

Alpha Psychiatry 2023;24(5):186-192

DOI: 10.5152/alphapsychiatry.2023.231235

Intention of Psychological Counseling, Attitude Toward Seeking Psychological Help, and Shame Among Vocational College Students: A Cross-Sectional Survey

ABSTRACT

Objective: The aim of this study was to explore the psychological counseling intention of college students, the attitude of seeking psychological help, and the related factors of shame so as to promote the psychological health of college students.

Methods: In 4 comprehensive colleges with sound psychological counseling centers, students of different grades were selected and divided into an active help-seeking group (n=216) and a help-refusal group (n=270). Students' shame behaviors were evaluated using the Self-Stigma of Seeking Help (SSOSH) scale and Self-Stigma Scale (SSS). The intention of psychological counseling was measured by the General Help-Seeking Questionnaire. The Inventory of Attitudes Toward Seeking Mental Health Services was used to evaluate the psychological status. Data from the above scales were compared through the t-test. Additionally, multiple linear regression analysis was performed to explore the impact of shame on the intention of psychological counseling.

Results: The study found that the active help-seeking group scored lower on SSOSH scale compared to those in the help-refusal group (total score: 41.2 ± 9.1 vs. 37.9 ± 8.7 , P=.0017). Meanwhile, the help-refusal group had higher scores on the shame dimension of the SSS (16.2 ± 3.9 vs. 5.3 ± 1.1 , P=.00085). After adjusting for age, gender, and other variables, multiple linear regression analysis indicated a negative correlation between shame and intention of psychological help and counseling, revealing a significant impact of shame on professional psychological counseling (P < .05).

Conclusion: Our study findings suggest that shame has a negative impact on the intention of seeking psychological help and counseling among college students, highlighting the importance of addressing shame-related factors to promote psychological health and encourage the utilization of professional psychological counseling services.

Keywords: College students, psychological problems, intention of psychological counseling, attitude toward seeking psychological help, shame



The prevalence and detrimental effects of mental health issues among college students cannot be ignored. With the development of society and the improvement of education, there is an increasing awareness of the importance of mental well-being in this population. Research has shown that college students commonly face psychological problems such as academic stress, interpersonal conflicts, and emotional fluctuations. These issues not only negatively impact their academic performance and quality of life but can also lead to serious mental illnesses such as anxiety and depression. Furthermore, psychological problems can affect the development of college students' social skills, self-esteem, and confidence, with long-term implications for their future growth.

Seeking psychological help is both important and effective for individuals facing mental health challenges.⁵ In times of distress, reaching out for support from mental health



Copyright@Author(s) - Available online at alpha-psychiatry.com.

Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.



Changchun Yin

Ru Gao

Xiaomin Ni

General Education College, Hainan Vocational and Technical College, Haikou, Hainan, China

Corresponding author: Xiaomin Ni ☑ Nixiaomin0721@163.com

Received: June 09, 2023 Accepted: September 06, 2023 Publication Date: October 27, 2023

Cite this article as: Yin C, Gao R, Ni X. Intention of psychological counseling, attitude toward seeking psychological help, and shame among vocational college students: A cross-sectional survey. *Alpha Psychiatry*. 2023;24(5):186-192.

professionals can provide individuals with the necessary tools and resources to cope with their difficulties.⁶

Furthermore, the attitude of college students toward seeking help is of utmost importance.⁷ A positive attitude toward seeking assistance indicates a recognition of the significance of mental health and a willingness to address personal struggles.⁸ By embracing a positive attitude toward seeking help, students can break down the barriers associated with stigma and seek the support they need without fear or shame.⁹

The attitude of students toward seeking help for mental health issues is influenced by various factors, some of which are not yet clear. Students' attitudes toward seeking help may be influenced by societal and cultural beliefs, such as their awareness and attitudes toward mental health issues, as well as societal expectations and pressures regarding seeking help. Additionally, individual factors such as psychological resilience, personal experiences, self-identity, and personal beliefs may also influence their attitudes toward seeking help.

