RESEARCH ARTICLE

Social Support as Moderator for Psychological Adjustment, Anxiety, Stress, Depression and Its Interrelationship with Suicidal Ideation among Students Post-Outbreak of Covid-19 in Malaysia

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ARTICLE INFO	ABSTRACT
	Malaysia's transition to endemic from pandemic because of COVID-19 in 2022 has affected university students as they embarked on another phase. The purpose of the current research is to study on how social support can have a moderated effect towards psychological adjustments, anxiety, stress and depression and if it has a consequential relationship on suicidality rate among university students after the COVID-19 pandemic in Malaysia, by using online computer administration surveys. A total of 415 university students participated. The psychological instruments used for this current study are International Adjustment Disorder Questionnaire (IADQ), Coronavirus Anxiety Scale (CAS), Perceived Stress Scale (PSS), Beck Depression Inventory (BDI), Multidimensional Scale of Perceived Social Support (MSPSS) and Scale for Suicide Ideation (SSI). Through statistical analysis using SPSS, the results indicated that psychological adjustment, stress, anxiety, depression, and social support have a statistically significant relationship (p<.001), with negative correlations. There is also evidence of significant relationship between the variables with suicidal ideation. Overall social support can mediate the level and intensity of suicidal ideation (r = -.579, p<.001). A significant regression equation was found (F(1,413) = 208.144, p< .000) with R^2 of .335 when testing the predictability of social support as a moderator against suicidal ideation using regression analysis. Moderation analysis also predicted that social support can act as moderator (enhancer/buffer) against suicidal ideation. The highest attribute to social support comes from family, followed by friends and significant others (r = -.435, -.416, -.406, p<.001). The researcher concluded that this research can contributes to the theoretical understanding of these complex dynamics of the interrelationships of the variables. This research highlight the need of planned services to target the psychological adjustment, anxiety, stress, depression, suicidal ideation and support mechanisms for students post-pandemic.

INTRODUCTION

Malaysia transitional phase from pandemic to endemic in 2022 has affected university students as they embarked on yet another change in lifestyle. University students were already complaining that the pandemic, university closures, social restrictions and isolation, and adaptations in learning norms from physical to online learning have negatively affected their mental health and causing interruptions on their studies (Huarcaya-Victoria, 2020). The transition may bring its own set of challenges. The announcement that the country is now in the endemic phase has raises more concerns about the

reintegration into pre-pandemic routines, uncertainty about the future, potential for new variants of COVID-19 and readjusting to social interactions (Haleem et al., 2020). The pandemic had showed a surge in mental health issues, encompassing heightened levels of psychological adjustments, anxiety, stress, depression and suicidal ideation, even among those without pre-existing mental health issues. The post-pandemic period may continue to see these issues, exacerbated by ongoing challenges such as academic uncertainties, social disruptions, and lingering health concerns (Alimoradi et al., 2022). The long-term psychiatric consequences remain uncertain.

The cumulative impact of stressors during the pandemic is likely to have significant repercussions on this vulnerable population in the post-pandemic period. It was notably addressed that university students were grappling with escalating prevalence of mental health issues before the pandemic has come into play. Numerous studies have reported an increased in psychological distress among students post-pandemic (Wang et al., 2021; Byrne et al., 2021; Kanval et al., 2024). The abrupt shift in learning norms, uncertainty about academic futures, and the pervasive atmosphere of fear have collectively contributed to increased anxiety and depression levels. The sudden disruptions of routines coupled with uncertainty of future prospects, has added a layer of stress for students (Rashid et al ., 2023; Wallace, 2023). Academic concerns combined with the lack of clear guidance, contribute significantly to the deterioration of mental well-being. This current epidemic has caused extensive morbidity and mortality as well as interference on people's lives and livelihood across the globe; this has happened as a consequence of both indisposition of coronavirus and the measures taken to prevent the spread in order to protect the health people (John et al., 2020).

The number of people showing anxiety, depression and/or thoughts of ending life is alarming, especially in this crucial change of phase from pandemic to endemic. Previous literature has established significant associations between pandemic-related stressors among students – including economic crises, female gender, academic delays, disruptions in daily life, and diminished social support – and the manifestation of suicidality. Stigmas on mental health problems among society, even before the pandemic, may had cause procrastination of individuals from seeking help when they need it and may had also delay the recognition of mental health issues. The challenges faced during the pandemic induces anxiety, particularly among university students, and those most at risk are individuals with pre-existing mental health issues who live in solitary and isolated conditions. These individuals tend to engage in self-judgment and experience severe suicidal ideation. Even as the immediate health crisis abates, these individuals may face continued challenges accessing support and resources. Disparities in healthcare and mental health services may persist or worsen.

The post-pandemic is an appropriate environment to study the role of social support on psychological adjustment, anxiety, stress and depression and its interrelationship with suicidal ideation among students in Malaysia because information regarding these variables on individuals and the ways to hinder the effect post-outbreak is limited. Research persuades researchers to investigate the most recent evidence/proof or information. Adjusting and readjusting to changes in work and education environments, shifting social norms, and uncertainties about the future can contribute to stress and anxiety. This purpose of this research is to investigate how social support can act as a moderator towards psychological adjustments, anxiety, stress and depression, and if it has a consequential relationship on the suicidality rate of students after the COVID-19 pandemic in Malaysia. The overall result of this research might also promote awareness to society on the importance of mental health towards personal life improvements and its effect that may lead to suicidality if left untreated, especially in the post-pandemic era.

The commencement of Movement Control Order (MCO) has indicated a startling total of 266 suicides. The statistic comprised of 53% individuals that committed suicide was between the age of 19 and 40 years and 23% between the aged of 15 and 18 years. It also showed that 78% of the reported cases involved men (Chua & Rao, 2021). There is lack of research regarding the predictability of psychological adjustment, anxiety, stress and depression on social support and its interrelationship with suicidal ideation among students. This current research can be further studied in order to curb the percentage of suicide attempts among youth in Malaysia corresponding to mental health

conditions, as well as providing alternatives and/or initiatives to help students be well-adjusted to the new norm of learning during the post-pandemic era. This current research is also pursued to help raise mental health awareness and to answer the researcher's curiosity and commitment to learning.

This current research is a quantitative research. The research objectives aimed to be accomplished from this research is to predict if social support can act as a moderator on the severity of students' suicidal ideation after the pandemic in Malaysia.

A conceptual framework is drawn to show an overview of the relationship of the research variables. Eventually, the psychological distress may contribute towards suicidal ideation. In this research, the author believed that social support can act as a moderator towards the severity of suicidal ideation. It is believed that this current research will have direct or indirect contributions of psychological adjustment, anxiety, stress and depression towards suicidality and if social support would act as a moderator. Figure 1 shows the conceptual framework of the research.
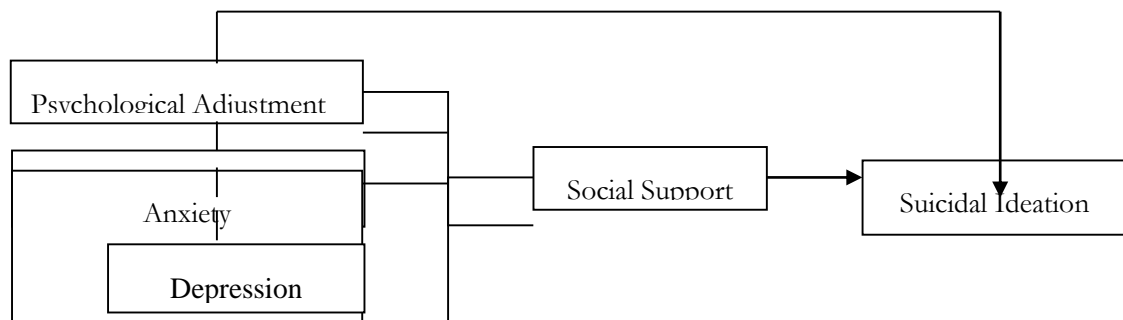

