

The Influence of COVID-19 Stress and Self-Concealment on Professional Help-Seeking Attitudes: A Cross-Sectional Study of University Students

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Purpose: The fourth wave of the COVID-19 pandemic has dramatically influenced many aspects of individuals' lives, putting the general population's mental health at high risk, especially university students in Vietnam. The present study aims to investigate the relationship between current living status and COVID-19 stress and test whether COVID-19 stress mediates the effect of self-concealment on help-seeking attitudes among university students.

Patients and Methods: A sample of 478 university students was recruited online to complete the survey. Parametric tests, correlation, regression, and simple mediation analyses were used to analyze the data.

Results: Our results show that students living alone experience more COVID-19 stress levels than those living with family or friends. Additionally, there is a significant positive association between self-concealment and professional help-seeking attitudes that is partially mediated by COVID-19 stress. Individuals who tend to conceal personal information have high COVID-19 stress levels, leading to positive professional help-seeking attitudes.

Conclusion: University administrators, social workers, counselors, clinicians, and therapists must consider students living alone as prioritized vulnerable groups for early mental health interventions. Clinicians should be aware of self-concealment and professional help-seeking attitudes that could influence psychological treatment.

Keywords: COVID-19 stress, current living status, professional help-seeking attitudes, self-concealment, university students

Introduction

The 2019 outbreak of Coronavirus Disease (COVID-19) has subsequently attracted worldwide attention, leading The World Health Organization (WHO) to confirm the COVID-19 as a public health emergency and a global health concern on January 30, 2020.¹ During the outbreak, the new variant of the COVID-19 called Delta has been more aggressive and transmissible than previously circulating strains. The number of cases in this spread of the new variant has been increasing rapidly, affecting countries worldwide. Specifically, Vietnam is among the most vulnerable countries in Southeast Asia that has been the hardest hit in this wave leading to more confirmed cases. From April 27 to August 8, 2021, there have been 206,490 infected cases, including 3215 deaths in Vietnam.² Facing this alarming situation, the Vietnam government has issued emergency policies across the country with

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many measures to prevent and control, which imposed more substantial restrictions, including shutting down schools, staying at home and only going outside for buying foods or emergency circumstances. Besides, the pandemic outbreak has affected the population's health in psychology, society, and neuroscience,³ specifically, university students who are a special social group with active lifestyles based on contacts, relationships, gatherings, and university activities. This pandemic has remarkably changed university students' lifestyles, including disruptions to their academic, relationships, and social life. These disruptions could cause boredom, worry, stress, and anxiety among those students. Therefore, when students have psychological problems, professional psychological help can draw an appropriate solution for them during the pandemic.

COVID-19 Stress and Professional Help-Seeking Attitudes

The new variant of COVID-19 raises worries regarding the disease's speeding and mode of transmission in the broad population. Many people have experienced mental health issues like anger, fear, stress, anxiety and depressive symptoms⁴ due to the COVID-19 pandemic. Many participants rated the psychological effect of the outbreak as moderate to severe stress and anxiety.^{5,6} Stress is described as any negative emotional experience accompanied by biochemical, physiological, cognitive, and behavioural responses.⁷ The COVID-19 stress is personal feelings and thoughts about many stressors that people are currently experiencing due to the pandemic.⁸

College students have been considered a vulnerable group of mental health problems⁹ because of active life habits based on physical activities, relationships, contacts and gatherings. University students are at risk for developing certain mental health disorders that have been

reported to be particularly high.^{10,11} Recent reports found that stress and anxiety levels have been increased due to the COVID-19 outbreak among university students.^{12,13} A group of university students have faced many barriers in the new reality of the rapid COVID-19, including abrupt disruption of daily life and routines, loss of social connections, income and temporary unemployment, the change in housing arrangements, and new concerns about their family's health.¹⁴ Additionally, Dean et al¹⁵ reported that younger people might lack the necessary skills to deal with the COVID-19 pandemic. Therefore, students should be referred to seek professional help early in the progression of these mental health problems.

According to Fischer and Turner,¹⁶ help-seeking attitude is a multidimensional construct that reflects: (i) recognition of the need for psychotherapeutic help, (ii) tolerance for the stigma related to seeking mental health treatment, (iii) willingness to express information about one's problems, and (iv) belief in mental health practitioners. The previous findings on how stress and anxiety affect professional help-seeking attitudes have been conducted for a long time. Some researchers reported the negative relationship between stress, anxiety and help-seeking attitudes, meaning that individuals with higher stress levels had less professional help-seeking attitudes.¹⁷⁻¹⁹ On the contrary, Chang²⁰ showed that individuals with higher anxiety levels were more likely to seek professional help and anxiety was a predictor of professional help-seeking attitudes.

Self-Concealment and Professional Help-Seeking Attitudes

Self-concealment is a behavioural tendency in which individuals keep personal information about distress, embarrassment and negative hidden from others.²¹⁻²³ People with self-concealment have uncomfortable thoughts,

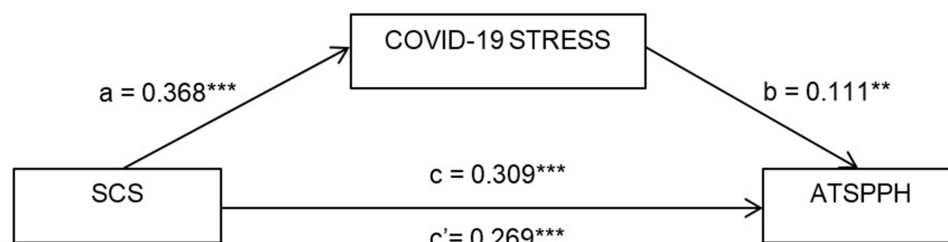


Figure 1 Simple mediation model with unstandardized coefficients. a = total effect of self-concealment on COVID-19 stress. b = effect of COVID-19 stress on ATSPPH, controlling for self-concealment. c = total effect of self-concealment on ATSPPH, without accounting for the mediators. c' = direct effect of self-concealment on ATSPPH once mediators have been included in the model. **p < 0.01, ***p < 0.001.