While the factors influencing students' attitudes toward seeking help are not fully understood, further in-depth research is needed to better understand students' attitudes toward seeking help and the factors influencing these attitudes. Such research would aid in developing more effective mental health intervention strategies, promoting students' active engagement with mental health issues, and encouraging them to seek appropriate support and treatment.

Thus, our study explores the intentions, attitudes, and shame feelings of college students seeking psychological help through a cross-sectional survey, highlighting the importance of addressing mental health issues in college settings.

Material and Methods

Study Sample

We selected comprehensive college students of different grades and divided them into freshman (first-year students), sophomore (second-year students), junior (third-year students), and senior (fourth-year students). A cross-sectional survey was conducted using questionnaires to collect data on personal information, psychological problems, intention of psychological counseling, attitude toward seeking psychological help, and shame among college students. A total of 500 questionnaires were distributed, and 486 valid questionnaires were collected and analyzed.

Sample Selection

To ensure the representativeness and scientific rigor of our study sample, the selection of students followed the principles of stratified sampling, ensuring adequate representation of each grade in

MAIN POINTS

- Shame has a negative impact on college students' willingness to seek psychological help and counseling.
- Addressing the factors related to shame can promote the mental health of college students.
- The importance of encouraging the use of professional psychological counselling services.

the sample. We employed the following method for selecting students to participate in the research: Firstly, we randomly selected several classes from different grades in comprehensive universities. Subsequently, we proportionally selected students from each grade based on the grade distribution within each class. In general, there are multiple classes in each grade. To ensure comprehensive sampling, we randomly select several classes from each grade as the sample. For example, if there are 5 classes in a grade, we randomly select 2 classes for sampling. Moreover, the specific details of selecting students within each class are as follows: we employ a combination of stratified sampling and systematic sampling. Students are stratified based on factors such as gender and academic performance followed by random selection within each stratum to ensure sample diversity. Students are selected from each stratum according to a predetermined pattern, such as selecting 1 student for every certain number of students, until the desired sample size is achieved. Moreover, we ensured that the participating students were from comprehensive universities with well-established psychological counseling centers, guaranteeing their access to necessary psychological support.

Inclusion and Exclusion Criteria

Inclusion criteria include age range (over 18 years old) and educational requirements (college students who are in comprehensive colleges with sound psychological counseling centers); all students signed informed consent. Exclusion criteria include severe mental illnesses. The study was approved by the Ethics Committee of General Education College, Hainan Vocational and Technical College (Approval No: 20220219).

Assessment

Assessment of Shame in College Students

Self-Stigma of Seeking Help Scale: The Self-Stigma of Seeking Help (SSOSH) scale is a measure developed by Vogel et al (2006) to assess self-stigma related to seeking mental health help. This scale has been used in over 150 studies across 12 countries worldwide. The scores on the SSOSH are interpreted on a range of 0-100. Scores above 50 indicate agreement with experiencing self-stigma when seeking mental health help. The SSOSH scale consists of 10 items, and individuals respond to these items using a Likert scale with 5 response options, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate higher levels of self-stigma. The items assess various aspects of self-stigma, including feelings of shame, embarrassment, and fear of being judged when considering seeking mental health help. The scale demonstrated internal consistency, with Cronbach's alpha ranging from 0.86 to 0.90. In our sample, Cronbach's alpha was 0.85.

Self-Stigma Scale: Students' shame behaviors were evaluated using the Self-Stigma Scale (SSS).^{11,12} The SSS was developed by Mak and Cheung in 2010. This scale is used to measure the internalized stigma that individuals may have toward their own minority group identity. The scale consists of 21 items covering 3 dimensions: self-stigma related to thoughts, emotions, and behaviors. Each item has a 4-point scale indicating "strongly disagree," "somewhat disagree," "somewhat agree," and "strongly agree." The total score is 84, with higher scores indicating a greater degree of self-stigma and a sense of stigma toward their own group.

