vietnamese versions of the PPSF, ESSA, and ATSPPH-O were approved for usage.

2.4 Sample

First, survey participants were conveniently sampled across three cities in the south of Vietnam. A grand total of 531 questionnaire questionnaires were sent out, and each one was filled out and sent back. Following the elimination process, 60 replies were declared unacceptable for analysis due to a lack of information, fidelity loss, and providing similar answers to all items in the questionnaire. Thus, the final sample included 471 responses (an 88.7 percent response rate), which is significantly more than the 30 percent response rate that the vast majority of researchers agreed was necessary for the study (Dillman, 2011).

Table 1. Participant Demographic

Demographic Variables	Category	Frequency (%)
Gender	Male	201 (42.7)
	Female	270 (57.3)
Academic Performance	Average	65 (13.8)
	Good	197 (41.8)
	Very Good	189 (40.1)
	Excellent	20 (4.2)
Talking with friends	Never	14 (3.0)
	Rarely	52 (11.0)
	Sometimes	187 (39.7)
	Very often	126 (26.8)
	Always	92 (19.5)

2.5 Measurement

2.5.1 Peer Pressure Short Form (PPSF)

The subscale of The Peer Pressure Questionnaires & Vignettes was used, including 11 items measuring perceived peer pressure created by Santor et al. (2000). The high school students express their level of agreement using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = Not sure/ don't know, 4 = agree, 5 = strongly agree). We used forward and back-translated method. For the sample used in the study, the instrument displayed acceptable reliability (Cronbach's $\alpha = 0.65$). The CFA indicated that the measurement was a good fit, CMIN/df = 3.01 ($p < 0.001$); GFI = 0.95; CFI = 0.87; TLI = 0.82; RMSEA = 0.06.

2.5.2 Educational Stress Scale for Adolescents (ESSA)

The Educational Stress Scale for Adolescents (ESSA) was developed by Sun et al. (2011). It contained 30 items that were selected after reviews of pertinent English- and Chinese-language literature and discussions with Chinese

professionals in the disciplines of education and public health (Ang & Huan, 2006). The Educational Stress Scale (ESSA), which included 16 items for adolescents, was utilized to assess the level of educational stress experienced by adolescents in five aspects (pressure from study, workload, worry about grades, self-expectation, despondency) (Sun et al., 2011). Each item was responded to on a 5-point Likert scale ranging from one to five (1 = "strongly disagree," 2 = "disagree," 3 = "neutral," 4 = "agree," 5 = "strongly agree"). This study employed the Educational Stress Scale for Adolescents (Vietnamese) - Vietnamese version (Truc et al., 2015). The ESSA scale has been validated to measure the scholastic stress of adolescents in Vietnam with a Cronbach's alpha of 0.80, indicating a high level of internal consistency (Truc et al., 2015). According to several studies, the Vietnamese version of the ESSA has adequate psychometric properties, with internal consistency scores of 0.82 (Ho et al., 2022). For the sample used in the research, the instrument demonstrated good dependability. Cronbach's α for the total scale was 0.82. The CFA indicated that the measurement was an adequate fit, CMIN/df = 2.86 ($p < 0.001$); GFI = 0.93; CFI = 0.90; TLI = 0.87; RMSEA = 0.06.