Figure 1 Conceptual Framework of Research Design

LITERATURE REVIEW

The post-pandemic environment has witnessed a rise in suicidal ideation among vulnerable population; with or without pre-existing mental health conditions. According to Zhao et al., (2023) young adults who are going through the transitional phase of growth development could not easily adapt themselves to new learning environment, thus increasing stress and anxiety that may lead to contemplation of suicide. A recent research by Brausch et al., (2023) focused on adolescent mental health and self-harm risk. The research was impacted by pandemic-related disruptions, leading the data collected in two different phase; before the pandemic (n=695) and after the onset (n=206). The research conducted between the two samples studied various factors such as depression, anxiety, emotion dysregulation, alcohol and substance use, bullying experiences, overall impairment, access to mental health services, and self-harm. The research resulted in a noteworthy distinction between the two samples. Respondents in the post-pandemic cohort were more likely to seek counsellor, experienced hospitalization for mental health reasons, and reported suicidal thoughts and contemplation within the past year as compared to the cohort in pre-pandemic sample. In addition, the post-pandemic sample showed increased levels of depression and anxiety symptoms, heightened emotion dysregulation, and more intense suicidal ideation. These results indicated the profound impact of the pandemic on various facers of adolescent mental health and self-harm risk, emphasizing the urgency for targeted interventions and support mechanisms in the post-pandemic landscape.

Li et al., (2023) investigated the relationship between the elevated stress levels in the start of the pandemic and an increased prevalence of suicidal ideation. The research concluded the need to address the myriad of stressors, ranging from economic uncertainties to the lingering psychological effects of lockdowns and social isolation in the post-pandemic landscape as a crucial component of suicide prevention efforts. The result of a longitudinal research conducted by Zhang et al., (2019) indicated a correlation between compromised psychological adjustment and an elevated risk of suicidal ideation. The unprecedented levels of isolation experienced during the pandemic continue to cast a long shadow. This is also supported by a research conducted by Kim

& Yi, (2022) that examined the complex interplay of factors influencing suicidal ideation, including the role of social isolation in the post-pandemic context.

A research across 10 countries in East and West investigated the frequency of suicidal ideation and its correlations during the COVID-19 pandemic was carried out by Cheung et al., (2021). This cross-sectional study assess suicidality using the Patient Health Questionnaire (PHQ-9) among 25 053 respondents from United States of America (USA), Canada, United Kingdom (UK), Brazil, Philippines, Republic of Korea, China, Turkey, Hong Kong and Macau. The research resulted with UK having the lowest percentage of respondents having suicidal thought in the previous two weeks at 7.6% and the highest in the Philippines at 24.9%. The research also yielded that young adults (aged of 18 to 24) reported highest level of suicide contemplation. This is probably due to the shift from face-to-face teaching to online learning that had caused and elevated levels of stress, anxiety and academic pressure. Young adults who are going through the transitional phase could not adapt themselves to new learning environment, thus increasing stress and anxiety that may lead to contemplation of suicide. This was later supported by a recent study by Apicella et al., (2023) that examined the increasing suicidal attempts in youth in Italy. There was an additional upsurge in child psychiatric consultations (CPC) related to suicidal attempts following the onset of the COVID-19 pandemic. According to the research, in addition to the increase in demand for psychiatric care among youth, there has been an observed escalation in urgent psychiatric cases linked to severe psychopathology and suicidal tendencies following the onset of the pandemic.

Valle-Palomino et al., (2023) examined review of scientific literature, focusing on the prevalence of suicidal ideation and suicide deaths linked to the pandemic in Spanish-speaking countries by employing PRISMA model as its primary method. The research selected 28 articles for analysis from three reputable databases; SCOPUS, Web of Science and the ProQuest Coronavirus Research Database. The research highlighted an upward trajectory in both suicidal ideation and suicidal deaths during the COVID-19 pandemic, persisting into the post-pandemic period. This upward trend involved children, adolescents, and young women of university age, particularly those from lower socioeconomic backgrounds. Identified risk factors contributing to this alarming increase included residing in rural areas, experiencing poor mental health, unemployment, and facing family deaths attributed to the pandemic. This comprehensive exploration provided valuable insights into the complex dynamics of suicide-related outcomes during and after the pandemic in Spanish-speaking countries.

METHODOLOGY

This research is conducted using the quantitative method. The non-probability sampling method was used to choose a representative sample from the population to be tested for the objectives of the research because of the inability to use probability sampling. This research is also a cross-sectional study, indicating that the data collected from the sample is done at one-time point. The quantitative research design uses survey in Google Form (web-based survey) as it is easier to assess and can be taken at any preferred time by the targeted population. The selection of respondents was guided by several inclusion criteria including, 1) students in tertiary educational institutes, 2) currently an active students, 3) residing and pursuing studies in Malaysia, 4) age above 18 years old, and 5) able to understand English. The Cochran formula was used to calculate the minimum estimated sample size and the calculation resulted with an approximately 385 students. A total of 415 active students between the ages of 18 to above 30 years old participated in this research. The survey distributions had been passed on multiple social media platforms; Facebook, Instagram, WhatsApp messenger, students' email, etc. The flow of the survey distributions can be seen in Figure 2.
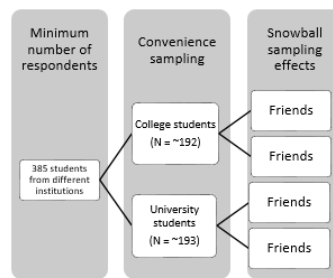
Figure 2 Flow of survey distributions

The self-reported survey consisted of informed consent, demographic information and psychological instruments to measure the variables. The first instrument measured the perceived social support of respondent using the Multidimensional Scale of Perceived Social Support (MSPSS). The psychological adjustments among respondents were examined using International Adjustment Disorder Questionnaire (IADQ-19). Psychological distress such as anxiety, stress and depression were observed using the Coronavirus Anxiety Scale (CAS), Perceived Stress Scale (PSS-14) and Beck's Depression Inventory (BDI-21) respectively. The last instrument measured the presence of suicidal ideation using the Scale of Suicidal Ideation (SSI). All of the instruments can be accessed by respondents through a provided link.

The MSPSS is a 12-item self-reported inventory that measures the perceptions of support received from family, friends, and significant others. Respondents rate each item in three subscales on a 7-point Likert scale. The range for possible scores varies from 4 (minimum) to 28 (maximum) for each subscale. The higher the respondent scores on each subscale, the higher the perceived support received. The 19-items IADQ is used to assess adjustment disorder as outlined in the ICD-11. The instrument comprises three primary sections, namely the psychosocial stressor, preoccupation of symptoms and failure to adapt symptoms, and functional impairment. There are no established cut-off scores for the instrument. CAS is a recently developed tool designed to identify instances of dysfunctional anxiety directly associated with the COVID-19 pandemic. It employs a 5-point Likert scale where the respondent rate items over the past two weeks. A high total score (≥ 9) signalled the presence of problematic symptoms in an individual. The 14-item, self reported PSS measures the perception of stress present in an individual. The scores of the sum are range between 0-56, in which high scores on the scale indicates high level of stress. The BDI is a 21-items developed to measure the severity, intensity and depth of depression in individuals. The lower the individual score in the self-report rating inventory, the lower the level of depression. The SSI is a 19-item instrument that measures the characteristics of individual's plan and ideation to commit or contemplate suicide. There are three subscales to determine the factors related to suicidal risk; active suicidal desire, passive suicidal desire and specifics plans. Each of the items consisting of three options graded according to the severity and intensity of suicidality. The scale total scores range from 0 to 38; the higher the score, the greater the tendency to contemplate suicide.