Assessment of Intention of Psychological Counseling

The General Help-Seeking Questionnaire (GHSQ) is a scale used to assess formal help-seeking intentions using a matrix design. The scale was developed by Deane et al.¹³ Help-seeking intentions can be categorized into 3 sub-scales: level of intention for seeking informal help, level of intention for seeking formal help, and level of intention to seek help from no one. It consists of 10 questions that use a 7-point Likert scale to measure how likely a person is to seek help from various sources, such as friends, family members, mental health professionals, and helplines. To calculate formal help-seeking intentions, the scores of 3 specific questions related to formal help-seeking are added together. This provides a numerical score that reflects a person's intention to seek formal help for their psychological concerns.

Assessment of Attitude Toward Seeking Psychological Help

The Inventory of Attitudes Toward Seeking Mental Health Services (IASMHS) scale is a tool used to assess individuals' mental health status and was developed by Mackenzie et al. 14 The scale aims to understand individuals' levels of psychological openness, help-seeking tendencies, and disregard for social biases. It is primarily applicable to undergraduate student populations. The scale includes multiple dimensions such as psychological openness, help-seeking tendencies, and disregard for social biases. The IASMHS scale is a self-report questionnaire used to assess an individual's attitudes toward seeking mental health services. The scale consists of 24 items, including 5 dimensions: cognitive openness, social support, beliefs about mental health/illness, mental health/illness prejudice, and social stigma. Each item in the IASMHS scale has a 5-point scale indicating "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." The total score is 120, with higher scores indicating a greater tendency to actively seek mental health services.

Statistical Analysis

The statistical analysis of the data was carried out using Statistical Package for the Social Sciences Software, version 22.0 (IBM SPSS Corp.; Armonk, NY, USA). The data from each questionnaire were found to follow a normal distribution after testing. Therefore, group comparisons were conducted using t-tests to assess differences in SSOSH and SSS scores in different groups (help-seeking/help-refusal groups). The data for each scale are presented as mean \pm SD. Multiple linear regression analysis was employed, with the shame score of SSS as the dependent variable and IASMHS as the independent variable. Other potential co-founding factors, such as age, gender, and economic status, were included as covariates in the regression model to control for their effects on the relationship between shame and the intention of psychological counseling. A significance level of P < .05 was considered statistically significant.

Results

Baseline Characteristics

Data were collected from 500 students in spring 2022. The 14 subjects (2.8%) were excluded because they filled out questionnaire. This lack of data is due to the students' absence from school during the assessment.

Overall, 486 students (273 females and 213 males) completed intervention. According to the GHSQ, 216 were assigned to the active help-seeking group (those who chose mental health professional

Table 1. Demographic Characteristics of the Sample

J .	·			
Characteristics	Help-Seeking Group (n = 216)	Help-Refusal Group (n = 270)		
Gender, n (%)	, , , , , , , , , , , , , , , , , , ,	,		
Female	116 (62.9)	157 (50.7)		
Male	100 (48.1)	113 (40.3)		
Age in years, mean (SD)	22.2 (4.1)			
Student status, n (%)				
Freshmen	107 (49.5)	137 (50.7)		
Sophomore	31 (11.4)	33 (12.2)		
Junior	27 (12.5)	36 (13.3)		
Senior	51 (23.6)	64 (23.7)		
Experience with mental health,	n (%)			
Yes	142 (65.7)	182 (67.4)		
No	55 (25.4)	73 (27.0)		
Do not know	16 (7.4)	15 (5.6)		
Did not answer	3 (1.3)	0 (0.0)		
General Help-Seeking Questionnaire mental health professional score, mean (SD)	8.6 (1.9)	3.3 (1.1)		

score over 5 in GHSQ) and 270 to the help-refusal group (those who chose mental health professional score below 5 in GHSQ). Table 1 shows the demographic characteristics of the sample. The baseline data of two groups were comparable, such as age, gender, and economic status (P = .527).