feelings and information about themselves that they avoid expressing to others.^{22,24} Hence, self-concealment involves a conscious and active process in hiding negatively and intimately personal thoughts, feelings, actions, and events. Self-concealment reflects processes of (i) possessing negatively evaluated secrets, (ii) hiding secrets from others, and (iii) avoiding or being apprehensive about self-disclosure. Additionally, self-concealment contributed to poorer physical and psychological health.²⁵ Self-concealment is a substantial factor in lowering the need for help-seeking behaviour.^{23,26}

The association between self-concealment and professional help-seeking attitudes in university students has been thoroughly studied and well documented for a long time. The previous findings found that self-concealment related negatively to professional help-seeking attitudes.²⁷ People with high levels of self-concealment reported less professional help-seeking attitudes.^{28,29} Self-concealment correlated negatively with help seeking attitudes and self-concealment significantly predicted professional help-seeking attitudes among college students³⁰ and among 163 African American college students.³¹ Many prior findings showed that self-concealment was negatively associated with professional help-seeking attitudes among 122 Asian Americans and 235 European American undergraduate students,²³ 257 undergraduate students³² and 785 undergraduate students in Turkey.³³

Living Status and COVID-19 Stress

University students are one of the most affected groups by COVID-19 lockdown, especially, students who lived alone were less likely to be around family, unable to share their worries with others and had fewer opportunities for outdoor activities during the pandemic. These issues led university students living alone to suffer more mental health problems such as fear, stress, and anxiety than others living with family or friends.

Jacob et al³⁴ found a positive association between living alone and common mental health disorders. Previous research has indicated that those who live alone have a higher prevalence of psychological problems. People living alone had higher anxiety levels than those living with family and friends^{35,36} than those living with two or more people.³⁷ A sample of 210 youths aged between 17 and 25 indicated that current living status was associated with anxiety and those living without family had higher levels of stress, anxiety and depression than those living with family.³⁸ Other findings showed that

students who lived alone had a higher prevalence of depressive and anxiety symptoms than those who lived with family or friends.³⁹

The fourth wave of the COVID-19 pandemic has impacted stronger and faster than ever before in Vietnam, leading to more COVID-19 confirmed cases and deaths. More substantial restrictions in COVID-19 such as shutting down schools, staying at home and only going outside for buying foods or emergency circumstances were given to prevent the spreading of the infection. The sudden change has affected people's mental health, particularly university students who have been considered a vulnerable population, increasing their risk of mental health problems. When these students are dealing with psychological distress such as stress and anxiety, seeking psychological help is a good way to cope. However, to the best of our knowledge, lack of scientific research has systematically examined the impact of COVID-19 stress on attitudes towards seeking professional psychological help, especially regarding university students. Therefore, the purpose of our research is to investigate the relationship between current living status and COVID-19 stress and test whether COVID-19 stress mediates the effect of self-concealment on help-seeking attitudes among university students in Vietnam. Thus, some questions were provided in this study as follow:

What are the relationships between professional help-seeking attitudes and COVID-19 stress and self-concealment?

What factors influence professional help-seeking attitudes in university students?

Does COVID-19 stress operate as a mediator between self-concealment and professional help-seeking attitudes?

Materials and Methods

Research Hypothesis

This study used a cross-sectional study to investigate predictors of professional help-seeking attitudes among university students in the COVID-19 pandemic context.

Hypothesis 1: Living alone would be more likely to experience COVID-19 stress than living with family or friends among students.

Hypothesis 2: Self-concealment would be negatively correlated with professional help-seeking attitudes.

Hypothesis 3: COVID-19 stress would be positively correlated with professional help-seeking attitudes.

Hypothesis 4: Self-concealment and COVID-19 stress would be predictors of professional help-seeking attitudes.

Hypothesis 5: COVID-19 stress would mediate the relationship between self-concealment and professional help-seeking attitudes.

Procedure

At the peak of the most dangerous time outbreak in Vietnam, our study selected the data based on an online survey through Google form. The data collection occurred from July 26 to August 3, 2021. Informed consent was provided and anonymity confidentiality terms were explained before participants conducted the survey. For the questionnaires, the participants were informed of the research aims and asked to provide socio-demographic information, including gender, school, current living status (ie, living alone), university major, education level. Participants were entirely voluntary without remuneration and could withdraw at any time. The survey was approximately 10–15 minutes to complete. When participants needed any clarification at any point in the survey, they would be advised to contact the research team via email or phone provided.

Items of three scales in this study including Attitudes Towards Seeking Professional Psychological Help Short Form (ATSPPH – SF),⁴⁰ Self-Concealment Scale (SCS)²⁵ and COVID-19 Stress Scale (CSS)⁴¹ were forward and back-translated method. In the first step, the English version was translated into Vietnamese by a Vietnamese native speaker who is fluent in English, then the Vietnamese version was sent and back-translated into English by a professional translator (native speaker of English and fluent in Vietnamese). Finally, the research team evaluated for accuracy and discrepancies in the content between the two versions (English-translated version and Vietnamese back-translated version) and the original version.

Participants

A total of 491 questionnaires were distributed, of which 478 were valid. Participants were university students from six universities in Vietnam who volunteered to participate in this study. The sample consisted of 389 females (81.4%) and 89 males (18.6%), most of the participants were living with family (n = 414; 86.6%), followed by living with friends (n = 34; 7.1%), and living alone (n = 30; 6.3%). All the distribution of participants was shown in Table 1.

Table 1 Socio-Demographic Characteristics of Samples (N = 478)

Variable	Category	Frequency (%)
Gender	Male	89 (18.6)
	Female	389 (81.4)
Education level	Freshman	322 (67.4)
	Sophomore	52 (10.9)
	Junior	58 (12.1)
	Senior	46 (9.6)
Current living status	Living alone	30 (6.3)
	Living with family	414 (86.6)
	Living with friends	34 (7.1)
Disability status	Disabled	9 (1.9)
	Non-disabled	469 (98.1)

Ethical Aspects

The present study adhered to the Declaration of Helsinki regarding research on human participants. The study was approved by the Ethic Committee of the Department of Science and Technology - Ho Chi Minh City University of Education (under the Vietnamese MoET) with number NV2021.19.02.DH on June 1, 2021.