2.5.3 Attitude Toward Seeking Professional Psychological Help – Short Form (ATSPPH-SF)

Based on an established self-report measure of attitudes toward seeking mental health care includes 29 items (Fischer & Turner, 1970), Fischer and Farina developed the scale Attitude Toward Seeking Professional Psychological Help - Short Form (ATSPPH-SF) (Fischer & Farina, 1995). The 10-item ATSPPH-SF scale measures the attitudes of students toward seeking professional psychological help, including two dimensions: openness to seeking professional help for emotional problems and needs in seeking professional help. The ATSPPH-SF has been validated to measure help-seeking attitudes among university students in Vietnam with a Cronbach's alpha of 0.83, indicating a high level of internal consistency (Tran-Chi et al., 2021). This research used ATSPPH-SF's ATSPPH-O subscale (with five items: ATSPPH1, ATSPPH3, ATSPPH5, ATSPPH6, ATSPPH7) to measure: Openness to seeking professional help for the emotional problems of high school students. Participants were asked to rate their level of agreement on a 5-point Likert scale (1 = "strongly disagree," 2 = "disagree," 3 = "neutral," 4 = "agree," 5 = "strongly agree"). For this research, the instrument demonstrated good dependability. Cronbach's α for the subscale was 0.74. The CFA indicated that the measurement was an adequate fit, CMIN/df = 2.11 ($p < 0.001$); GFI = 0.99; CFI = 0.98; TLI = 0.97; RMSEA = 0.04.

2.6 Data Analysis

To analyze data for this study, we used SPSS version 26.0 and Smart partial least squares (SmartPLS) – SEM version 4.0. To begin, we evaluate the differences between characteristics of PPSF, ESSA, and ATSPPH-O by utilizing SPSS. Next, we explore the relationship between variables, moderating and mediating factors through PLS-SEM. We conduct the following two-step analysis: Firstly, we evaluated the measurement model through factors including indicator reliability (Outer loadings), construct reliability (Cronbach's alpha – CA, Composite reliability – CR), convergent validity (AVE) and discriminant validity (HTMT); In step two, we examined the validity of the structural model through Variance inflation factor (VIF), coefficient determination ($R2$), effect size ($f2$), and the significance and relevance of path coefficients. Path coefficients with P-values and specific indirect, specific direct, and total effects were computed using a complete PLS-SEM analysis based on 1000 bootstrap samples. We conducted a multiple-mediated PLS path model with ESSA as the output variable, PPSF as the input variable, and ATSPPH-O as the mediating variable.

3. Results

3.1 Results of Mann Whitney U Test and Kruskal-Wallis Test

Firstly, Kolmogorov-Smirnov was used to test the normality of the gathered data (our sample size was greater than 50 participants) to address the distribution and comprehend the nature of the obtained data. Results in **Table 2** reveals that PPSF, ESSA, and ATSPPH-O have non-normally distribution as the p-value of PPSF and ATSPPH-O are less than 0.001, and the p-value of ESSA is less than 0.05. Thus, we used Mann-Whitney test and Kruskal-Wallis test to analyze the data.

Table 2. Test of Normality

Variables	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
PPSF	0.78	<0.001	0.98	<0.001
ESSA	0.49	0.009	0.99	0.069
ATSPPH-O	0.84	<0.001	0.98	<0.001

Note: a, Lilliefors Significance Correction

Abbreviations: PPSF, Peer Pressure-Short Form; ESSA, Educational Stress Scale for Adolescents; ATSPPH-O, Openness to seeking professional psychological help.

A Mann-Whitney U test is applied to determine the difference between males and females in terms of peer pressure, educational stress, and openness to seeking professional psychological help. The results showed that male students (Mdn = 2.27) had significantly higher scores than female students (Mdn = 2.09) for peer pressure, z = [-3.04], p = [0.002]. Thus, the results suggest that the first hypothesis (H1) should be confirmed. Additionally, we found the significant difference in the level of educational stress between male and female students, in which female students (Mdn = 3.43) had significantly greater educational stress than male students (Mdn = 3.31), z = [-2.12], p = [0.03]. Female students (Mdn = 3.40) were more open to seeking professional psychological help than male students (Mdn = 3.20), z = [-3.86], p = [0.000].

To evaluate the difference between the demographic characteristics of variable groups on PPSF, ESSA, and ATSPPH-O, we also used the Kruskal-Wallis test. The results showed that there was a significant difference in the distribution features of peer pressure for the academic performance variables ($\chi2(3) = 13.35$, $p = 0.004$). Therefore, the second hypothesis (H2) is accepted. On the other hand, there was a significant difference in the median score of peer pressure between the frequency of talking with friends ($\chi2(4) = 9.69$, $p = 0.46$). This study did not demonstrate that levels of educational stress had a difference between academic performance variables ($\chi2(3) = 2.31$, $p = 0.50$).