Intention of Psychological Counseling

Our findings revealed significant differences between groups. In terms of the intention to use formal resources, the help-seeking group scored significantly higher (6.2 \pm 0.9) compared to the helprefusal group (2.8 \pm 0.9), with a statistically significant difference (P=.015). Similarly, the help-seeking group also had significantly higher scores in the intention to use informal resources (6.8 \pm 1.2) compared to the help-refusal group (3.6 \pm 1.2), with a statistically significant difference (P = .007). Furthermore, the help-seeking group scored significantly higher in the areas of personal or emotional problems (7.7 \pm 1.1) and suicidal ideation (6.1 \pm 1.5) compared to the help-refusal group (personal or emotional problems: 3.8 \pm 1.1, suicidal ideation: 4.8 ± 1.5), with statistically significant differences (personal or emotional problems: P = .014, suicidal ideation: P = .08). These results suggest that individuals who actively seek help have higher scores in terms of their intention to seek psychological counseling, use of resources, and addressing personal or emotional problems compared to those who refuse help, with significant differences observed (Table 2).

Attitude Toward Seeking Psychological Help

Regarding the mean scores of the IASMHS in the 2 studied groups, the help-seeking group showed a psychological openness score of 13.10 ± 5.55 , while the help-refusal group had a score of 10.53 ± 7.47 . This difference was found to be statistically significant (P=.008). In terms of help-seeking propensity, help-seeking students had a score of 15.43 ± 3.94 , while help-refusal students had a score of 11.31 ± 4.36 , with a significant difference observed between the 2 groups (P=.0173). Additionally, it is worth noting that in both groups, each of the scores has been adjusted by subtracting 0.23 to account for the baseline measurement (Table 3).

Table 2. General Help-Seeking Questionnaire Score of Students

	Help-Seeking Group (n = 216),	Help-Refusal Group (n = 270),		
Participant Questionnaires	Mean \pm SD	Mean \pm SD	95% CI	Р
GHSQ (intention to treat)				
Formal resources	6.2 ± 0.9	2.8 ± 0.9	(2.49, 3.91)	.015
Informal resources	6.8 ± 1.2	3.6 ± 1.2	(2.93, 4.37)	.007
GHSQ (personal or emotional problems)	7.7 ± 1.1	3.8 ± 1.1	(3.55, 4.95)	.014
GHSQ (suicidal ideation)	6.1 ± 1.5	4.8 ± 1.5	(-0.26, 1.56)	.080
GHSQ, General Help-Seeking Questionnaire.				

Table 3. Attitude Toward Seeking Psychological Help Among College Students

Attitude Score	Help- Seeking Group	Help- Refusal Group	95% CI	P
Psychological openness	13.10 ± 5.55	10.53 ± 7.47	(4.81, 21.39)	.0080
Help-seeking propensity	15.43 ± 3.94	11.31 ± 4.36	(6.67, 19.19)	.0173

The Existence and Degree of Shame Symptom Among College Students

According to the SSOSH scale and SSS, results showed that the active help-seeking group scored lower on the SSOSH score compared to those in the help-refusal group (e.g., total score: 41.2 ± 9.1 vs. 37.9 ± 8.7 , P=.0017). Meanwhile, the help-refusal group had higher scores on the shame dimension of the SSS (16.2 ± 3.9 vs. 5.3 ± 1.1 , P=.0085, 95% CI, 8.6-23.8).

Meanwhile, students (n=151, 31.7%) at colleges feel shame of having psychological problems. With regard to the degree of shame, mild was the most prevalent (n=140, 27.2%) followed by moderate (n=10, 3.3%) and severe (n=1, 0.8%). In the help-refusal group, the primary reasons for not seeking help were shame (n=126, 74.8%), not knowing where to seek help (n=20, 12.5%), and fear of being ridiculed (n=21, 12.7%).