In order to answer the research objectives, descriptive analysis and inferential statistics are carried out to measure the relationship between the variables. Correlation explores the significant relationships between all the variables within the data set. The data collected were tabulated and analysed using Statistical Package for Social Science (SPSS) version 22.0 software. To enhance the analytical depth, moderation testing was also performed using Structural Equation Model (SEM) through the IBM SPSS Analysis of Momentum (AMOS) version 28.0 software.

RESULTS

Table 1: Descriptive of Demographic Variables

Variables	Level	Frequency (N)	Percentage (%)	Std. Deviation (SD)	Mean (*M*)

Gender	Female	210	50.6	.505	1.50
	Male	204	49.2		
	Prefer not to say	1	0.2		
Age range	18 – 20 years old	47	11.3	.956	2.61
	21 – 23 years old	151	36.4		
	24 – 26 years old	142	34.2		
	27 – 29 years old	66	15.9		
	≥ 30 years old	9	2.2		
Race	Malay	190	45.8	.850	1.78
	Chinese	141	34.0		
	Indian	69	16.6		
	Others	15	3.6		
Level of education	Foundation	40	9.6	.921	2.83
	Diploma	77	186		
	Bachelor's degree	232	55.9		
	Masters degree	46	11.1		
	Doctorate	20	4.8		

Table 1 the demographic analysis of the respondents. The gender of the respondents; female and male participated in this research was almost balanced. All the respondents involved in this research vary in age; from as young as 18 years old to thirty years old. The standard deviation and mean for gender, age and current level of education indicated that there are no outliers in the data.

Predictions if social support can act as a moderator on the severity of students' suicidal ideation after the pandemic in Malaysia

In order to predict if social support can be a moderator of the interrelation of psychological adjustment, anxiety, stress, and depression to suicidal ideation, two type of analysis have been conducted; regression analysis and mediation testing in structural equation model (SEM). Regression analysis is used to predict trends in a given data. Linear regression is the most common and basic tool used type of predictive analysis. A simple linear regression was calculated to predict suicidal ideation based on perceived social support. Moderation pertains to the degree of variation in the association between two variables (independent and dependent variables) contingent upon the presence of a third variable, designated as the moderator. This moderator possesses the capability to influence both the intensity and direction of the relationship between the independent and dependent variables.

Table 2: Summary of social support and suicidal ideation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.579[a]	.335	.333	8.117
a. Predictors: (Constant), Social support				
b. Dependent Variable: Suicidal ideation				

Based on Table 2, the R Square is at .335, which indicated that the model can be used to predict social support as a moderator / preventive factor towards suicidal ideation among university students in Malaysia post-outbreak of COVID-19 pandemic. A significant regression equation was found (F(1,413) = 208.144, $p < .000$) with R^2 of .335.

By using IBM Analysis of Moment Structures (AMOS), a moderation testing is also conducted. Moderation, referred to as effect modification, manifests when the correlation between two variables is contingent upon the presence of a third variable known as the moderator variable, often referred to simply as the moderator. This moderating variable introduces statistical nuances through an interaction, wherein a categorical or continuous variable intricately influences both the direction and magnitude of the relationship between the dependent and independent variables. In the realm of correlational analysis, a moderator operates as a third variable exerting influence over the zero-order correlation between two other variables or the magnitude of the slope of the dependent variable in relation to the independent variable.

 a) Moderation testing of psychological adjustment with suicidal ideation

A moderation test was run, with psychological adjustment as the predictor, suicidal ideation as the dependent, and perceived social support as a moderator. Moderation path from AMOS is presented in Figure 3 and moderation analysis summary is tabulated in Table 3.
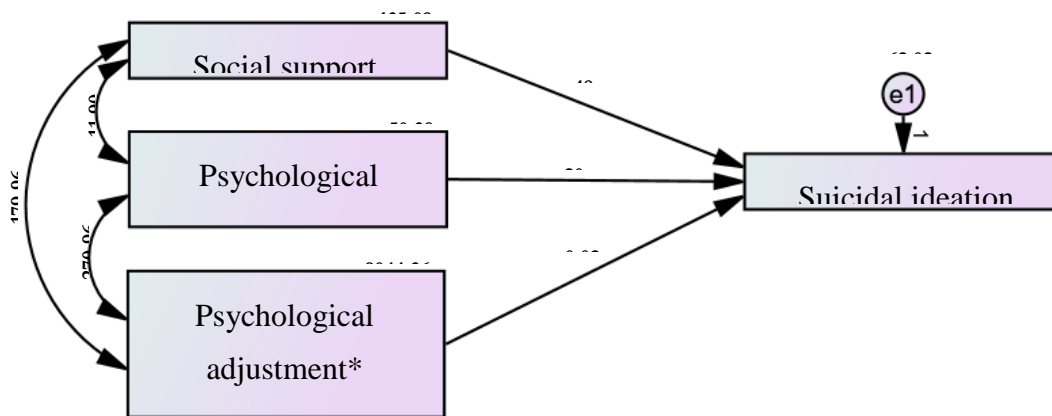

Figure 3: Moderation path using AMOS for psychological adjustment and suicidal ideation

Table 3 Moderation analysis summary psychological adjustment against suicidal ideation

Path	β	C.R	P-value
Psychological adjustment → Suicidal ideation	-.197	-3.291	.000**
Social support → Suicidal ideation	.485	14.304	.001**
Psychological adjustment*social support → Suicidal ideation	.020	4.574	.000**

 **. Correlation is significant at the 0.001 level (2-tailed).

Table 3 revealed a positive and significant moderating impact of social support on the relationship between psychological adjustment and suicidal ideation (β = .020, t = 4.574, $p < .001$ for a two-tailed test). This indicates that there is evidence that social support is moderating the relationship of psychological adjustment to suicidal ideation.

 b) Moderation testing of anxiety with suicidal ideation

A moderation test was run, with anxiety as the predictor, suicidal ideation as the dependent, and perceived social support as a moderator. Moderation path from AMOS is presented in Figure 4 and moderation analysis summary is tabulated in Table 4.
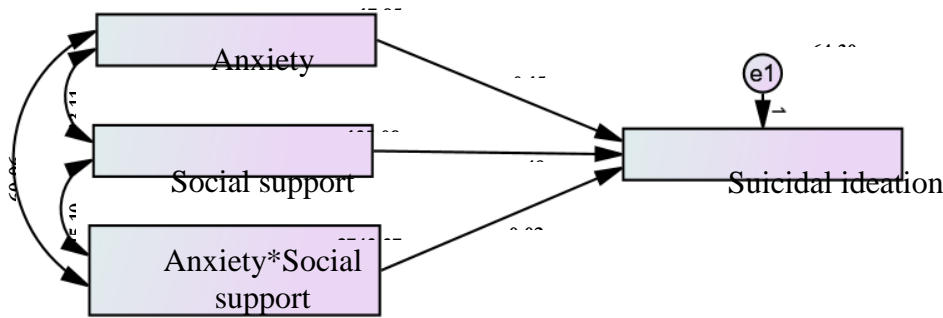

Figure 4 Moderation path using AMOS for anxiety and suicidal ideation

Table 4 Moderation analysis summary anxiety against suicidal ideation

Path	β	C.R	P-value
Anxiety → Suicidal ideation	.145	1.451	.147**
Social support → Suicidal ideation	-.475	-13.511	.000**
Anxiety*social support → Suicidal ideation	.016	1.987	.047**

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

Table 4 revealed a positive and significant moderating impact of social support on the relationship between anxiety and suicidal ideation (β = .016, t = 1.987, *p* < .05 for a two-tailed test). This indicates that the presence of the moderator in the relationship from anxiety to suicidal ideation is strengthened.