The result showed that no significant differences were found between the frequency of talking with friends features of educational stress for $\chi2(4) = 7.79$, $p = 0.09$). There was no significant difference in the median score of openness to seeking professional psychological help between academic achievement variables ($\chi2(3) = 6.05$, $p = 0.10$). Besides, this study did not demonstrate that the level of openness to seeking professional psychological help had a difference between the frequency of talking with friends ($\chi2(3) = 7.94$, $p = 0.94$).

3.2 Results of PLS-SEM Analysis

3.2.1 Measurement Model

To evaluate the outer model, the indicator reliability was first examined through the outer loadings of reflective constructs. These values revealed an essential and sufficient measure and showed clear connections between the latent variables and their measurements (Avkiran, 2018). We relied on a threshold value of 0.708 to indicate adequate reliability (Hair Jr et al., 2021). In this investigation, ATSPPH5, ATSPPH6, and ESSA11 were accepted because their values exceeded the 0.70 level. In addition, indicators that have outer loadings under 0.708 (from 0.4 to 0.7) are still accepted (Hair Jr et al., 2021). Therefore, even though the outer loadings, including ATSPPH1, ATSPPH3, ATSPPH7, ESSA1, ESSA2, ESSA3, ESSA4, ESSA5, ESSA6, ESSA7, ESSA8, ESSA9, ESSA10, ESSA12, ESSA13, ESSA14, ESSA15, ESSA16, PPSF3, PPSF4, PPSF5, PPSF6, PPSF10, were less than 0.7, we acepted them. However, Hair et al. (2023) recommended that indicators with outer loadings of less than 0.3 should be removed. We found that PPSF1, PPSF2, PPSF7, PPSF8, PPSF9, and PPSF11 have outer loadings less than 0.3, but their elimination did not increase CR and AVE, these indicators are conditionally acceptable for the structures that house them.

Table 3. Results of the Reflective Measurement Model

Construct and items	**CR**	**α**	**AVE**
ATSPPH-O	0.768	0.739	0.376
ESSA	0.842	0.830	0.235
PPSF	0.640	0.657	0.120

CR, composite reliability; **α**, Cronbach's alpha**; AVE**, average variance extracted

Next, the CA and CR were calculated to evaluate construct reliability. However, CA has the limitation that it presupposes all indicator loadings are equivalent in the population (also known as tau-equivalence) (Hair Jr et al., 2021). In exploratory research, reliability scores between 0.60 and 0.70 are considered "acceptable," whereas values between 0.70 and 0.90 are "adequate to good". This criterion applies equally to CA and CR. Besides, the AVE is used to assess the convergent validity of the outer model. The minimum acceptable AVE is 0.50; an AVE of 0.50 or higher shows that the construct explains 50% or more of the variation in the indicators that comprise the construct (Hair et al., 2019; Hair Jr et al., 2021). However, if CR is greater than 0.6, an AVE of less than 0.5 is still acceptable (Fornell & Larcker, 1981). **Table 3** shows that none of the measured constructs have an AVE value that exceeds the minimum threshold, but since their CR values are all more than 0.6, the AVE is acceptable. The final factor to assess the outer model is discriminant validity through HTMT criteria. Discriminant validity is considered to be attained when it is determined that the HTMT threshold for discriminant validity is 0.85 (Henseler et al., 2015). **Table 4** shows the HTMT values.

Table 4. Heterotrait-Monotrait (HTMT) Criterion of Lower Order Constructs

	ATSPPH_O	ESSA	PPSF
ATSPPH_O	**-**	**-**	**-**
ESSA	**0.360**	**-**	**-**
PPSF	**0.263**	**0.433**	**-**

PPSF: Peer pressure; **ESSA**: Education stress; **ATSPPH_O**: Openness to seeking professional psychological help

3.2.2 Structural Model

To evaluate the inner model, the variance inflation factor (VIF) is a value that needs to be calculated to estimate the severity of the structural model's collinearity issue. **Table 5** shows that all VIF values are less than 5. In the acquired data, the VIF values revealed no instances of collinearity.