Measurement

Attitude Toward Seeking Professional Psychological Help – Short Form

Attitude Toward Seeking Professional Psychological Help - Short Form (ATSPPH-SF) was developed by Fischer and Farina⁴⁰ based on the 29-item Attitude Toward Seeking Professional Psychological Help (ATSPPH) by Fischer and Turner.¹⁶ The 10-item ATSPPH-SF evaluates students' attitude toward seeking professional psychological help. The measurement used a 5-point Likert scale, participants were asked to rate their level from one to five (1 = "strongly disagree", 2 = "disagree", 3 = "neutral", 4 = "agree", 5 = "strongly agree"). Fischer and Farina⁴⁰ found an internal consistency of $\alpha = 0.84$ and test-retest reliability of 0.80 in the ATSPPH-SF.

Cronbach's α for the total scale was 0.837 in this study. The confirmatory factor analysis (CFA) indicated that the measurement was an adequate fit, CMIN/df = 3.402 ($p < 0.001$); Goodness-of-fit index (GFI) = 0.965; Comparative fit index (CFI) = 0.962; Tucker - Lewis Index (TLI) = 0.931; Root

mean square error of approximation (RMSEA) = 0.071 and 90% Confidence Interval (CI: 0.055, 0.088).⁴²

Self-Concealment Scale

Self-Concealment Scale (SCS) with 10 items developed by Larson and Chastain²⁵ to access to (i) tendency to conceal personal information; (ii) tendency not to reveal personal distressing secrets or negative thoughts about oneself and (iii) worried about disclosing personal information. 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”). Larson and Chastain²⁵ reported Cronbach’s α = 0.83 and test-retest reliability of 0.81 (4 weeks) in a validation sample.

Cronbach’s α was 0.901 for the total scale in this study. The CFA indicated that the measurement was a good fit, CMIN/df = 3.850 ($p < 0.001$); GFI = 0.947; CFI = 0.957; TLI = 0.945; RMSEA = 0.076 and 90% CI (0.061, 0.089).⁴²

Covid-19 Stress Scale

Covid-19 Stress Scale (CSS) was developed by Taylor et al⁴¹ to assess people’s psychological responses toward the COVID-19 pandemic. The original of the CSS consisted of 36 items, measuring five factors: (i) COVID danger and contamination; (ii) COVID socio-economics consequences; (iii) COVID xenophobia; (iv) COVID traumatic stress; (v) COVID compulsive checking. Cronbach’s alpha coefficients for each scale were > 0.8 in Canadian and U.S samples 45. In this study, three factors of the CSS were COVID danger and contamination, COVID socio-economic consequences, and COVID traumatic stress used for considering COVID-related stressors among university students. During the lockdown period in Vietnam, many difficulties and issues were concerned such as lack of mental health services, lack of staple food, virus infection concerns, family’s health preoccupations, etc. These problems affect physical health and mental health leading to pressure, worry, and difficulty in sleeping. Three factors were suitable for the current Vietnam circumstance that most university students encountered and noticed.

The measurement in the current study consisted of 24 items to measure three factors of the CSS: (i) COVID

danger and contamination, (ii) COVID socio-economics consequences and (iii) COVID traumatic stress. Each item was rated on a 5-point Likert scale ranging from one to five (1 = “never”, 2 = “rarely”, 3 = “sometimes”, 4 = “often”, 5 = “almost always”).

Cronbach’s α was 0.959 for the total scale in this study. The coefficient alpha for the COVID danger and contamination, COVID socio-economic consequences, COVID traumatic stress was 0.938, 0.934, and 0.93, respectively. In the present study, the CFA showed that the measurement was an adequate fit, CMIN/df = 2.540 ($p < 0.001$); GFI = 0.908; CFI = 0.966; TLI = 0.960; RMSEA = 0.056 and 90% CI (0.049, 0.061).⁴²

Research Analysis

The Social Sciences Statistics Program (SPSS) version 22.0 was used for data processing. Descriptive statistics was used to describe participants’ characteristics. The one-way analysis of variance (ANOVA) was used to test whether there were any statistically significant differences between participants’ current living status and the COVID-19 stress. Pearson correlation was conducted to establish the relationship between professional help-seeking attitudes and self-concealment, COVID-19 stress, gender. Multiple linear regression analysis was used to examine the relationship between the predictor variables (self-concealment, COVID stress, gender) and the dependent variable (professional help-seeking attitudes). The bootstrapping method was conducted using the PROCESS macro⁴³ to examine the mediation hypothesis. In the current study, we used a bootstrap procedure⁴⁴ to examine the statistical significance of the hypothesized indirect effect. To conduct the bootstrap procedure, we selected 5000 bootstrap samples and bias-corrected 95% confidence intervals.

Results

A one-way ANOVA was performed to test a significant difference between the three current living statuses in terms of COVID-19 stress, as shown in Table 2. Levene’s test of equality of error variances was used to

Table 2 One-Way ANOVA Results for the Difference of the Current Living Status According to COVID-19 Stress

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.832	2	3.416	4.400	0.013
Within Groups	368.782	475	0.776		
Total	375.614	477			

test the assumption ANOVA that the variances for each variable are equal across the groups. The outcome of Levene's Test for Homogeneity of Variances showed that the variances between the three groups were equal: $F(2, 475) = 0.291, p > 0.05$. Therefore, the assumption of homogeneity of variances was satisfied.