c) Moderation testing of stress with suicidal ideation

A moderation test was run, with stress as the independent variable, suicidal ideation as the dependent, and perceived social support as a moderator. Moderation path from AMOS is presented in Figure 5 and moderation analysis summary is tabulated in Table 5.
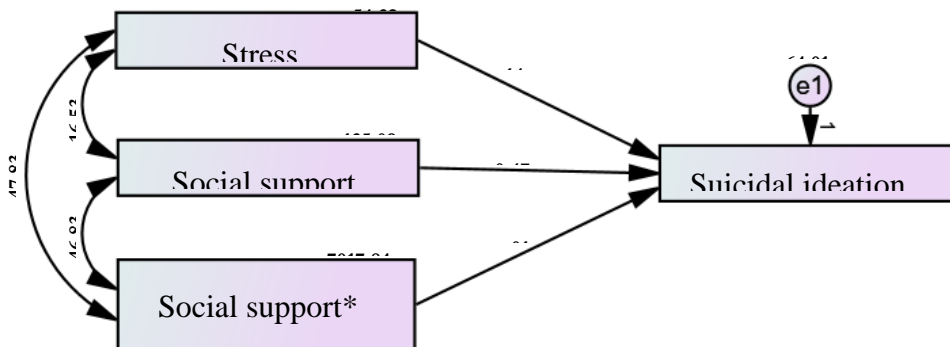

Figure 5 Moderation path using AMOS for stress and suicidal ideation

Table 5 Moderation analysis summary stress against suicidal ideation

Path	β	C.R	P-value
Stress → Suicidal ideation	-.136	-2.495	.013**
Social support → Suicidal ideation	.474	13.729	.000**
Stress*social support → Suicidal ideation	-.010	-2.161	.031**

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

Table 5 revealed a negative and significant moderating impact of social support on the relationship between stress and suicidal ideation (β = -.010, t = 2.161, *p* < .05 for a two-tailed test). This indicates that the presence of the moderator in the relationship from anxiety to suicidal ideation is strengthened.

d) Moderation testing of depression with suicidal ideation

A moderation test was run, with stress as the independent variable, suicidal ideation as the dependent, and perceived social support as a moderator. Moderation path from AMOS is presented in Figure 6 and moderation analysis summary is tabulated in Table 6.
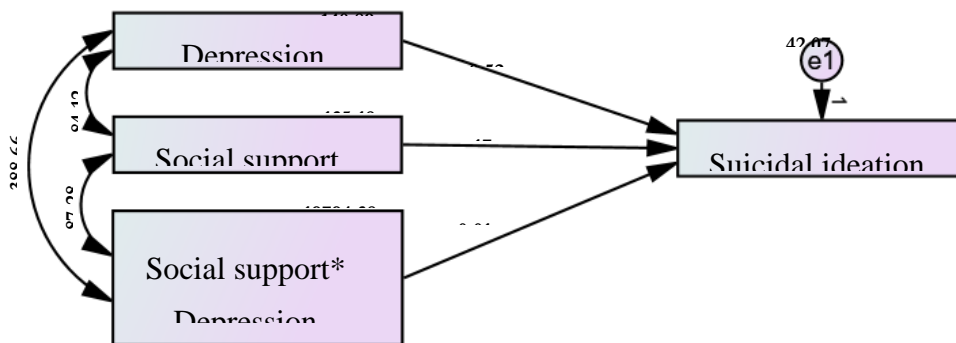

Figure 6 Moderation path using AMOS for depression and suicidal ideation

Table 6 Moderation analysis summary depression against suicidal ideation

Path	β	C.R	P-value
Depression → Suicidal ideation	.522	14.918	.000**
Social support → Suicidal ideation	-.170	-4.875	.000**
Depression*social support → Suicidal ideation	-.005	-2.091	.037**

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

Table 6 revealed a negative and significant moderating impact of social support on the relationship between depression and suicidal ideation (β = -.005, t = -2.091, *p* < .05 for a two-tailed test). This indicates that the presence of the moderator in the relationship from depression to suicidal ideation is dampened.

To conclude this sub-topic, moderation testing inferred that social support can be an enhancer and also a buffer on the relationship of psychological adjustment, anxiety, stress, and depression on suicidal ideation. With respect to the results from regression analysis and moderation testing, this

implies that H6 has been tested and accepted as there are evidence that social support can be a moderator for psychological adjustment, anxiety, stress and depression against suicidal ideation among students post-global outbreak of COVID-19 in Malaysia.

DISCUSSION

Social support, accessed via the Multidimensional Scale of Perceived Social Support (MSPSS), demonstrates a significant relationship with psychological adjustment, anxiety, stress, and depression. The findings reveal positive correlations between psychological adjustment, anxiety, stress, depression, and suicidal ideation. However, these variables show a negative correlation with social support. Relevant literature (Mikocka-Walus et al., 2021; Loades et al., 2020) underscores the importance of comprehending the interconnectedness of these variables amidst the psychological challenges encountered by students. The study into the post-pandemic psychological landscape of university students unveils a nuanced interplay among psychological adjustment, anxiety, stress, depression, suicidal ideation, and the crucial role of social support. Drawing on pertinent literature (Cheng et al., 2020; Zhang et al., 2021), the discussion delves into the intricate relationships among these factors, offering insights into the multifaceted challenges confronted by students following the global outbreak of COVID-19.

Psychological adjustment, anxiety, stress, depression, and suicidal ideation were assessed using the International Adjustment Disorder Questionnaire (IADQ), Coronavirus Anxiety Scale (CAS), Perceived Stress Scale (PSS), Beck Depression Inventory (BDI), and Scale of Suicidal Ideation (SSI) respectively. The research findings support the hypothesis proposing a significant relationship between suicidality and psychological adjustment, anxiety, stress, and depression among students. This is corroborated by literature (Li et al., 2023; Kim et al., 2022) highlighting the intricate interactions among these factors and their impact on suicidal ideation post-pandemic. Additionally, studies (Johnson et al., 2021; Liu et al., 2022; Smith, 2023) provide insights into the complex dynamics linking these variables and underscore the heightened vulnerability of students in the post-pandemic era.

Based on the data analysis, it is concluded that social support negatively correlates with suicidal ideation among university students post-pandemic. This suggests that higher levels of social support are associated with lower tendencies for suicidal ideation. Existing research (Van Orden et al., 2010; Seidler et al., 2023) underscores the protective role of social support against suicidal ideation, highlighting the need for targeted interventions to strengthen support systems for students. This finding aligns with Zadravec Sedivy et al. (2017), who also identified social support as a protective factor against suicide. Consistent with literature, the analysis demonstrates an inverse relationship between social support and suicidal ideation (Kawashima et al., 2020; Madjar et al., 2021). Strong social support networks are associated with lower rates of suicidal thoughts. The discussion delves into various dimensions of social support, including emotional, instrumental, and informational support, stressing their collective impact on mitigating the risk of suicidal ideation. The evolving role of social support in the digital age, including online communities and virtual networks, is explored (Kingsbury et al., 2021; Choi & Noh, 2019), considering their potential benefits and limitations in preventing suicidal ideation among university students.

Citing relevant literature (Lakey & Orehek, 2011; Gariepy et al., 2016), this study examines social support as a key intermediary influencing mental health outcomes and mitigating suicidal ideation risks. Numerous studies (Cohen, 2004; Umberson, 1992) establish a protective link between social support and mental health, exploring its emotional, instrumental, and informational dimensions. It delves into how social support buffers the adverse effects of COVID-19-induced mental health challenges, including stress, anxiety, and depression, among university students (Li et al., 2021; Huang et al., 2020). The research underscores the importance of supportive relationships in providing security and comfort, thereby alleviating stressors' impact on students' well-being amidst academic and personal disruptions.