Table 5. Collinearity Statistics (VIF)

	ATSPPH_O	ESSA	PPSF
ATSPPH_O	-	1.100	-
ESSA	-	-	-
PPSF	1.000	1.100	-

PPSF: Peer pressure; **ESSA**: Education stress; **ATSPPH_O**: Openness to seeking professional psychological help

Next, R^2 is a measure of the model's prediction accuracy. The fraction of variability in endogenous constructs that the structural model explains is revealed by evaluating the coefficients of determination. R^2 should be greater than 0.1 (Chin, 1998), which is considered a significant threshold (Falk & Miller, 1992). In our structural model, adjusted R^2 showed 8.9% variance occurred in ATSPPH-O explained by PPSF, and 31.3% variance occurred in ESSA explained by PPSF and ATSPPH-O. Additionally, the effect size (f^2) was used to observe the effect of each external construct on the endogenous construct. Based on the Cohen-suggested range (Cohen, 2013), this study showed that ATSPPH-O to ESSA, PPSF to ATSPPH-O have a small effect of 0.072 and 0.100, and PPSF to ESSA have an average effect of 0.265.

3.2.3 Results of PLS-SEM Analysis

The results showed that there was a positive effect of PPSF on ATSPPH-O [$\beta = 0.301$, $p < 0.001$, 95% CI = (0.160; 0.473)]. Therefore, the third hypothesis (H3) is accepted. Additionally, the fourth hypothesis (H4) is confirmed because the results found a positive impact of ATSPPH-O on ESSA [$\beta = 0.233$, $p < 0.001$, 95% CI = (0.091; 0.352)]. The results from the **Table 6** also supported the fifth hypothesis (H5) as it revealed a positive effect of PPSF on ESSA, [$\beta = 0.516$, $p < 0.001$, 95% CI = (0.448; 0.651)]. The indirect effect of PPSF [$\beta = 0.070$, $p < 0.05$, 95% CI = (0.027; 0.127)] on ESSA through ATSPPH-O is significant. Therefore, the sixth hypothesis (H6) is supported. All direct effects were statistically significant at the 2.5% level, and the value of 0 was not included in the 95% confidence intervals.

Table 6. Results of PLS-SEM Analysis

Path	β coefficient	T	p	95% confidence intervals	95% BC confidence intervals
Direct effect					
PPSF →ESSA	0.516	10.055	< 0.001	[0.448; 0.651]	[0.379; 0.580]
PPSF→ATSPPH-O	0.301	3.775	< 0.001	[0.160; 0.473]	[0.099; 0.427]
ATSPPH-O→ESSA	0.233	3.497	< 0.001	[0.091; 0.352]	[0.103; 0.361]
Indirect effect					
PPSF→ATSPPH-O→ESSA	0.070	2.760	0.006	[0.027; 0.127]	[0.026; 0.126]

Abbreviations: PPSF, Peer Pressure-Short Form; ESSA, Educational Stress Scale for Adolescents; ATSPPH-O, Openness to seeking professional psychological help.

4. Discussion

The main purpose of this research was to examine the relationship between peer pressure, educational stress, and openness to seeking professional psychological help among high school students in Vietnam. Using the PLS-SEM model, we investigated if openness to seek professional psychological help may mediate the impacts of peer pressure on educational stress. Our research highlights numerous significant findings.