Table 4. The Existence and Degree of Shame Symptom Among College Students

Scale	Help-Seeking Group, n (%)	Help-Refusal Group, n (%)	Р	95% CI
Shame degree (n = 15	1)			
Mild	51 (33.7)	89 (58.9)	.0013	(0.1825, 0.3755)
Moderate	0 (0.0)	10 (3.3)	<.001	(0.0062, 0.1538)
Severe	0 (0.0)	1 (0.8)	<.001	(0.0001, 0.0485)
Reasons for not seekin	g help			
Shame	0 (0.0)	126 (74.8)	<.001	(0.6779, 0.8053)
Not knowing where to seek help	0 (0.0)	20 (12.5)	<.001	(0.0157, 0.1273)
Fear of being ridiculed	0 (0.0)	21 (12.7)	<.001	(0.0193, 0.1343)
Feeling of shame by go	ender			
- Females	0 (0.0%)	83 (49.6%)	.0085	(0.1605, 0.3346)
- Males	0 (0.0%)	59 (35.7%)		

The feeling of shame varied across genders; females were more likely to feel ashamed of seeking psychological help (n=83, 49.6%) compared to males (n=59, 35.7%, P=.0085). These findings suggest that efforts should be made to reduce the stigma associated with seeking psychological help among college students, especially for female students, and that targeted interventions should be developed to address different types and degrees of shame (Table 4).

The Factor of Refusing the Psychological Help

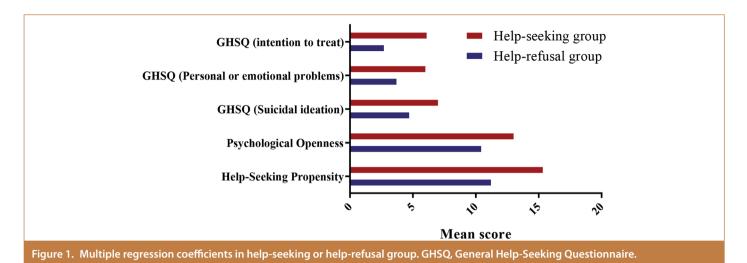
A multiple linear regression analysis was conducted to examine the association between shame symptoms and the intention of psychological counseling and attitude toward seeking psychological help. We separately analyzed the help-seeking group and the help-refusal group and conducted multiple regression analysis. After controlling for age, gender, and socioeconomic status, multiple linear regression analysis demonstrated a significant negative correlation between shame symptoms and IASMHS and GHSQ, which revealed a regression coefficient of -0.323 and -0.462, indicating a significant impact of shame on professional psychological counseling (P < .05). Table 5 and Figure 1 show the multiple regression coefficients for each scale.

Discussion

The results of our study provide valuable insights into the intentions, attitudes, and shame feelings of college students seeking psychological help. The findings highlight the importance of addressing mental

c 1	Help-Seeking	Help-Refusal	0
Scale	Group $(x \pm s)$	Group $(x \pm s)$	β
Self-Stigma of Seeking Help	41.2 ± 9.1	37.9 ± 8.7	-0.452
Shame dimension of SSS	5.3 ± 1.1	16.2 ± 3.9	-0.228
Psychological openness	13.10 ± 5.55	10.53 ± 7.47	-0.319
Help-seeking propensity	15.43 ± 3.94	11.31 ± 4.36	-0.303
GHSQ (intention to treat)	6.2 ± 0.9	2.8 ± 0.9	-0.266
GHSQ (personal or emotional problems)	7.7 ± 1.1	3.8 ± 1.1	-0.259
GHSQ (suicidal ideation)	6.1 ± 1.5	4.8 ± 1.5	-0.261
Total for IASMHS			-0.323
Total for GHSQ			-0.462

GHSQ, General Help-Seeking Questionnaire; IASMHS, Inventory of Attitude Toward Seeking Mental Health Services; SSS, Self-Stigma Scale.



health issues in college settings and promoting active engagement with mental health support.

