

PSYCHOMETRIC EVALUATION OF THE MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT (MSPSS) AMONG MALAYSIAN UNIVERSITY STUDENTS

Lynne Hsu Shi Xuan¹, Jodine Koay Rou Wenn², Jennie Liew Kah Nie³, Nur Syafiqah Binti Elias⁴, Nur Alya Maisarah Binti Jayazino⁵, *Chua Bee Seok⁶

¹⁻⁶Universiti Malaysia Sabah

*Corresponding email: chuabs@ums.edu.my

Abstract: Social support is crucial in order to help students cope and analyse their mental health and overall well-being. Students' mental health may be impacted by stress from their personal lives as well as their studies, which may lead to suicidal thoughts and suicide attempts. The objective of this study is to evaluate the Multidimensional Scale of Perceived Social Support (MSPSS) among Malaysian university students in terms of internal consistency, item-total correlation method and convergent, concurrent validity. The sample consisted of 268 university students from public and private universities around Malaysia. The MSPSS is an instrument to determine the degree of perceived social support from three sources: significant others, family, and friends. Cronbach's alpha of the three dimensions of MSPSS ranges from 0.898 to 0.916, which indicates a high reliability for the instrument. Item analysis using the item-total correlation method also shows that the items for the three distinct MSPSS dimensions are related to one another and measure the same construct. Convergent validity also shows that there was a significant correlation between the three dimensions, as evidenced by the correlation coefficient between them, which ranged from 0.477 to 0.528 with $p < .001$. On the other hand, concurrent validity scores demonstrate that the YSAS and ATTS scores have a negative and insignificant relationship with all three of the MSPSS dimensions. MSPSS is a reliable instrument that is suitable to assess the perceived social support for university students in Malaysia. However, the concurrent validity of this instrument required further research.

Keywords: Reliability, Validity, Item Analysis, Multidimensional Scale of Perceived Social Support (MSPSS)

INTRODUCTION

University life presents a variety of challenges, and social support plays a crucial role in helping students navigate these difficulties. It significantly influences students' ability to cope, maintain psychological well-being, and manage their mental health. Social support refers broadly to the perceived availability of resources—emotional, informational, and practical—provided by others in an individual's social network. It encompasses mutual encouragement, advice, and validation of one's experiences and decisions (Zhou, 2014). Research by Holliman et al. (2021) underscores the critical role that social support plays in enhancing university students' psychological well-being.

The presence of strong social support networks is often linked to better academic performance, greater engagement, and overall personal growth. Conversely, a lack of support can hinder students' development and contribute to mental health challenges. For instance, support from family, friends, and significant others has been shown to positively correlate with academic competence, school engagement, social acceptance, and aspirations for further education. It is also negatively associated with stress (Lau et al., 2018; Mulyadi et al., 2020). Furthermore, Alsubaie et al. (2019) found that social support not only improves quality of life but also reduces depressive symptoms among students.

One of the most severe consequences of poor mental health is suicide, which is defined as the act of self-inflicted harm with the intent to die (Turecki & Brent, 2016). Suicide risk increases when individuals are exposed to mental health disorders, negative life events, prior suicide attempts, or a diminished sense of life's value (Chan et al., 2022; Wu et al., 2021). University students are particularly vulnerable, especially those who lack adequate social support. Sivertsen et al. (2019) highlighted that suicidal thoughts, suicide attempts, and non-suicidal self-harming behaviours are more common among students who are socially isolated—such as those who are single and living alone.

Academic pressures and personal challenges can negatively affect students' mental health, leading to suicidal ideation. Duncan et al. (2019) found that reduced social support is associated with increased depressive symptoms, further emphasizing its protective role. Understanding the function of social support in relation to suicide is critical for developing effective prevention and intervention strategies aimed at improving students' mental health and overall well-being.

Globally, suicide remains a pressing public health issue. According to the World Health Organization (2023), approximately 700,000 people die by suicide each year, and for each of these deaths, many more attempt suicide. Suicide was the fourth leading cause of death among individuals aged 15 to 29 worldwide in 2019. In Malaysia, the situation is similarly concerning. Chan and Ch'ng (2022) reported a rising suicide rate among university students, reinforcing the urgent need to explore the role of social support in mitigating these risks. International studies have shown that social support helps reduce suicidal ideation by buffering against anxiety and depressive symptoms (Aizpurua et al., 2021; Chu, 2021). However, there is a lack of studies examining this issue specifically within the Malaysian context, making such research both timely and necessary.

Perceived social support has been conceptualized as being shaped by beliefs about one's self-worth and the perceived availability and responsiveness of others (Vaingankar et al., 2012). One widely used tool for measuring perceived social support is the Multidimensional Scale of Perceived Social Support (MSPSS), developed by Zimet, Dahlem, Zimet, and Farley in 1988. The MSPSS assesses support from three key sources: family, friends, and significant others. It comprises 12 items, with four items assigned to each subscale. Given its simplicity and effectiveness, the MSPSS has been used globally; however, further validation is required to ensure its reliability and cultural appropriateness for use among university students in Malaysia.