Firstly, the level of peer pressure differed significantly between male and female students; this research shows that male students have higher peer pressure than female students. Many previous studies supported our findings (SARI & TEKBIYIK, 2012). According to Maqsood et al. (2022), male students may be more vulnerable to peer pressure because they spend more time with their friends and have more outside environmental exposure than female students. Especially in risk-taking, male adolescents were more susceptible to peer factors that encourage risk-taking than females. By contrast, there was also a social psychology view that females are more easily influenced, particularly by their friends and close peers (Han & Li, 2009). This may be because females pay more attention to social evaluation and interaction competence during adolescence than males (Rudolph & Conley, 2005). Next, the level of educational stress differed significantly between male and female students. Our research showed that female students experience more educational stress than male students. A popular explanation of this finding is that females experience more stress and are more concerned about educational ability and exam failure than males (Altermatt, 2007; HUI, 2000). Furthermore, female biological systems appear to be more complex during adolescence. Late adolescent females have complex hormonal secretory patterns (Schulz & Sisk, 2016), enhanced emotional stress reactivity (Nolen-Hoeksema, 2001). However, some previous studies also showed the opposite results. Male students have higher educational stress levels than female students (Aihie & Ohanaka, 2019). Educational stress is tied to expectations, and in certain communities, males are expected to achieve more academic success than females, which may explain why males feel more educational stress than females. For example, in Chinese culture, Chinese parents have different expectations for their boys and girls, which is severe when they prioritize their sons with educational resources (Yu & Su, 2006). As a consequence, anxiety in males was linked to strong requirements from parents for strictness, compliance, and increased dependency (Li, 1974). Vietnam is also an Asian country with cultural and traditional aspects similar to those of China, especially the legacy of Confucianism that still exists. However, for younger Vietnamese age groups, the impact of the legacy of Confucianism tends to be less (Vu & Yamada, 2020); so, the over-prioritization of educational opportunities for Vietnamese men in general may be much reduced compared to before. It only weighs heavily on Vietnam's ethnic minorities (Thi et al., 2023), and our study did not include individuals who are ethnic minority people. Our results illustrated that female students were more open to seeking professional psychological help than male students. This finding ties well with previous studies wherein females had a more positive attitude than males toward seeking professional psychological help (Goh et al., 2007). A similar conclusion was reached by Liddon et al. (2018), females were more likely than males to seek help since they were aware of their mental health needs. In addition, the sorts of therapy available are less appealing to males than to females because many psychological therapies are more emotion-focused than solution-focused, whereas males might be tough about expressing emotions outwardly (Kingerlee et al., 2014). Traditional attitudes concerning the male position in society, concern about revealing affection toward other males, and concern about expressing emotions were associated with negative attitudes against obtaining professional psychological help (Good et al., 1989). This would help researchers and therapists better understand the many barriers to males seeking treatment.

The level of peer pressure differed significantly between students at the different academic performance levels. In this

research, we investigated that students with "excellent" performance are under more peer pressure than other groups. This was supported by previous works that peers encourage one another to improve rather than decrease in achievement (Rambaran et al., 2017). This could be caused by adolescents who have positive peer relationships being more likely to engage in and even excel at academic tasks than those who have negative peer relationships (Wentzel, 2017). A similar finding revealed that students with the required peer support tend to grow and exceed their abilities, focusing more on their academics and achieving better in academic activities at school (Olalekan, 2016). Throughout time, peer group academic success and involvement were major predictors of changes in individual academic aims and achievement (Kindermann, 2007). For example, extra classes held outside of school hours are becoming increasingly popular in Asian nations to assist students in improving their academic performance and preparing for national examinations, and Vietnam is no exception (Ha & Harpham, 2005); and this engagement is a way for membership in academically focused peer groups (Buoye, 2004). Therefore, the above arguments demonstrated that peer pressure on academic achievement could have a positive impact on promoting good academic achievement in adolescents. However, schools also need to be mindful of peer influence, as peer pressure can also have a negative impact. For instance, although high-achieving groups reinforced the favorable relationships between academic performance and social competency, low-achieving groups simultaneously facilitated the negative relationships between academic performance and social issues (Chen et al., 2008). Webber (2002) showed that cultural and intergenerational problems, limited communication and lack of connection among family members, peer pressure, and excessive academic success expectations are the primary causes of drug use among Vietnamese adolescents in Australia.