The implications of the research on the relationship between psychological adjustment, anxiety, stress, depression, and suicidal ideation, along with the moderating effect of social support among university students post-pandemic in Malaysia, are far-reaching. This research contributes to theoretical understanding and offers practical insights for academia, mental health professionals, and policymakers. Universities should prioritize the development of comprehensive social support programs, including peer mentorship initiatives and awareness campaigns, to foster community and mitigate mental health challenges. Policymakers should consider policies prioritizing mental health and well-being, such as flexible academic accommodations and destigmatization of seeking help. Mental health support services should be accessible through digital platforms, and involving families in support networks is crucial. Suicide prevention programs should focus on mental health awareness, destigmatization, and early intervention.

CONCLUSION
All the hypotheses had been tested and discussed further in this article. The relationship of psychological adjustment, anxiety, stress, depression, and suicidal ideation and the moderating effect of social support among students post-pandemic has been explained in this article thoroughly. This article also discussed the implications and limitations of the research. Researcher also included recommendations for further refined future research that may use the same or partially same idea as the current research. Thus, the researchers hope that this research can help future researcher as a reference paper, especially for those investigating the same variables.

REFERENCES

Abdollahi, A., Carlbring, P., Khanbani, M., & Ghahfarokhi, S. A. (2016). *Emotional intelligence moderates perceived stress and suicidal ideation among depressed adolescent inpatients. Personality and Individual Differences, 102, 223–228.*doi:10.1016/j.paid.2016.07.015

Ahmad, N. M. (2020). Balancing Economic Growth and Preservation of Human Rights during Movement Control Order: The Malaysian Experience in Overcoming the Impacts of COVID-19 Pandemic. *INSLA E-Proceeding*, *3*(1), 589–595.E-ISSN: 2735-1742.

Alimoradi, Z., Ohayon, M., Griffiths, M., Lin, C., & Pakpour, A. (2022). Fear of COVID-19 and its association with mental health-related factors: Systematic review and meta-analysis. *BJPsych Open, 8*(2), E73. doi:10.1192/bjo.2022.26

Apicella, M., Serra, G., Trasolini, M., Andracchio, E., Chieppa, F., Averna, R., Iannoni, M. E., Infranzi, A., Moro, M., Guidetti, C., Maglio, G., Raucci, U., Reale, A., & Vicari, S. (2023). Urgent psychiatric consultations for suicide attempt and suicidal ideation before and after the COVID-19 pandemic in an Italian pediatric emergency setting. *Frontiers in Psychiatry*, *14*. https://doi.org/10.3389/fpsyt.2023.1135218

Arslan, G., Yıldırım, M., & Zangeneh, M. (2021). Coronavirus anxiety and psychological adjustment in college students: Exploring the role of college belongingness and Social Media Addiction. *International Journal of Mental Health and Addiction*, *20*(3), 1546–1559. https://doi.org/10.1007/s11469-020-00460-4

Arslan, G., Yıldırım, M., Zangeneh, M., & Ak, İ. (2022). Benefits of positive psychology-based story reading on Adolescent Mental Health and well-being. *Child Indicators Research*, *15*(3), 781–793. https://doi.org/10.1007/s12187-021-09891-4

Balkundi, S., & Fredrick, S. S. (2023). Students' perceptions of covid-19 stress and internalizing problems: Is social support a buffer? *Contemporary School Psychology*. https://doi.org/10.1007/s40688-023-00457-5

Barzilay, S., & Cohen, A. (2017). Psychological Models of Suicide. *Oxford Medicine Online*. doi:10.1093/med/9780190260859.003.0002

Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The Scale for Suicide Ideation. *Journal of Consulting and Clinical Psychology,47*(2), 343-352. doi:10.1037//0022-006x.47.2.343

Bin Kassim, M. S., Ahmad, N. A., Silim, U. A., Abdullah, M. N., Harun, N., Dollah, S. N., Sahril, N., Rezali, M. S., Chan Ying Ying, Redzuan, N. I., Salleh, A. M., Ishak, H., Aziz, S. A., Chin Loi Fei, Lee Chung Wah, Ab Rahman, N., Namal, M., Mohd Som, S., Fabian Sunil Dass, … Ibrahim, N. (2023). Prevalence of depression and suicidal ideation among patients in the main COVID-19 hospitals in Peninsular Malaysia. *Malaysian Journal of Public Health Medicine*, *23*(1), 110–117. https://doi.org/10.37268/mjphm/vol.23/no.1/art.1628

Brausch, A. M., Whitfield, M., & Clapham, R. B. (2023). Comparisons of mental health symptoms, treatment access, and self-harm behaviors in rural adolescents before and during the COVID-19 pandemic. *European Child & Adolescent Psychiatry*, *32*(6), 1051–1060. https://doi.org/10.1007/s00787-022-02039-x

Bruggeman, H., Charafeddine, R., Demarest, S., Nélis, G., & Gisle, L. (2023). BELHEALTH: A longitudinal study to monitor the mental health of the Belgian population post-pandemic. *European Journal of Public Health*, *33*(Supplement_2). https://doi.org/10.1093/eurpub/ckad160.492

Byrne, A., Barber, R., & Lim, C. H. (2021). Impact of the covid-19 pandemic – A mental health service perspective. *Progress in Neurology and Psychiatry*, *25*(2), 27. https://doi.org/10.1002/pnp.708

Çağış, Z. G., Öztekin, G. G., Aziz, I. A., Chirico, F., Rizzo, A., & Yıldırım, M. (2023). Meaning in life and loneliness as mediators between covid-19 anxiety and life satisfaction in the post-pandemic among the general population in Turkey: A serial mediation model. *European Journal of Investigation in Health, Psychology and Education*, *13*(10), 2214–2225. https://doi.org/10.3390/ejihpe13100156

Cheng, F. -F., Zhan, S. –H., Xie, A. –W., Cai, S. –Z., Hui, L., Kong, X. –X., Tian, J. –M., & Yan, W. –H. (2020). Anxiety IN Chinese pediatric medical staff during the outbreak of Coronavirus Disease 2019: A cross-sectional study, Translational Pediatrics, 9(3), 231-236. https://doi.org/10.21037/tp.2020.04.02

Cheung, T., Lam, S. C., Lee, P. H., Xiang, Y. T., & Yip, P. S. (2021). Global imperative of suicidal ideation in 10 countries amid the COVID-19 pandemic. Frontiers in Psychiatry, 11. https://doi.org/10.3389/fpsyt.2020.588781

Chima, C., Shalaby, R., Lawal, M. A., Vuong, W., Hrabok, M., Gusnowski, A., Surood, S., Greenshaw, A. J., Wells, K., & Agyapong, V. I. (2022). Covid-19 pandemic: Influence of gender identity on stress, anxiety, and depression levels in Canada. *Trauma Care*, *2*(1), 11–22. https://doi.org/10.3390/traumacare2010002

Choi, D. H., & Noh, G. Y. (2019). The influence of social media use on attitude toward suicide through psychological well-being, social isolation, and social support. *Information, Communication & Society, 23(10)*, 1427-1443. https://doi.org/10.1080/1369118X.2019.1574860

Chua, S. N. & Rao, M. V. (2021). *Youth suicide in Malaysia*. Relate Mental Health Malaysia, page 3

Cohen, S. (2004). Social relationships and health. *The American psychologist, 59(8),* 676-684. https://doi/org/10.1037/0003-066X.59.8.676

Dąbkowska, M., Kobierecka-Dziamska, A., & Prusaczyk, M. (2021). Anxiety, coping strategies and resilience among children and adolescents during COVID-19 pandemic: A systematic review.