Research Objective

This study aims to evaluate the psychometric properties of the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) among university students in Malaysia. Specifically, the objectives are:

1. To assess the internal consistency reliability of the MSPSS and its three subscales (family, friends, and significant others).
2. To examine the convergent and concurrent validity of the MSPSS in the context of Malaysian university students.
3. To conduct item analysis using item-total correlation methods to evaluate the performance of each item within the scale.

Literature Review

The Multidimensional Scale of Perceived Social Support (MSPSS), developed by Zimet et al. (1988), is a widely used instrument for assessing perceived support from family, friends, and significant others. Numerous studies across diverse populations and cultural contexts have demonstrated acceptable reliability and validity of MSPSS.

Ebrahim and Alothman (2022) validated the Arabic version of the MSPSS among 606 Saudi mothers of children with developmental disabilities. Their results showed high internal consistency for all subscales (Cronbach's alpha and McDonald's omega > .90) and strong item-total correlations, supporting the scale's psychometric robustness.

In Romania, Robu et al. (2021) conducted a three-part study to validate the MSPSS among adolescents. The findings supported its factorial validity, internal consistency ($\alpha > .86$ for subscales), and test-retest reliability. Confirmatory factor analysis (CFA) confirmed a three-factor structure, with measurement invariance across age and gender, and concurrent validity was demonstrated through correlations with well-being and stress measures.

Bugajski et al. (2019) examined the MSPSS among patients with heart failure and COPD. The study found excellent internal consistency (Cronbach's $\alpha > .90$) and confirmed the three-factor structure, reinforcing its suitability for clinical populations. Similarly, Calderon et al. (2021) validated the Spanish MSPSS among 925 cancer patients. CFA demonstrated measurement invariance across age and sex, with women reporting higher friend support. The scale showed strong reliability and construct validity, proving its usefulness in healthcare contexts.

In Indonesia, Laksmi et al. (2020) assessed the MSPSS among 299 adolescent disaster survivors. The translated version exhibited solid factorial validity, internal consistency (composite reliability $> .70$), and measurement invariance across gender, supporting its application in culturally and emotionally diverse settings. Existing studies consistently confirm that the MSPSS is a reliable and valid tool across populations, languages, and contexts. However, further validation is warranted in the Malaysian university context to ensure its cultural relevance and psychometric soundness.

METHODOLOGY

Research Design

This study adopted a quantitative research design using self-administered surveys to evaluate the reliability and validity of the Multidimensional Scale of Perceived Social Support (MSPSS), Zimet et al. (1988) among university students in Malaysia. The study assessed the scale's internal consistency, convergent validity, and factorial structure through three distinct analyses: reliability testing, convergent validity assessment, and exploratory factor analysis.

Participants

A total of 268 university students in Malaysia participated in the study, selected through convenience sampling, a non-probability method based on participant availability and accessibility (Lavrakas, 2013). University students were chosen due to the growing concern over mental health and well-being among young adults. Eligible respondents were invited to complete an online

questionnaire Google Forms and distributed via social media such as Whatsapp, Instagram, Telegram, Facebook, and Tik Tok.

Instruments

The Multidimensional Scale of Perceived Social Support (MSPSS)

The Multidimensional Scale of Perceived Social Support (MSPSS) is an inventory designed by Zimet et al., (1988). The MSPSS is a brief 12-item, self-administered measurement tool with three subscales, Family (items 3, 4, 8, and 11), Friends (items 6, 7, 9, and 12), and Significant Others (items 1, 2, 5, and 10). Each item uses a seven-point Likert scale which ranges from 1 (very strongly disagree) to 7 (very strongly agree). A higher score indicates greater social support perceived by an individual with a total score range of 12-84, or it also can be scored through subscales by adding the items in each subscale and then dividing by 4. These items are : (1) There is a special person who is around when I am in need. (2) There is a special person with whom I can share joys and sorrows. (3) My family really tries to help me. (4) I get the emotional help & support I need from my family. (5) I have a special person who is a real source of comfort to me. (6) My friends really try to help me. (7) I can count on my friends when things go wrong. (8) I can talk about my problems with my family. (9) I have friends with whom I can share my joys and sorrows. (10) There is a special person in my life who cares about my feelings. (11) My family is willing to help me make decisions. (12) I can talk about my problems with my friends.

Yatt Suicide Attitude Scale (YSAS)

The original Malay version of the YSAS had been developed by a research team from Universiti Kebangsaan Malaysia (Ibrahim et al., 2022). It consists of 10 items to gauge two components, Suicidal Ideation and Suicidal Attempts, where each with a total of five items . The total number of items is 10 scored on a 5-point Likert Scale ranging from 1 (Never) to 5 (Very Often).