There was a statistically significant effect of current living status on COVID-19 stress at the $p < 0.05$ level for the three conditions [$F(2, 475) = 4.400, p = 0.013$]. Post-hoc comparisons using the Tukey HSD test indicated that there was a statistically significant difference between living alone ($M = 2.985; SD = 0.907$) and living with friends ($M = 2.333; SD = 0.905$). Living with parents ($M = 2.603; SD = 0.877$) was not significantly different from living alone and living with friends. The findings showed that students who lived alone experienced higher levels of COVID-19 stress than others. Therefore, the results suggested that the first hypothesis should be accepted.

Table 3 shows how ATSPPH correlated with self-concealment, COVID-19 stress and gender. Results of Pearson correlation indicated that there were statistically significant and moderately positive correlation between ATSPPH and self-concealment ($r(476) = 0.412, p < 0.01$), a weakly positive correlation between ATSPPH and COVID-19 stress ($r(476) = 0.279, p < 0.01$) and gender ($r(476) = 0.114, p < 0.05$). The findings showed that an increase in self-concealment would lead to higher ATSPPH and an increase in COVID-19 stress would lead to higher ATSPPH in students. Therefore, the results suggested that the second hypothesis should be rejected and the third hypothesis should be accepted.

Multiple regression analysis was conducted to check for multicollinearity and homoscedasticity before examining the direct and indirect that influenced of self-concealment on ATSPPH through the hypothesized mediators of COVID-19 stress. Multiple linear regression analysis was

performed with the following independent variables: self-concealment, COVID-19 stress, gender and dependent variable: the ATSPPH scale. The preliminary assumption of multiple linear regression was used as the basis for examining multicollinearity.

Multicollinearity was examined for all independent variables using Pearson's bivariate correlation. The correlation coefficients were less than 0.8, indicating no multicollinearity between the independent variables.⁴⁵ The tolerance of every variable was higher than 0.2 and the variance inflation factor VIF values for all variables were lower than 2, indicating no multicollinearity between the independent variables in the multiple regression analysis.^{46,47} In homoscedasticity assumption, the residual scatter plots showed that the scores were concentrated in the center (0 point) and randomly scattered about a horizontal line. Additionally, the Durbin-Watson (DW) statistic was used to examine auto-correlation between independent variables, which was 1.91, indicating no significant correlations between the residuals.⁴⁸ Therefore, the assumption was satisfied and the regression analysis was conducted.

Table 4 reveals that the corrected coefficient, Adjusted R^2 was 0.188, indicating a change in the dependent variable, students' professional help-seeking attitudes, due to a one-unit change in the independent variable. The regression model was statistically significant ($F(3, 474) = 37.873, p < 0.001, R^2 = 0.193$). The results showed that self-concealment ($\beta = 0.266, p < 0.01$) and COVID-19 stress ($\beta = 0.107, p < 0.01$) were significant predictors of ATSPPH. While gender was not a significant predictor of ATSPPH. Therefore, the results suggest that the fourth hypothesis should be accepted.

We used a simple mediation model to examine the indirect effect of self-concealment on ATSPPH through COVID-19 stress as presented in Figure 1. If the 95% CI for these estimates does not include zero, the indirect effect is statistically significant (Shrout & Bolger, 2002). Table 5 shows that the total effect (c) of self-concealment on ATSPPH was positive and significant, $b = 0.309, SE = 0.031, 95\% CI [0.248, 0.371]$. The direct effect (c') of self-concealment on ATSPPH adjusting for COVID-19 stress was positive and significant, $b = 0.269, SE = 0.034, 95\% CI [0.203, 0.335]$. The indirect effect was statistically significant, $b = 0.041, SE = 0.017, 95\% CI [0.006, 0.073]$. These results suggested that COVID-19 stress mediated the effect of self-concealment on help-seeking attitudes. Therefore, the results suggested that the fifth hypothesis should be accepted.

Table 3 Correlation Between Professional Help-Seeking Attitudes and Self-Concealment, COVID-19 Stress, Gender

Variable	ATSPPH	SCS	CSS	GENDER
ATSPPH	–			
SCS	0.412**	–		
CSS	0.279**	0.379**	–	
GENDER	0.114*	0.068	0.086	–

Notes: **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

Abbreviations: ATSPPH, attitudes toward seeking professional psychological help; SCS, self-concealment scale; CSS, COVID-19 stress scale.

Table 4 Multiple Regression Results of Professional Help-Seeking Attitudes

Model	Unstandardized Coefficients		Standardized Coefficients	t	p	F	R ²	Adjusted R ²	
	B	Std. Error	Beta						
1	(Constant)	1.864	0.166		11.235	0.000	37.873	0.193	0.188
	SCS	0.266	0.034	0.355	7.947	0.000			
	CSS	0.107	0.035	0.138	3.082	0.002			
	GENDER	0.138	0.073	0.078	1.883	0.060			

Abbreviations: SCS, self-concealment scale; CSS, COVID-19 stress scale.

Table 5 Total, Direct and Indirect Effects of Self-Concealment on Professional Help-Seeking Attitudes Through COVID-19 Stress

Effects	Point Estimate	SE	t	p	95% CI
Total effect	0.309	0.031	9.866	0.000***	0.248 - 0.371
Direct effect	0.269	0.034	8.004	0.000***	0.203 - 0.335
Indirect effect	0.041	0.017			0.006 - 0.073

Note: ***p < 0.001.

Discussion

The main purposes of the present research were (i) to investigate the relationship between current living status and COVID-19 stress and (ii) to test whether COVID-19 stress mediates the effect of self-concealment on help-seeking attitudes among university students in Vietnam.

Our study highlighted a few significant findings. First, students living alone were more likely to experience COVID-19 stress than others. Second, there were correlation between COVID-19 stress, self-concealment and professional help-seeking attitudes. Third, COVID-19 stress and self-concealment factors could significantly predict the professional help-seeking attitudes in students. Fourth, COVID-19 stress mediated the effect of self-concealment on professional help-seeking attitudes.