Anxiety, Uncertainty, and Resilience During the Pandemic Period - Anthropological and Psychological Perspectives. https://doi.org/10.5772/intechopen.97828

Daly, M., Sutin, A. R., & Robinson, E. (2021). Depression reported by US adults in 2017–2018 and March and April 2020. *Journal of Affective Disorders*, *278*, 131–135. https://doi.org/10.1016/j.jad.2020.09.065

Debnath, S. (2021). THE ISSUE OF MENTAL HEALTH OF YOUTH IN POST PANDEMIC ERA. *Economic Crisis and Mentality of Youth in Post-Pandemic Period edited by Sagar Simlandy*, 211.

Farfán-Latorre, M., Estrada-Araoz, E. G., Lavilla-Condori, W. G., Ulloa-Gallardo, N. J., Calcina-Álvarez, D. A., Meza-Orue, L. A., Yancachajlla-Quispe, L. I., & Rengifo Ramírez, S. S. (2023). Mental health in the post-pandemic period: Depression, anxiety, and stress in Peruvian University students upon return to face-to-face classes. *Sustainability*, *15*(15), 11924. https://doi.org/10.3390/su151511924

Gariepy, G., Honkaniemi, H., & Quesnel-Vallee, A. (2016) Social support and protection from depression: systematic review of current findings in Western countries. *The British journal of psychiatry: the journal of mental science, 2019(4),* 284-293. https://doi.org/10.1192/bjp.bp.115.169094

Grewal, J. (2023). *Long-Term Covid-19 Neurological Symptoms: A Review of Epidemiology, Pathophysiology, and Treatment.* https://doi.org/10.58445/rars.147

Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R. C., Pirkis, J., Appleby, L., Arensman, E., Caine, E. D., Chan, L. F., Chang, S.-S., Chen, Y.-Y., Christensen, H., Dandona, R., Eddleston, M., Erlangsen, A., … Yip, P. S. (2020). Suicide risk and prevention during the COVID-19 pandemic. *The Lancet Psychiatry*, *7*(6), 468–471. https://doi.org/10.1016/s2215-0366(20)30171-1

Haleem, A., Javaid, M., & Vaishya, R. (2020). Effects of COVID-19 pandemic in daily life. *Current Medicine Research and Practice,* 1092), 78-79. https://doi.org/10.1016/j.cmrp.2020.03.011

Hamadani, J. D., Hasan, M. I., Baldi, A. J., Hossain, S. J., Shiraji, S., Bhuiyan, M. S., Mehrin, S. F., Fisher, J., Tofail, F., Tipu, S. M., Grantham-McGregor, S., Biggs, B.-A., Braat, S., & Pasricha, S.-R. (2020). Immediate impact of stay-at-home orders to control COVID-19 transmission on socioeconomic conditions, food insecurity, mental health, and intimate partner violence in Bangladeshi women and their families: An interrupted time series. *The Lancet Global Health*, *8*(11). https://doi.org/10.1016/s2214-109x(20)30366-1

Houben-Wilke, S., Goërtz, Y. M., Delbressine, J. M., Vaes, A. W., Meys, R., Machado, F. V., van Herck, M., Burtin, C., Posthuma, R., Franssen, F. M., Vijlbrief, H., Spies, Y., van 't Hul, A. J., Spruit, M. A., & Janssen, D. J. (2022). The impact of long covid-19 on mental health: Observational 6-month follow-up study. *JMIR Mental Health*, *9*(2). https://doi.org/10.2196/33704

Huang, Y., Wu, R., Wu, J., Yang, Q., Zheng, S., & Wu, K. (2020). Psychological resilience, self-acceptance perceived social support and their associations with mental health of incarcerated offenders in China. Asian Journal of Psychiatry, 52, 102166. https://doi.org/10.1016/j.ajp.2020.102166

Huarcaya-Victoria, J. (2020). Mental health considerations about COVID-19 pandemic. R*evista Peruana de Medicina Experimental y Salud Publica,* 37(2). https://doi.org/10.17843/RPMESP.2020.372.5419

Husain, M. O., Gratzer, D., Husain, M. I., & Naeem, F. (2021). Mental illness in the post-pandemic world: Digital Psychiatry and the future. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.567426

Husky, M. M., Kovess-Masfety, V., Gobin-Bourdet, C., & Swendsen, J. (2021). Prior depression predicts greater stress during covid-19 mandatory lockdown among college students in France. *Comprehensive Psychiatry*, *107*, 152234. https://doi.org/10.1016/j.comppsych.2021.152234

Husky, M. M., Pic, O., Callahan, S., & Navarro-Mateu, F. (2024). Twelve-month suicidal ideation, incidence and persistence among college students pre-pandemic and during the pandemic: A longitudinal study. *Psychiatry Research*, *331*, 115669. https://doi.org/10.1016/j.psychres.2023.115669

Ibrahim, N., Che Din, N., Ahmad, M., Amit, N., Ghazali, S. E., Wahab, S., Abdul Kadir, N. B., Halim, F. W., & A. Halim, M. R. (2019). The role of social support and spiritual wellbeing in predicting suicidal ideation among marginalized adolescents in Malaysia. *BMC Public Health*, *19*(S4). https://doi.org/10.1186/s12889-019-6861-7

Iob, E., Frank, P., Steptoe, A., & Fancourt, D. (2020). Levels of severity of depressive symptoms among at-risk groups in the UK during the COVID-19 pandemic. *JAMA Network Open*, *3*(10). https://doi.org/10.1001/jamanetworkopen.2020.26064

Islam, Md. S., Sujan, Md. S., Tasnim, R., Sikder, Md. T., Potenza, M. N., & van Os, J. (2020). Psychological responses during the covid-19 outbreak among university students in Bangladesh. *PLOS ONE*, *15*(12). https://doi.org/10.1371/journal.pone.0245083

Jamshaid, S., Bahadar, N., Jamshed, K., Rashid, M., Imran Afzal, M., Tian, L., Umar, M., Feng, X., Khan, I., & Zong, M. (2023). Pre- and post-pandemic (COVID-19) mental health of international students: Data from a longitudinal study. *Psychology Research and Behavior Management*, *Volume 16*, 431–446. https://doi.org/10.2147/prbm.s395035

John, A., Eyles, E., McGuinness, L. A., Okolie, C., Olorisade, B. K., Schmidt, L., Webb, R. T., Arensman, E., Hawton, K., Kapur, N., Moran, P., O'Connor, R. C., O'Neill, S., Gunnell, D., & Higgins, J. P. T. (2020). The impact of the COVID-19 pandemic on self-harm and suicidal behaviour: Protocol for a living systematic review. *F1000Research*, *9*, 644. https://doi.org/10.12688/f1000research.24274.1

Jones, E. A., Mitra, A. K., & Bhuiyan, A. R. (2021). Impact of covid-19 on Mental Health in Adolescents: A systematic review. *International Journal of Environmental Research and Public Health*, *18*(5), 2470. https://doi.org/10.3390/ijerph18052470

Kanval, N., Ihsan, H., Irum, S., & Ambreen, I. (2024). Human Capital Formation, Foreign Direct Investment Inflows, and Economic Growth: A Way Forward to Achieve Sustainable Development. *Journal of Management Practices, Humanities and Social Sciences*, *8*(3), 48-61.