The present study confirmed the findings about the relationship between peer pressure, educational stress, and openness to seeking professional psychological help. Especially, the openness to seeking professional psychological help would mediate the relationship between peer pressure and educational stress. On the one hand, our results demonstrated that students with a higher level of peer pressure had a greater openness to seeking professional psychological help. This notion lends support to the result of previous studies, which found that an individual's peer group was a significant influence in determining whether or not they wanted to seek professional psychiatric care (Rickwood et al., 2007; Shin, 2018). Besides, another prior study on attitudes about seeking professional psychology treatment revealed that peers significantly impact a person's decision to seek mental health services when suffering grieving symptoms (Vogel et al., 2007). Adolescents seek support from peers more, along with all other sources of help, and peers are likely to be the first and most essential step to seeking treatment for mental health issues (Yamasaki et al., 2016). Peers had an important role in providing emotional and informational support and facilitating seeking professional psychological help (Hombrados-Mendieta et al., 2012; Wentzel et al., 2016). Higher levels of perceived friends were connected with more positive perceptions about seeking professional psychological help (Seyfi et al., 2013). The current study's data also showed that students who "always" and "very often" talk to their friends are more likely to be open to seeking professional psychological help than students who "sometimes", "rarely", and "never" talk with friends. Students could receive professional help through the recommendations of peers who have sought or used mental health services (Dew et al., 1991). Moreover, students had the potential to function as natural interventions for each other when it comes to seeking psychological help (Disabato et al., 2018). If peers used to experience psychological care and have positive reactions, the chances that students seek formal psychological help could increase (Disabato et al., 2018). Our findings are equally relevant when considering the cultural setting and people of Vietnam, which explains why Vietnamese adolescents choose peers to seek help or express personal issues instead of their family. This may be due to the generation gap. A previous study showed that Vietnamese adolescents are more comfortable discussing sexuality, dating, marriage, and education with their peers than with their parents (Cooper et al., 1993).

On the other hand, the present study also showed that the more open students were to seeking professional psychological help, the higher the educational stress they experienced. This could be a conflicting and controversial result since previous research. According to Kang-Yi et al. (2018), in-school and out-of-school community mental health services help improve educational outcomes. A similar conclusion was reached by Prerna et al. (2020), counseling programs improved academic performance, career options, course selection, and college and career preparation. Although there was a contradiction compared to prior research, when we consider the open process of seeking professional psychological help, this finding can be explained. The results of this study call our attention to the detrimental aspect of openness to seeking professional psychological help. This might lead to stigma when the mental health problem of the individual is revealed. Adolescents face discrimination from their peers because of their mental health, and many report feeling isolated from others and unable to form meaningful interactions with their peers (Moses, 2010), whereas peers play crucial roles in adolescent life, including academic aspects in this phase. Wada et al. (2019) proved that stigma makes students reluctant to seek help and access mental health services. Although

adolescents might accept barriers to openly seeking professional help, they are still likely to suffer from stigma; they suffer psychological distress and might feel powerless while seeking treatment (Alfayez & AlShehri, 2020). The students claimed that if residency directors, supervisors, fellow students, or clients knew that the student had or was receiving therapy for emotional or mental health issues, they would respond negatively (Alfayez & AlShehri, 2020). As a result, mental health stigma might put students at risk of falling behind or damaging their academic standing status (Wada et al., 2019). In some Asian countries, including Vietnam, stigma against people with psychological problems was popular and serious (Ng, 1997). In Vietnamese culture, mental illness is synonymous with insanity and is regarded as incurable and untreatable (Lien, 1993). The negative stigma attached to seeking help for mental health issues has proven to be a major source of stress and discourages people from using mental health services (Saechao et al., 2012). Moreover, a study in the past showed that 67.9% of respondents thought counseling services significantly influenced their academic performance (Bolu-Steve & Oredugba, 2017). According to Husky et al. (2009), those who required psychological help displayed substantially lower academic performance and missed more days of school than those who did not require psychological help.