This research shows there is a difference between current living status and COVID-19 stress. This finding supports our hypothesis that students who have been living alone are more likely to experience COVID-19 stress than students living with family or friends. This finding is in line with the study of Deng et al³⁹ who lived alone had a higher prevalence of psychological problems than students who lived with family or friends. Many reasons have been proposed to explain why people who live alone are more stressed than those living with family or friends. One of the most vulnerable groups of people affected was those who lived alone or were left alone during the lockdown.⁴⁹

Individuals who live alone could face issues about isolation, lack of social connections, support, and neighborhood engagement.^{50,51} It was reported that individuals with social isolation,⁵² lack of social support^{53–56} could lead to mental health problems such as stress, anxiety, and depression. These findings are consistent with our results that people who live alone facing isolation and lack of social support could have symptoms of stress and anxiety.

The result reveals that COVID-19 stress is significantly and positively associated with and predicted help-seeking attitudes. This finding supports our hypothesis that individuals with high levels of stress are more likely to have professional help-seeking attitudes. Chen et al⁵⁷ found that 50.97% of respondents reported they needed psychological counseling in the COVID-19 outbreak. Roy et al⁵⁸ reported that more than 80% of respondents needed professional help to deal with emotional and psychological problems during the COVID-19 context. Few previous studies have explained why students seek professional help for common psychological distress in the Vietnam context. According to Jubert,⁵⁹ healthcare systems have been involved in education, and Vietnamese culture has become much more accepting of seeking professional help for psychological problems in recent years. A sample of 350 Vietnamese undergraduate students, a high proportion of participants were aware of common mental health problems such as stress, anxiety, and depression, and they

rated a counselor or psychologist as a helpful source of mental health intervention. This indicated that undergraduate students believed counselors and psychologists could help people with common mental health problems.⁶⁰ These findings support that a school-based mental health literacy education provides knowledge about the nature and causes of common mental health issues and more information about available appropriate mental health resources. A similar finding of Kamimura et al⁶¹ showed that increasing college students' knowledge about mental illness would help promote them to seek professional help.

Our data analysis reveals that self-concealment is significantly and positively associated with professional help-seeking attitudes. This result reflects those students with high levels of self-concealment report more professional help-seeking attitudes. This is a surprising finding, as it is contrary to what we know from previous studies,^{23,27,30,31,33} which have shown a significant negative correlation between self-concealment and professional help-seeking attitudes. Another finding indicates that self-concealment is a predictor of help-seeking attitudes in university students. A high level of self-hiding, unwillingness to expose psychological issues and a belief that revealing inner thoughts to others is unsafe are factors contributing to unfavourable help-seeking attitudes.³⁰ As reported by previous studies, self-revelation is often inevitable when seeking professional mental health services.^{62,63}

Another finding suggests that COVID-19 stress is a potential mediator of the association between self-concealment and professional help-seeking attitudes among university students. COVID-19 stress partially mediated the relationship between self-concealment and help-seeking attitudes. The partial mediation indicates that COVID-19 stress plays a dual role, acting both directly and indirectly in help-seeking attitudes. Students who have tendencies to withhold personal information from others are more likely to experience COVID-19 stress, which leads to more positive help-seeking attitudes. Therefore, our findings contribute empirical evidence to the help-seeking attitudes literature, showing that the influence of self-concealment on help-seeking attitudes is mediated by COVID-19 stress. Previous models have not examined the mediation role of COVID-19 stress in the relationship between self-concealment and help-seeking attitudes, and this understanding will help develop more targeted interventions.

Limitations

There are several limitations to the study. First, we use convenience sampling to recruit university students, which

can reduce the generalizability of the studies to a representative Vietnamese population. We encourage future researchers to examine if the current model refers to other students, which will provide a better understanding of the relationship between self-concealment and help-seeking attitudes. Second, the study has not included actual help-seeking intentions or behaviors to utilize professional psychological services, limiting this findings' scope. Future studies should examine the role of stress levels and self-concealment on help-seeking intentions and behaviors besides help-seeking attitudes. Third, the current study has not investigated other factors that may predict help-seeking attitudes of Vietnamese university students (eg, self-stigma; previous help-seeking experiences; and socio-economic status), future research endeavours might investigate these factors.

Implications

Despite some limitations, the present findings contribute to future theory and practice, which can grow and advance in relationship with mental health problems regarding Vietnamese university students.

The results have substantial theoretical and practical implications. Theoretically, the findings may provide a clearer understanding of how university students' self-concealment and stress levels influence their help-seeking attitudes. Additionally, the present study extends previous research by investigating the role of COVID-19 stress as a mediator in the relationship between self-concealment and help-seeking attitudes. It contributes to the advancement of current knowledge on the models developed to measure help-seeking attitudes.

The findings have many practical implications. During the lockdown period, university students have confronted many new challenges.^{14,15} However, they have not typically been regarded as the most vulnerable groups that should be prioritized for early mental health interventions, particularly students living alone who report high stress levels. In this regard, universities can help students address personal challenges such as providing financial hardship assistance and tuition fee reduction to support financially impacted students due to the COVID-19 pandemic. Besides, university administrators need to continuously assess, identify, prevent and manage mental health conditions of university students in an adequate manner.⁶⁴ Supporting mental health issues in university students should be a high priority in pandemic and post-pandemic situations.⁶⁵ Online interventions should be established in the pandemic because of their safety,

convenience, timeliness, and efficiency, such as psychological assistance hotlines, mental health services hotlines, online mental health education systems, and PsyCare.^{6,66} PsyCare is a mental health care project during the pandemic that universities in Vietnam have developed. This project aims to support the general population's psychological issues, especially vulnerable groups such as children, students, and the elderly.⁶⁷ Besides, the Vietnam Psychotherapy Association has officially announced a hotline number to support mental health for the general population, who were affected by the COVID pandemic. This mental health support program includes two groups: (i) mental health support during the pandemic group, (ii) severe mental illness (panic disorder, major depression and suicidality) support group.