Kawashima, Y., Yonemoto, N., Kawanishi C., Otsuka, K., Kinoshita, T., Shirakawa, O., Yoshimura, R., Eto, N., Hashimoto, S., Tachikawa, H., Furuno, T., Sugimoto, T., Ikeshita, K., Inagaki, M., & Yamada, M. (2020). Two-day assertive case-management educational program for medical personnel to prevent suicide attempts: A multicenter pre-post observational study. Psychiatry and Clinical Neurosciences, 74(6), 362-370. https//doi.org/10.1111/pcn.12999

Kim, E., & Yi, J.-S. (2022). Factors related to suicidal ideation and prediction of high-risk groups among youngest-old adults in South Korea. International Journal of Environmental Research and Public Health, 19(16), 10028. https://doi.org/10.3390/ijerph191610028

Kim, S., Son, H. –G., Lee, S., Park, H., & Jeong, K. –H. (2022). A study on the relationship between depression change types and suicide ideation before and after covid-19. Healthcare, 10(9), 1610. https;//doi.org/10.3390/healthcare10091610

Kingsbury, M., Reme, B. –A., Skogen, J. C., Sivertsen, B., Overland, S., Cantor, N., Hysing, M., Petrie, K., & Colman, I. (2021). Differential associations between types of social media use and university students' non-suicidal self-injury and suicidal behavior. *Computers in Human Behavior,* 115, 106614. https://doi.org/10.1016/j.chb.2020.106614

Lakey, B., & Orehek, E. (2011). Relational regulation theory: A new approach to explain the link between perceived social support and mental health. Psychological Review, 118(3), 482-495. https://doi.org/10.1037/a0023477

Leach, M., MacGregor, H., Scoones, I., & Wilkinson, A. (2021). Post-pandemic transformations: How and why covid-19 requires us to rethink development. *World Development*, *138*, 105233. https://doi.org/10.1016/j.worlddev.2020.105233

Lee, S. A. (2020). Coronavirus anxiety scale: A brief mental health screener for covid-19 related anxiety. *Death Studies*, *44*(7), 393–401. https://doi.org/10.1080/07481187.2020.1748481

Li, F., Luo, S., Mu, W., Li, Y., Ye, L., Zheng, X., Xu, B., Ding, Y., Ling, P., Zhou, M., & Chen, X. (2021). Effects of sources of social support and resilience on the mental health of different age groups during the COVID-19 pandemic. *BMC Psychiatry*, *21*(1). https://doi.org/10.1186/s12888-020-03012-1

Li, S., Liu, S., Zhang, P., Lin, Y., Cui, Y., Gu, Y., Wang, J., Liu, Z., & Zhang, B. (2023). Suicidal ideation in the general population in China after COVID-19 pandemic was initially controlled. *Journal of Affective Disorders, 323,* 834-840. https;//doi.org/10.1016/j.jad.2022.12.036

Li, X., et al. (2023). The Relationship between Social Support and Depressive Symptoms in Post-Pandemic Era: A Meta-Analysis. *Frontiers in Psychiatry*, *14*, 830266

Li, Y., Peng, J., & Tao, Y. (2021). Relationship between social support, coping strategy against COVID-19, and anxiety among home-quarantined Chinese University Students: A Path Analysis Modeling Approach. *Current Psychology*, *42*(13), 10629–10644. https://doi.org/10.1007/s12144-021-02334-x

Liu, C., Huang, N., Fu, M., Zhang, H., Feng, X. L., & Guo, J. (2021). Relationship between risk perception, social support, and mental health among general Chinese population during the COVID-19 pandemic. *Risk Management and Healthcare Policy*, *Volume 14*, 1843–1853. https://doi.org/10.2147/rmhp.s302521

Liu, L., Pollock, N. J., Contreras, G., Tonmyr, L., & Thompson, W. (2022) Pandemic-related impacts and suicidal ideation among adults in Canada: a population-based cross-sectional study. *Health Promot Chronic Dis Prev Can.* 2023:43(3): 105-18. https://doi.org/10.24095/hpcdp.43.3.01

Liu, M., & Shi, B. (2023). The effect of physical exercise on the anxiety of college students in the post-pandemic era: The mediating role of Social Support and proactive personality. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1128748

Liu, X., Chen, G., Hu, P., Guo, G., & Xiao, S. (2016). *Does Perceived Social Support Mediate or Moderate the Relationship Between Victimisation and Suicidal Ideation Among Chinese Adolescents? Journal of Psychologists and Counsellors in Schools, 27(01), 123–136.* doi:10.1017/jgc.2015.30

Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., Linney, C., McManus, M. N., Borwick, C., & Crawley, E. (2020). Rapid systematic review: The impact of social isolation and loneliness on the mental health of children and adolescents in the context of covid-19. *Journal of the American Academy of Child & Adolescent Psychiatry*, *59*(11). https://doi.org/10.1016/j.jaac.2020.05.009

Lozano-Verduzco, I., Vega-Cauich, J., Mendoza-Pérez, J. C., & Craig, S. L. (2023). Perceived social support and mental health indicators of a Mexican LGBT sample during the COVID-19 pandemic. *International Journal of Mental Health and Addiction*. https://doi.org/10.1007/s11469-023-01064-4

Madjar, N., Daka, D., Zalsman, G., & Shoval, G. (2021). Depression symptoms as a mediator between social support, non-suicidal self-injury, and suicidal ideation among Arab adolescents in Israel. *School Psychology International,* 014303432199874. https://doi.org/10.1177/0143034321998741

Maunder, R. G., & Hunter, J. J. (2020). Human resilience and coping in the face of a pandemic. Journal of the American Academy of Child & Adolescent Psychiatry, 59(3), 283-284

Mazza, M. G., Palladini, M., Poletti, S., & Benedetti, F. (2022). Post-COVID-19 depressive symptoms: Epidemiology, pathophysiology, and pharmacological treatment. *CNS Drugs*, *36*(7), 681–702. https://doi.org/10.1007/s40263-022-00931-3

Mikocka-Walus, A., Stokes, M., Evans, S., Olive, L., & Westrupp, E., (2021). Finding the power within and without: How can we strengthen resilience against symptoms of stress, anxiety, and depression in Australian parents during the covid-19 pandemic? Journal of Psychosomatic Research, 145, 110433. https://doi.org/10.1016/j.jpsychores.2021.110433

Min, S., Jeong, Y. H., Kim, J., Koo, J. W., & Ahn, Y. M. (2021). The aftermath: Post-pandemic psychiatric implications of the COVID-19 pandemic, a South Korean perspective. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.671722

Mishra, M. A., & Kumari, K. T. (2022). Stress-Nature, Causes And Coping Mechanism In A Post-Pandemic Environment. *Journal of Positive School Psychology*, *6*(8), 5016-5023.

Moore, S. E., Wierenga, K. L., Prince, D. M., Gillani, B., & Mintz, L. J. (2021). Disproportionate impact of the COVID-19 pandemic on perceived social support, mental health and somatic symptoms in sexual and gender minority populations. *Journal of Homosexuality*, *68*(4), 577–591. https://doi.org/10.1080/00918369.2020.1868184

Muntean, M., Colcear, D., Briciu, V., Lupse, M., & Radulescu, A. (2023). Exploring psychological factors linking burnout and depression among COVID-19 healthcare workers two years post-pandemic. *International Journal of Science and Research (IJSR)*, *12*(8), 994–1004. https://doi.org/10.21275/sr23808143958

Oon-arom, A., Wongpakaran, T., Kuntawong, P., & Wongpakaran, N. (2021). Attachment anxiety, depression, and perceived social support: a moderated mediation model of suicide ideation among the elderly. *International Psychogeriatrics*, *33*(2), 169–178. doi:10.1017/S104161022000054X

Özmete, E., & Pak, M. (2020). The relationship between anxiety levels and perceived social support during the pandemic of covid-19 in Turkey. *Social Work in Public Health*, *35*(7), 603–616. https://doi.org/10.1080/19371918.2020.1808144

Pakpour, A. H., Al Mamun, F., Hosen, I., Griffiths, M. D., & Mamun, M. A. (2020). A population-based nationwide dataset concerning the COVID-19 pandemic and serious psychological consequences in Bangladesh. *Data in Brief*, *33*, 106621. https://doi.org/10.1016/j.dib.2020.106621

Patel, M., et al. (2020). *Social support and post-pandemic depression: A meta-analysis of recent studies.* Journal of Affective Disorders, 215, 134-142.