Regarding the intention of psychological counseling, our study revealed significant differences between the help-seeking and help-refusal groups. The help-seeking group showed higher scores in the intention to use both formal and informal resources compared to the help-refusal group. This suggests that students who actively seek help have a greater willingness to utilize various resources and seek support for their personal or emotional problems. These findings are consistent with previous research that emphasizes the importance and effectiveness of seeking psychological help for individuals facing mental health challenges. 10,11 By encouraging a positive attitude toward seeking help, colleges can create a supportive environment that promotes mental well-being and helps students overcome barriers associated with stigma and shame. 15,16

In terms of attitude toward seeking psychological help, our study found that the help-seeking group had higher scores in psychological openness and help-seeking propensity compared to the help-refusal group. This indicates that individuals who actively seek help have a more positive attitude toward mental health services and a greater likelihood of seeking help when needed. These findings align with previous research that emphasizes the significance of a positive attitude toward seeking help in addressing mental health issues. ^{1,15,17} By promoting a positive attitude toward seeking help, colleges can encourage students to overcome barriers such as shame and fear of being ridiculed, thus facilitating their access to appropriate support and treatment.

Our study also explored the existence and degree of shame among college students seeking psychological help. The results showed that students in the help-refusal group had higher scores on the shame dimension compared to the help-seeking group. Additionally, a significant proportion of students reported feeling shame about having psychological problems, with females more likely to feel ashamed compared to males. These findings highlight the need for targeted interventions to address the stigma associated with seeking psychological help, especially among female students. 17,18 Efforts should be made to reduce shame and create a supportive environment where students feel comfortable seeking help without fear of judgment or ridicule.

Furthermore, our study revealed a significant negative correlation between shame and the intention of psychological help and counseling. This suggests that shame can significantly have an impact an individual's willingness to seek professional psychological counseling. These findings reinforce the importance of addressing shame as a barrier to seeking help and emphasize the need for interventions that specifically target and reduce shame symptoms. Colleges can play a crucial role in creating a supportive and non-judgmental environment that encourages students to seek psychological help without shame or fear.^{15,16}

We also highlight an interesting relationship between shame and gender, particularly in relation to seeking psychological help among college students. The data indicate that females are more likely to feel ashamed of seeking psychological help compared to males. This finding suggests that there may be distinct gender differences in how shame is experienced and expressed. One possible explanation for this gender difference could be societal expectations and norms surrounding gender roles. These findings have important implications for mental health support services on college campuses. Efforts should be made to reduce the stigma associated with seeking psychological help, particularly among female students. Additionally, targeted interventions should be developed to address the different types and degrees of shame experienced by individuals of different genders. 19,20 Furthermore, it would be valuable to explore the underlying factors that contribute to these gender differences in shame. Future research could investigate how societal expectations, cultural beliefs, and personal experiences shape individuals' attitudes toward seeking help and their experience of shame. This could provide further insights into the complex relationship between shame and gender and inform the development of more tailored interventions.

Limitations

It is important to note that our study has several limitations. Firstly, the study design was cross-sectional, which limits our ability to establish causality between variables. Future research should consider utilizing longitudinal designs to further explore the factors influencing attitudes toward seeking help and the impact of shame on help-seeking behaviors among college students. Secondly, the sample selection was limited to comprehensive colleges with psychological counseling centers, which may reduce the generalizability of the findings to

other types of colleges or universities. Future research should consider including a more diverse sample from various educational institutions to enhance the external validity of the findings. Meanwhile, the study relied on self-report measures to assess shame, intention of psychological counseling, and attitudes toward seeking mental health services. While self-report measures are commonly used in research, they are subject to response biases and may not always accurately capture participants' true feelings or behaviors. Selfreport measurement can be influenced by various factors, leading to result biases. Firstly, individual differences can affect self-report measurement. Different people may have different subjective feelings or interpretations, even in the same situation, which can introduce biases in the results. Secondly, social expectations can influence selfreport measurement. Participants may feel compelled to conform to societal norms or expectations when answering questions, leading to biases in their responses. Additionally, memory biases can impact self-report measurement. Participants' memories may be inaccurate or selectively biased, affecting their recall of past events or experiences and leading to biased responses.