Additionally, the present study concluded that high levels of peer pressure are associated with increased educational stress. On the one hand, our findings are in line with the earlier research conducted by Bedewy and Gabriel (2015), which found that moderate-to-severe stress sources were linked to intense competition with peers. In addition, when peers have behaviors involving bullying, violence, and sexuality, that contributes to the increased educational stress of adolescents (Banks & Smyth, 2015; Sharma, 2014). Furthermore, the research of Deepika and Prema (2017) has revealed that students aged 16 to 18 are more influenced by their peers than those in earlier age groups and peer pressure is one of the leading causes of academic failure them. However, many studies stand on the opposite side. They favor the idea that peer pressure is effective in reducing the educational stress of students (Bariyyah, 2015). The amount of peer pressure that was experienced by the students influenced general and academic self-efficacy expectations. Peer groups played an important part in the process of controlling and validating an individual's sense of self-efficacy (Bandura & Wessels, 1994). According to Kiran-Esen (2012), students who perceived that they were subject to a low level of peer pressure had significantly higher general and academic self-efficacy expectations than students who perceived that they were subject to a high level of peer pressure. Adolescence is a moment when youngsters want to socialize with their peers, who demonstrate diverse behavior and attitudes through their engagement, so they learn more by engaging and interacting with them (Uzezi & Deya, 2017). Therefore, to get schoolwork done and stay motivated to study, students need to be in the company of their classmates. More students who felt they were liked and valued by their peers also reported high levels of adaptive achievement motivation (Moldes et al., 2019).

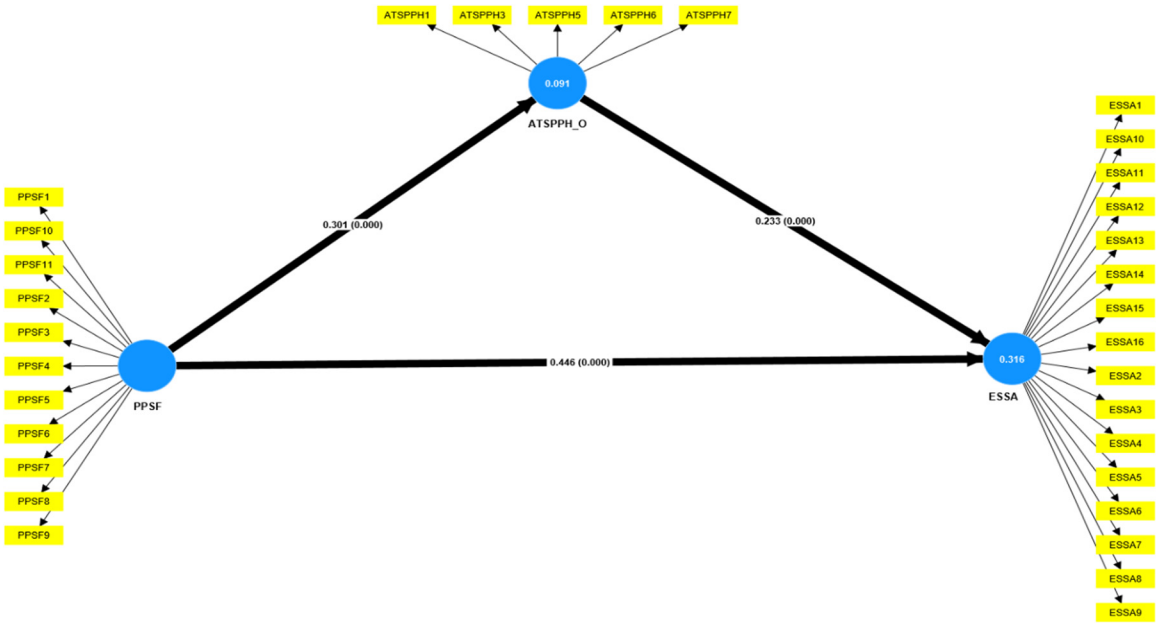

Figure 1. A Structural Model

Figure 1 shows the final PLS model. The proposed research model for this study includes three different latent vectors: PPSF (Peer pressure), ESSA (Educational stress), and ATSPPH-O (Openness to seeking professional psychological help).