Moreover, the help-seeking attitudes of Vietnamese university students may be related to their knowledge about mental illness and views of resources from family and friends as the main options.^{61,68–70} These results imply that providing additional information about mental health problems and treatment resources is essential to facilitate mental health care. Therefore, mental health education, mental health awareness campaigns, training courses⁶¹ and psychoeducational programs²³ should be provided for university students in Vietnam.

In terms of implications for clinical practice, our findings suggest that clinicians should consider self-concealment may affect clients in seeking help for their mental health problems. Besides, self-concealment and attitudes toward seeking professional psychological help could limit help-seeking behavior among clients. Therefore, clinicians should find ways to assess and address the perceptions of professional help for clients in therapy. If clients are uncomfortable with seeking or do not believe in helpful treatment processes, the risk of dropping out will increase. Besides, Blanchard and Farber⁷¹ showed that 93% of participants admitted to lying in therapy process. They indicated a significant association between self-concealment and the topics which individuals lied in therapy. Therefore, these results remind clinicians about levels of concealment being likely in therapy and particularly among clients with high self-concealment.

Conclusion

There has been provided evidence showing that the COVID-19 pandemic has generally increased levels of stress among the general population, especially university students. It is essential to investigate professional help-seeking attitudes among students so that counselors and clinicians could provide psychological interventions in time. The results show that there are

the associations between COVID-19 stress, self-concealment and professional help-seeking attitudes. The present study has found information about COVID-19 stress acting as a mediator between self-concealment and help-seeking attitudes, showing that individuals who tend to conceal personal information have higher COVID-19 stress levels, leading to more help-seeking attitudes. The findings highlight the students' openness to mental health issues and professional help-seeking, indicating that these students have believed in mental health services, support from counselors, clinicians, and therapists. The research findings suggest that students living alone experience more stress than those living with family or friends. It is noted that university administrators, social workers, counselors, clinicians, and therapists need to consider students living alone as prioritized vulnerable groups for early mental health interventions. This is the first research conducting the association between self-concealment and help-seeking attitudes among university students in the COVID-19 pandemic in Vietnam, contributing additional information to future similar studies based on our findings.

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Disclosure

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References

1. World Health Organization. COVID-19 Public Health Emergency of International Concern (PHEIC) Global research and innovation forum; 2020. Available from: [https://www.who.int/publications/m/item/covid-19-public-health-emergency-of-international-concern-\(pheic\)-global-research-and-innovation-forum](https://www.who.int/publications/m/item/covid-19-public-health-emergency-of-international-concern-(pheic)-global-research-and-innovation-forum). Accessed December 12, 2021.
2. COVID-19 in Viet Nam Situation Report 54; 2021. Available from: <https://www.who.int/vietnam>. Accessed December 9, 2021.
3. Holmes EA, O'Connor RC, Perry VH, et al. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *Lancet Psychiatry*. 2020;7(6):547–560. doi:10.1016/S2215-0366(20)30168-1
4. Torales J, O'Higgins M, Castaldelli-Maia JM, Ventriglio A. The outbreak of COVID-19 coronavirus and its impact on global mental health. *Int J Soc Psychiatry*. 2020;66(4):317–320. doi:10.1177/0020764020915212
5. Lee J, Jeong HJ, Kim S. Stress, anxiety, and depression among undergraduate students during the COVID-19 pandemic and their use of mental health services. *Innovative Higher Educ*. 2021;46:519–538. doi:10.1007/s10755-021-09552-y
6. Wang C, Pan R, Wan X, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int J Environ Res Public Health*. 2020;17(5):1729. doi:10.3390/ijerph17051729