Therefore, self-report measurement can be influenced by individual differences, social expectations, and memory biases, resulting in potential inaccuracies in the results. To mitigate these biases, researchers can employ strategies such as using multiple measurement methods for validation, incorporating control conditions, and providing clear question guidance to improve the accuracy and reliability of self-report measurement. Future research could consider incorporating objective measures or alternative assessment methods, such as interviews or observations, to provide a more comprehensive understanding of these constructs.

In conclusion, our study highlights the importance of addressing mental health issues in college settings and promoting active engagement with mental health support. The findings emphasize the significance of a positive attitude toward seeking help and the detrimental impact of shame on help-seeking behaviors.²¹ Colleges and mental health professionals should work together to reduce the stigma associated with seeking psychological help and develop targeted interventions that address shame and promote a supportive environment for students to seek the help they need.

Implications for Future Research

Our study provides important insights into the significance of addressing mental health issues in college settings and the role of shame in help-seeking behaviors. However, there are several areas that warrant further investigation. Future research could delve deeper into understanding the underlying factors that contribute to the stigma associated with seeking psychological help through a longitudinal design. This design allows for tracking changes over time in individuals or groups' counseling intentions and attitudes toward seeking help. By using a longitudinal design, researchers can understand how attitudes toward seeking help change when counseling intention increases or decreases. This design also helps explore the causal relationship between counseling intention and shame, as shame may be a significant factor in seeking help. Tracking levels of shame at different time points and comparing them with counseling intentions can provide insights. Additionally, it enables researchers to observe dynamic changes in these variables. By tracking data over time, researchers can identify changing trends and

understand how counseling intention, attitudes toward seeking help, and shame may fluctuate. Overall, this could involve exploring cultural, social, and individual influences that shape attitudes toward mental health and help seeking. By gaining a comprehensive understanding of these factors, interventions can be developed to effectively reduce stigma and promote a supportive environment for students.

Availability of Data and Materials: All data generated or analyzed during this study are included in the article.

Ethics Committee Approval: The study was approved by the Ethics Committee of General Education College, Hainan Vocational and Technical College (Approval No: 20220219).

Informed Consent: Written informed consent was obtained from the participants who agreed to take part in the study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – C.Y.; Design – C.Y.; Supervision – X.N.; Resources – X.N.; Materials – X.N.; Data Collection and/or Processing – C.Y., R.G.; Analysis and/or Interpretation – R.G.; Literature Search – C.Y.; Writing – C.Y.; Critical Review – R.G., X.N.

Declaration of Interests: The authors have no conflict of interest to declare.

Funding: The funding support were received from The Project of Hainan Social Science Research Base in 2022 (JD22-15) and Hainan natural science (No. 323RC513).