5. Limitations

This is the first study to show a link between peer pressure, educational stress, and openness to seeking professional psychological help, which suggests some new research directions and concerns for future research. However, this study also has some limitations. First, survey participants were conveniently sampled by us across three major cities in the south of Vietnam, thus limiting the applicability of the study to a representative Vietnamese community. Future studies may consider using random sampling to increase representativeness of the Vietnamese community. Second, this cross-sectional study will not illustrate the longitudinal effects of peer pressure on openness to seeking professional psychological help and peer pressure on educational stress. Future studies should design an experimental or longitudinal study to clarify the influence of those factors. Third, participants in this study performed by self-report, so the data may be biased. Future researchers should conduct in-depth interviews to gather more individuals' opinions on the impact of peer pressure on professional psychological help-seeking attitudes and educational stress to validate the self-reported data.

6. Implications

Despite several restrictions, the present findings provide theoretical and practical implications in many aspects. To our knowledge, although previous studies have examined peer pressure and educational stress in adolescents, this is the first to investigate the relationship between them and attitudes toward seeking professional psychological help. As previous studies have shown, in adolescence, peers positively or negatively influence individuals (Brown et al., 1986; Gulati, 2017). Our findings provide a new data and essential understanding about the impact of peer pressure on educational stress and seeking professional help attitudes. Additionally, we examined the impact of openness to seeking professional psychological help as a mediating factor in the relationship between peer pressure and education stress. Our findings also provide essential evidence and a better understanding of the correlation between peer pressure and academic performance, this lays the foundation for future studies to further investigate the relationship between these two factors. These findings contribute both to the field of education and to the field of psychology.

On the one hand, most adolescents spend their time at school, and they have more interactions with friends and teachers than with their families. Therefore, our findings emphasize the significance of peer interactions and influences for adolescents; favorable interactions will improve their education and mental health, and vice versa. This is even more important when placed in the context of an Asian country like Vietnam, where the generation gap between students and parents still exists and it will be difficult for them to express problems to their families, so they choose peers or teachers. Educators, teachers, and school counselors need to consider students' peer interactions when devising any educational program or intervention at school. The academic performance of students can be improved if they help support their peers in their studies to achieve goals instead of competing fiercely. In addition, psychoeducational programs can be effective when they provide adolescents with essential knowledge about psychological characteristics in adolescence, risky behaviors, and the consequences of harmful peer interactions. Furthermore, adolescents also need to be provided with specific knowledge and tools to manage their emotions and behavior at this stage, so they need training in social skills, counseling, and orientation. On the other hand, the research field and clinical psychology also have vital data for their treatment plans and intervention programs for adolescents when considering the relationships of adolescents outside of family. Doctors, psychiatrists, and psychologists could consider the impact of peer interactions on the mental health of adolescents and provide treatment plans based on them.

7. Conclusion

Previous studies have shown that peer pressure leads to educational stress and some mental health problems in adolescents, and our new findings are combined. Our cross-sectional study provided the first and foremost evidence of the effects of peer pressure on educational stress and openness to seeking professional psychological help in the Vietnamese population. The results show that (i) students with a higher level of peer pressure have a greater openness to seeking professional psychological help; (ii) the more open to seeking professional psychological help, the higher educational stress that students got; (iii) students with a higher level of peer pressure have greater educational stress;

(iv) the openness to seeking professional psychological help would mediate the relationship between peer pressure and educational stress; (v) there was a significant difference between academic performance of peer pressure. On the one hand, counselors, clinicians, and therapists must identify students who are experiencing educational stress in the context of peer pressure as vulnerable groups in need of early mental health interventions. On the other hand, educators and teachers must consider the impact of peer pressure on students' academic performance and devise appropriate teaching strategies.

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Authors contributions

Hang-Phuong Nguyen-Thi, Vinh-Long Tran-Chi contributed to the conception and design of the study. Hang-Phuong Nguyen-Thi, Vinh-Long Tran-Chi organized the database. Vinh-Long Tran-Chi and Xuan Thanh Kieu Nguyen, Vy Truc Le performed the statistical analysis. Ngoc-Anh Truong and Vy Truc Le wrote the first draft of the manuscript. All authors contributed to manuscript revision, read, and approved the submitted version.

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