7. Bakioglu F, Korkmaz O, Ercan H. Fear of COVID-19 and positivity: mediating role of intolerance of uncertainty, depression, anxiety, and stress. *Int J Ment Health Addict.* 2020;1–14. doi:10.1007/s11469-020-00331-y
8. Ahuja KK. Scanning the VIRUS: a study of dimensions of stress and coping with COVID-19. *Current Psychol.* 2021;1–11. doi:10.1007/s12144-021-01369-4
9. Auerbach RP, Mortier P, Bruffaerts R, et al. WHO world mental health surveys international college student project: prevalence and distribution of mental disorders. *J Abnorm Psychol.* 2018;127(7):623–638. doi:10.1037/abn0000362
10. Ketchen Lipson S, Gaddis SM, Heinze J, Beck K, Eisenberg D. Variations in student mental health and treatment utilization across US colleges and universities. *J Am Coll Health.* 2015;63(6):388–396. doi:10.1080/07448481.2015.1040411
11. Said D, Kypri K, Bowman J. Risk factors for mental disorder among university students in Australia: findings from a web-based cross-sectional survey. *Soc Psychiatry Psychiatr Epidemiol.* 2013;48(6):935–944. doi:10.1007/s00127-012-0574-x
12. Son C, Hegde S, Smith A, Wang X, Sasangohar F. Effects of COVID-19 on college students' mental health in the United States: interview survey study. *J Med Internet Res.* 2020;22(9):e21279. doi:10.2196/21279
13. Cao W, Fang Z, Hou G, et al. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res.* 2020;287:112934. doi:10.1016/j.psychres.2020.112934
14. Schiff M, Zasiakina L, Pat-Horenczyk R, Benbenishty R. COVID-related functional difficulties and concerns among university students during COVID-19 pandemic: a binational perspective. *J Community Health.* 2020;45(1):1–9. doi:10.1007/s10900-019-00710-0
15. Dean DJ, Tso IF, Giersch A, et al. Cross-cultural comparisons of psychosocial distress in the USA, South Korea, France, and Hong Kong during the initial phase of COVID-19. *Psychiatry Res.* 2021;295:113593. doi:10.1016/j.psychres.2020.113593
16. Fischer EH, Turner JI. Orientations to seeking professional help: development and research utility of an attitude scale. *J Consult Clin Psychol.* 1970;35(1p1):79. doi:10.1037/h0029636
17. Crowe A, Kim T. Ethnicity, life satisfaction, stress, familiarity, and stigma toward mental health treatment. *J Counseling Develop.* 2020;98(1):83–93. doi:10.1002/jcad.12302
18. Nam SK, Lee SM. The role of attachment and stigma in the relationship between stress and attitudes toward counseling in South Korea. *J Counseling Develop.* 2015;93(2):212–224. doi:10.1002/j.1556-6676.2015.00197.x
19. Qiao X. *A Cross-Cultural Comparison of American and Chinese College Students' Attitudes Toward Seeking Professional Psychological Help and Expectations About Counseling and Counselors*[Master's Thesis]. Fort Hays State University; 2013.
20. Chang H. Depressive symptoms and help-negation among Chinese university students in Taiwan: the role of gender, anxiety and help-seeking attitudes. *Int J Advan Counselling.* 2014;36(2):204–218. doi:10.1007/s10447-013-9200-1
21. Flett GL, Hewitt PL, Heisel MJ. The destructiveness of perfectionism revisited: implications for the assessment of suicide risk and the prevention of suicide. *Rev General Psychol.* 2014;18(3):156–172. doi:10.1037/gpr0000011
22. Larson DG, Chastain RL, Hoyt WT, Ayzenberg R. Self-concealment: integrative review and working model. *J Soc Clin Psychol.* 2015;34(8):705–e774. doi:10.1521/jscp.2015.34.8.705
23. Masuda A, Boone MS. Mental health stigma, self-concealment, and help-seeking attitudes among Asian American and European American college students with no help-seeking experience. *Int J Advan Counselling.* 2011;33(4):266–279. doi:10.1007/s10447-011-9129-1
24. Hartman JD, Patock-Peckham JA, Corbin WR, et al. Direct and indirect links between parenting styles, self-concealment (secrets), impaired control over drinking and alcohol-related outcomes. *Addict Behav.* 2015;40:102–108. doi:10.1016/j.addbeh.2014.08.009
25. Larson DG, Chastain RL. Self-concealment: conceptualization, measurement, and health implications. *J Soc Clin Psychol.* 1990;9(4):439–455. doi:10.1521/jscp.1990.9.4.439
26. Kessler RC, Berglund PA, Bruce ML, et al. The prevalence and correlates of untreated serious mental illness. *Health Serv Res.* 2001;36(6 Pt 1):987.
27. Liao H-Y, Rounds J, Klein AG. A test of Cramer's (1999) help-seeking model and acculturation effects with Asian and Asian American College Students. *J Couns Psychol.* 2005;52(3):400. doi:10.1037/0022-0167.52.3.400
28. Omori M. Japanese college students' attitudes toward professional psychological services: the role of cultural self-construal and self-concealment. *Psychol Rep.* 2007;100(2):387–399. doi:10.2466/pr0.100.2.387-399
29. Özbay Y, Terzi Ş, Erkan S, Çankaya ZC. Üniversite öğrencilerinin profesyonel yardım arama tutumları, cinsiyet rolleri ve kendini saklama düzeyleri. *Pegem Eğitim Ve Öğretim Dergisi.* 2011;1(4):59–71. doi:10.14527/C1S4M7
30. Hao Z-H. Predictors of college students' attitudes toward seeking professional psychological help. Paper presented at: 2010 4th International Conference on Bioinformatics and Biomedical Engineering 2010.
31. Masuda A, Anderson PL, Edmonds J. Help-seeking attitudes, mental health stigma, and self-concealment among African American college students. *J Black Stud.* 2012;43(7):773–786. doi:10.1177/00219347124445806
32. Kelly AE, Achter JA. Self-concealment and attitudes toward counseling in university students. *J Couns Psychol.* 1995;42(1):40. doi:10.1037/0022-0167.42.1.40
33. Demir R, Murat M, Bindak R. Self-concealment and emotional intelligence as predictors of seeking psychological help among undergraduate students. *Asian J Educ.* 2020;6(3):448–455. doi:10.20448/journal.522.2020.63.448.455
34. Jacob L, Haro JM, Koyanagi A. Relationship between living alone and common mental disorders in the 1993, 2000 and 2007 National Psychiatric Morbidity Surveys. *PLoS One.* 2019;14(5):e0215182. doi:10.1371/journal.pone.0215182
35. Kurcer MA, Erdogan Z, Cakir Kardes V. The effect of the COVID-19 pandemic on health anxiety and cyberchondria levels of university students. *Perspect Psychiatr Care.* 2021;1–9. doi:10.1111/ppc.128590
36. Sundarasan S, Chinna K, Kamaludin K, et al. Psychological impact of COVID-19 and lockdown among university students in Malaysia: implications and policy recommendations. *Int J Environ Res Public Health.* 2020;17(17):6206. doi:10.3390/ijerph17176206
37. Hakami Z, Khanagar SB, Vishwanathiah S, et al. Psychological impact of the coronavirus disease 2019 (COVID-19) pandemic on dental students: a nationwide study. *J Dent Educ.* 2021;85(4):494–503. doi:10.1002/jdd.12470
38. Arusha AR, Biswas RK. Prevalence of stress, anxiety and depression due to examination in Bangladeshi youths: a pilot study. *Child Youth Serv Rev.* 2020;116:105254. doi:10.1016/j.childyouth.2020.105254
39. Deng J, Zhou F, Hou W, . The prevalence of depressive symptoms, anxiety symptoms and sleep disturbance in higher education students during the COVID-19 pandemic: a systematic review and meta-analysis. *Psychiatry Res.* 2021;301:113863. doi:10.1016/j.psychres.2021.113863
40. Fischer EH, Farina A. Attitudes toward seeking professional psychological help: a shortened form and considerations for research. *J Coll Stud Dev.* 1995. doi:10.3389/fpsyg.2016.00547