Patel, V. (2020). Faculty opinions recommendation of multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *Faculty Opinions – Post-Publication Peer Review of the Biomedical Literature*. https://doi.org/10.3410/f.737753881.793573903

Rashid, A., Jehan, Z., & Kanval, N. (2023). External Shocks, Stock Market Volatility, and Macroeconomic Performance: An Empirical Evidence from Pakistan. *Journal of Economic Cooperation & Development*, *44*(2), 1-26.

Romm, K. F., Park, Y. W., Hughes, J. L., & Gentzler, A. L. (2021). Risk and protective factors for changes in adolescent psychosocial adjustment during Covid-19. *Journal of Research on Adolescence*, *31*(3), 546–559. https://doi.org/10.1111/jora.12667

Sadiq, A. (2023). *Post-Covid-19 Pandemic and Its Impact on Women's Sleep Patterns and Quality: A Cross-Cultural Analysis*. https://doi.org/10.20944/preprints202311.1520.v1

Sadiq, A. M. (2023). *The Role of Online Social Support Networks in Mitigating Post-Pandemic Psychological Distress among Women*. https://doi.org/10.21203/rs.3.rs-3639816/v1

Sarangi, A., Amor, W., Co, E. L., Javed, S., Usmani, S., & Rashid, A. (2022). Social media reinvented: Can social media help tackle the post-pandemic mental health onslaught? *Cureus*. https://doi.org/10.7759/cureus.21070

Schmidt, L., Sinyor, M., Webb, R. T., Marshall, C., Knipe, D., Eyles, E. C., John, A., Gunnell, D., & Higgins, J. P. T. (2023). A narrative review of recent tools and innovations toward automating living systematic reviews and evidence syntheses. *Zeitschrift Für Evidenz, Fortbildung Und Qualität Im Gesundheitswesen*, *181*, 65–75. https://doi.org/10.1016/j.zefq.2023.06.007

Seidler, Z. E., Wilson, M. J., Oliffe, J. L., Fisher, K., O'Connor, r., Pirkis, J., & Rice, S. M. (2023). Suicidal ideation in men during COVID-19: An examination of protective factors. *BMC Psychiatry, 23(1).* https://doi.org/10.1186/s12888-023-04539-9

Shidhaye, R. (2023). Global priorities for improving access to mental health services for adolescents in the post-pandemic world. *Current Opinion in Psychology*, *53*, 101661. https://doi.org/10.1016/j.copsyc.2023.101661

Silva, W. A., de Sampaio Brito, T. R., & Pereira, C. R. (2020). Covid-19 anxiety scale (CAS): Development and psychometric properties. *Current Psychology*, *41*(8), 5693–5702. https://doi.org/10.1007/s12144-020-01195-0

Smith, K. (2023). "We're Not Thriving, But We're Trying." Exploring Undergraduate Students' Resilience During the COVID-19 Pandemic. *Social Work Doctoral Dissertations. 28.* https://research.library.kutztown.edu/socialworkdissertations/28

Svob, C., Murphy, E., Wickramaratne, P. J., Gameroff, M. J., Talati, A., van Dijk, M. T., Yangchen, T., & Weissman, M. M. (2023). Pre- and post-pandemic religiosity and mental health outcomes: A

prospective study. *International Journal of Environmental Research and Public Health*, *20*(11), 6002. https://doi.org/10.3390/ijerph20116002

Taktak, S., & Oz, H. S. (2023). The relationship between depression, anxiety and stress levels on suicidal behavior in patients with schizophrenia. *Psychiatry and Clinical Psychopharmacology*, 108–116. https://doi.org/10.5152/pcp.2023.22606

Umberson, D. (1992). Gender, marital status and the social control of health behavior. *Social Science & Medicine, 34(8),* 907-917. https://doi.org/10.1016/0277-9536(92)90259-S

Valle-Palomino, N., Fernandez-Mantilla, M. M., Talledo-Sebedon, D. de, Guzman-Gonzalez, O. V., Carguachinchay-Huanca, V. H., Sosa-Lizama, A. A., Orlandini-Valle, B., & Vela-Miranda, O. M. (2023). Suicidal ideation and death by suicide as a result of the COVID-19 pandemic in Spanish-speaking countries: Systematic review. Journal of Clinical Medicine, 12(21), 6700. https://doi.org/10.3390/jcm12216700

Van Orden, K., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner Jr, T. E. (2010). The interpersonal theory of suicide. *Psychological review, 117(2*), 575.

Voitsidis, P., Gliatas, I., Bairachtari, V., Papadopoulou, K., Papageorgiou, G., Parlapani, E., Syngelakis, M., Holeva, V., & Diakogiannis, I. (2020). Insomnia during the COVID-19 pandemic in a Greek population. *Psychiatry Research*, *289*, 113076. https://doi.org/10.1016/j.psychres.2020.113076

Wallace, J. (2023). The Importance of Mental Health in a Post Pandemic Society: The Impact on College Minority Students. *Tapestry: Journal of Diversity, Equity, Inclusion, and Belonging in Education*, *1*(1), 7.

Wan, L., Yang, X., Liu, B., Zhang, Y., Liu, X., Jia, C., & Wang, X. (2022). Depressive symptoms as a mediator between perceived social support and suicidal ideation among Chinese adolescents. *Journal of Affective Disorders*, *302*, 234–240. https://doi.org/10.1016/j.jad.2022.01.061

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2021). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (covid-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, *17*(5), 1729. https://doi.org/10.3390/ijerph17051729

Wang, J., Huo, Y., & Liu, J. (2023). The reciprocal relationship between awe and perceived stress among Chinese early adolescents: A cross-lagged analysis. *Youth & Society*. https://doi.org/10.1177/0044118x231186830

Zandravec Sendivy, N., Podlogar, T., Kerr, D. C. R., & De Leo, D. (2017) Community social support as a protective factor against suicide: A gender-specific ecological study of 75 regions of 23 European countries. *Health & Place, 48*, 40-46. https://doi.org/10.1016/j.healthplace.2017.09.004

Zhang, Y. Y., Lei, Y. T., Song, Y., Lu, R. R., Duan, J. L., & Prochaska, J. J. (2019). Gender differences in suicidal ideation and health-risk behaviors among high school students in Beijing, China. *Journal of global health*, *9*(1). https://doi.org/10.7189/jogh.09.010604

Zhang, Y., Bao, X., Yan, J., Miao, H., & Guo, C. (2021). Anxiety and depression in Chinese students during the COVID-19 pandemic: A meta-analysis. *Frontiers in Public Health*, 9. https://doi.org/10.3389/fpubh.2021.697642

Zhao, S., & Peng, L. (2021). *Feeling Matters: Perceived Social Support Moderate the Relationship between Personal Relative Deprivation and Depressive Symptoms*. https://doi.org/10.21203/rs.3.rs-461250/v1

Zhao, S., Zhang, Y., Yu, C., Zhang, H., Xie, M., Chen, P., & Lin, D. (2023). Trajectories of perceived stress among students in transitionto college: Mindset Antecedents and Adjustment Outcomes. *Journal of Youth and Adolescence*, 52(9), 1873-1886. https://doi.org/10.1007/s10964-023-01788-5

Zhou, T., Xu, C., Wang, C., Sha, S., Wang, Z., Zhou, Y., Zhang, X., Hu, D., Liu, Y., Tian, T., Liang, S., Zhou, L., & Wang, Q. (2022). Burnout and well-being of healthcare workers in the post-pandemic period of covid-19: A perspective from the job demands-resources model. *BMC Health Services Research*, *22*(1). https://doi.org/10.1186/s12913-022-07608-z

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, *52*(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2