References

- Filion N, Fenelon A, Boudreaux M. Immigration, citizenship, and the mental health of adolescents. *PLoS One*. 2018;13(5):e0196859. [CrossRef]
- 2. Nesi J. The impact of social media on youth mental health: challenges and opportunities. *N C Med J.* 2020;81(2):116-121. [CrossRef]
- Purtle J, Nelson KL, Counts NZ, Yudell M. Population-based approaches to mental health: history, strategies, and evidence. *Annu Rev Public Health*. 2020;41:201-221. [CrossRef]
- 4. Liu T, Liu J, Wang C, et al. Prevalence of gastrointestinal symptoms and their association with psychological problems in youths. *Ann Palliat Med*. 2023;12(2):311-323. [CrossRef]
- Zhang X. Problems and countermeasures of college students' mental health education. J Healthc Eng. 2022;2022:6430855. [CrossRef]
- Fusar-Poli P, Salazar de Pablo G, De Micheli A, et al. What is good mental health? A scoping review. Eur Neuropsychopharmacol. 2020;31:33-46.
 [CrossRef]
- Drissi N, Ouhbi S, Janati Idrissi MA, Fernandez-Luque L, Ghogho M. Connected mental health: systematic mapping study. *J Med Internet Res*. 2020;22(8):e19950. [CrossRef]
- Lei X, Liu C, Jiang H. Mental health of college students and associated factors in Hubei of China. PLoS One. 2021;16(7):e0254183. [CrossRef]
- Huang J, Nigatu YT, Smail-Crevier R, Zhang X, Wang J. Interventions for common mental health problems among university and college students: a systematic review and meta-analysis of randomized controlled trials. J Psychiatr Res. 2018;107:1-10. [CrossRef]
- Brenner RE, Colvin KF, Hammer JH, Vogel DL. Using item response theory to develop revised (SSOSH-7) and ultra-brief (SSOSH-3) self-stigma of seeking help scales. Assessment. 2021;28(5):1488-1499. [CrossRef]
- Larrahondo BF, Valencia JG, Martínez-Villalba AMR, Ospina JPZ, Aguirre-Acevedo DC. Validation of the Self Stigma of Seeking Help (SSOSH) scale

- in a population of Colombian medical students. *Rev Colomb Psiquiatr* (Engl Ed). 2021;50(2):82-91. [CrossRef]
- 12. Vogel DL, Armstrong PI, Tsai PC, et al. Cross-cultural validity of the Self-Stigma of Seeking Help (SSOSH) scale: examination across six nations. *J Couns Psychol.* 2013;60(2):303-310. [CrossRef]
- Olivari C, Guzmán-González M. Validation of the general help-seeking questionnaire for mental health problems in adolescents. Rev Chil Pediatr. 2017;88(3):324-331. [CrossRef]
- Hammer JH, Parent MC, Spiker DA. Mental Help Seeking Attitudes Scale (MHSAS): development, reliability, validity, and comparison with the ATSPPH-SF and IASMHS-PO. J Couns Psychol. 2018;65(1):74-85. [CrossRef]
- Quan W, Xie Q. The problems of "Mental Health Trend" in the ideological and political management of college students under the network environment. J Environ Public Health. 2022;2022:4968807. [CrossRef]
- Lattie EG, Adkins EC, Winquist N, Stiles-Shields C, Wafford QE, Graham AK. Digital mental health interventions for depression, anxiety, and enhancement of psychological well-being among college students: systematic review. J Med Internet Res. 2019;21(7):e12869. [CrossRef]

- 17. Lam TP, Sun KS, Piterman L, et al. Impact of training for general practitioners on their mental health services: the Hong Kong experience. *Aust J Gen Pract*. 2018;47(8):550-555. [CrossRef]
- 18. Fazel M, Soneson E, Sellars E, Butler G, Stein A. Partnerships at the interface of education and mental health services: the utilisation and acceptability of the provision of specialist liaison and teacher skills training. *Int J Environ Res Public Health*. 2023;20(5). [CrossRef]
- Alabduljabbar A, Almana L, Almansour A, et al. Assessment of fear of failure among medical students at king Saud university. Front Psychol. 2022;13:794700. [CrossRef]
- Kotera Y, Andrzejewski D, Dosedlova J, Taylor E, Edwards AM, Blackmore C. Mental health of Czech university psychology students: negative mental health attitudes, mental health shame and self-compassion. Healthcare (Basel). 2022;10(4). [CrossRef]
- Proctor EK, Landsverk J, Aarons G, Chambers D, Glisson C, Mittman B. Implementation research in mental health services: an emerging science with conceptual, methodological, and training challenges. *Adm Policy Ment Health*. 2009;36(1):24-34. [CrossRef]