41. Taylor S, Landry CA, Paluszek MM, Fergus TA, McKay D, Asmundson GJ. Development and initial validation of the COVID Stress Scales. *J Anxiety Disord.* 2020;72:102232. doi:10.1016/j.janxdis.2020.102232
42. Hair J, Guyot D, Westad F. *Multivariate Data Analysis.* Pearson Prentice Hall; 2010.
43. Hayes AF. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach.* Guilford publications; 2017.
44. Shrout PE, Bolger N. Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychol Methods.* 2002;7(4):422. doi:10.1037/1082-989X.7.4.422
45. Allison PD. *Multiple Regression: A Primer.* Pine Forge Press; 1999.
46. Akinwande MO, Dikko HG, Samson A. Variance inflation factor: as a condition for the inclusion of suppressor variable (s) in regression analysis. *Open J Stat.* 2015;5(07):754. doi:10.4236/ojs.2015.57075
47. Field A. *An Adventure in Statistics: The Reality Enigma.* Sage; 2016.
48. Field A. *Discovering Statistics Using SPSS.* Sage publications; 2009.
49. Raj T, Bajaj A. Living alone in lockdown: impact on mental health and coping mechanisms among young working adults. *Current Psychol.* 2021;1–13. doi:10.1007/s12144-021-01511-2
50. Chew QH, Chia FL-A, Ng WK, et al. Perceived stress, stigma, traumatic stress levels and coping responses amongst residents in training across multiple specialties during COVID-19 pandemic—a longitudinal study. *Int J Environ Res Public Health.* 2020;17(18):6572. doi:10.3390/ijerph17186572
51. Gyasi RM, Yeboah AA, Mensah CM, Ouedraogo R, Addae EA. Neighborhood, social isolation and mental health outcome among older people in Ghana. *J Affect Disord.* 2019;259:154–163. doi:10.1016/j.jad.2019.08.024
52. Hawkley LC, Cacioppo JT. Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Ann Behav Med.* 2010;40(2):218–227. doi:10.1007/s12160-010-9210-8
53. Elmer T, Mephram K, Stadtfeld C. Students under lockdown: comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PLoS One.* 2020;15(7):e0236337. doi:10.1371/journal.pone.0236337
54. Guntzville LM, Williamson LD, Ratcliff CL. Stress, social support, and mental health among young adult Hispanics. *Fam Community Health.* 2020;43(1):82–91. doi:10.1097/FCH.0000000000000224
55. Hefner J, Eisenberg D. Social support and mental health among college students. *Am J Orthopsychiatry.* 2009;79(4):491–499. doi:10.1037/a0016918
56. Qi M, Zhou S-J, Guo Z-C, et al. The effect of social support on mental health in Chinese adolescents during the outbreak of COVID-19. *J Adolescent Health.* 2020;67(4):514–518. doi:10.1016/j.jadohealth.2020.07.001
57. Chen B, Li Q-X, Zhang H, et al. The psychological impact of COVID-19 outbreak on medical staff and the general public. *Current Psychol.* 2020. 1–9. doi:10.1007/s12144-020-01109-0
58. Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian J Psychiatr.* 2020;51:102083. doi:10.1016/j.ajp.2020.102083
59. Jubert TJ. Who seeks help? A global perspective on attitudes toward seeking professional psychological help: vietnam, Hong Kong, and the United States. *UW-L J Undergrad Res.* 2009;12:1–6.
60. Thai QCN, Nguyen TH. Mental health literacy: knowledge of depression among undergraduate students in Hanoi, Vietnam. *Int J Ment Health Syst.* 2018;12(1):1–8. doi:10.1186/s13033-018-0179-1
61. Kamimura A, Trinh HN, Johansen M, et al. Perceptions of mental health and mental health services among college students in Vietnam and the United States. *Asian J Psychiatr.* 2018;37:15–19. doi:10.1016/j.ajp.2018.07.012
62. Thompson VLS, Bazile A, Akbar M. African Americans' perceptions of psychotherapy and psychotherapists. *Prof Psychol Res Pr.* 2004;35(1):19. doi:10.1037/0735-7028.35.1.19
63. Wallace BC, Constantine MG. Africentric cultural values, psychological help-seeking attitudes, and self-concealment in African American college students. *J Black Psychol.* 2005;31(4):369–385. doi:10.1177/0095798405281025
64. Liu J, Zhu Q, Fan W, Makamure J, Zheng C, Wang J. Corrigendum: online mental health survey in a medical college in China during the COVID-19 outbreak. *Front Psychiatry.* 2020;11:845. doi:10.3389/fpsy.2020.00845
65. Dodd RH, Dadaczynski K, Okan O, McCaffery KJ, Pickles K. Psychological wellbeing and academic experience of University students in Australia during COVID-19. *Int J Environ Res Public Health.* 2021;18(3):866. doi:10.3390/ijerph18030866
66. Liang S-W, Chen R-N, Liu -L-L, et al. The psychological impact of the COVID-19 epidemic on Guangdong college students: the difference between seeking and not seeking psychological help. *Front Psychol.* 2020;11:2231. doi:10.3389/fpsyg.2020.02231
67. Nguyen T. 'Vaccines' for the human spirit amid the Covid-19 pandemic. *VietNamNet.* 2021.
68. Rafal G, Gatto A, DeBate R. Mental health literacy, stigma, and help-seeking behaviors among male college students. *J Am Collhealth.* 2018;66(4):284–291. doi:10.1080/07448481.2018.1434780
69. Rüscher N, Müller M, Ajdacic-Gross V, Rodgers S, Corrigan P, Rössler W. Shame, perceived knowledge and satisfaction associated with mental health as predictors of attitude patterns towards help-seeking. *Epidemiol Psychiatr Sci.* 2014;23(2):177–187. doi:10.1017/S204579601300036X
70. Thai TT, Vu NLLT, Bui HHT. Mental health literacy and help-seeking preferences in high school students in ho Chi Minh City, Vietnam. *School Ment Health.* 2020;12(2):378–387. doi:10.1007/s12310-019-09358-6
71. Blanchard M, Farber BA. Lying in psychotherapy: why and what clients don't tell their therapist about therapy and their relationship. *Couns Psychol Q.* 2016;29(1):90–112. doi:10.1080/09515070.2015.1085365

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