For the part suicidal ideation section, these item are : (1) I have no will to continue my life. (2) I feel like there is no reason for me to live. (3) It has crossed my mind to end my life when I am faced with a big problem. (4) I have once thought to end my life. (5) It has crossed my mind to end my life but I am afraid to do so. The second part, suicide attempt section : (6) I have hurt myself for the purpose of ending my life. (7) I have tried certain methods to end my life. (8) I have tried to end my life but ceased to do so when I am reminded by something (loved ones, sins etc.) (9) I have tried to end my life but it did not work. (10) I have attempted to end my life but I actually did not want to die.

Attitudes Towards Suicide (ATTS)

The Attitudes Towards Suicide (ATTS) questionnaire was created by Salander Renberg and Jacobsson (2003) with the intention of creating a workable tool that would allow attitudes towards suicide to be measured widely. The ATTS questionnaire is originally 61 questions with 11 domains but for this study, we only used 1 domain (Ability to understand and accept suicide') that contained six items. It used scored on a 5-point Likert scale which ranges from 1 (Strongly Disagree) to 5 (Strongly Agree) These are the six items for the domain (Ability to understand and accept suicide): (1) Suicide is an acceptable means to terminate an incurable disease. (2) There may be situations where the only reasonable resolution is suicide. (3) I could say that I would take my life without actually meaning it. (4) Suicide can sometimes be a relief for those involved. (5) I would consider the possibility of taking my life if I were to suffer from a severe, incurable, disease. (6) People do have the right to take their own lives.

Data Analysis

Data were analyzed using IBM SPSS Statistics Version 29.0. To assess the reliability of the *Multidimensional Scale of Perceived Social Support* (MSPSS), Cronbach's Alpha was employed to evaluate the internal consistency of the scale. According to Tavakol and Dennick (2011), a

Cronbach's Alpha value between 0.70 and 0.90 indicates good internal reliability. To establish convergent validity, Pearson correlation analyses were conducted between the MSPSS and two external measures: the Yatt Suicide Attitude Scale (YSAS), which assesses suicidal ideation and suicide attempts, and the Attitudes Towards Suicide Scale (ATTS) which designed to measure public attitudes toward suicide. These instruments were chosen due to their relevance in the domain of mental health and well-being. A correlation coefficient (r) of 0.50 or higher was considered acceptable for convergent validity, in line with the guidelines by Nikolopoulou (2023). A positive correlation was expected, indicating that higher perceived social support is associated with more adaptive or protective attitudes toward suicide. As noted by Senthilnathan (2019), a positive correlation implies that as one variable increases, the other also increases, supporting the theoretical alignment among the instruments used.

RESULTS

Reliability of the Multidimensional Scale of Perceived Social Support (MSPSS)

The reliability of Malaysia's version of Multidimensional Scale of Perceived Social Support (MSPSS) was examined by using the method of internal consistency Cronbach's alpha. According to Hu and Bentler (1999), a good internal consistency is indicated by a coefficient of more than 0.80, whereas acceptable internal consistency is indicated by a coefficient greater than 0.70. The result showed Cronbach's Alpha for the 3 dimensions of MSPSS the constructs in the study ranged from .898 to .916 (refer Table 1). All of the dimensions showed that the reliability is high because it exceeded the recommended threshold of .0.6, in the support from family dimension (alpha = .898), support from friends dimension (alpha = .903), and dimension of support from significant others (alpha = .916). Besides that, item analysis was conducted to improve our understanding of the reliability of MSPSS.

Table 1

Cronbach's Alpha of the Subscale of the Multidimensional Scale of Perceived Social Support (MSPSS)

Dimensions	Items	Cronbach's Alpha
Support from Family	3, 4, 8, 11	.898
Support from Friends	6, 7, 9, 12	.903
Support from Significant others	1, 2, 5, 10	.916

Item Analysis of the Multidimensional Scale of Perceived Social Support (MSPSS)

In this study, item analysis was conducted using the item-total correlation method to evaluate the performance of each item within the MSPSS. According to Cronbach (1951), an item-total correlation coefficient above 0.30 is considered acceptable for item retention. As shown in Table 2, all MSPSS items exceeded this threshold, indicating satisfactory internal consistency and confirming that each item contributes meaningfully to the overall scale. Detailed statistics are presented in Tables 2 and 3.

Table 2

Item Analysis of the Multidimensional Scale of Perceived Social Support (MSPSS)

Dimension/Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Support from Family		
MSPSS_3	.806	.861
MSPSS_4	.833	.846
MSPSS_8	.747	.885
MSPSS_11	.735	.883
Support from Friends		
MSPSS_6	.793	.871
MSPSS_7	.773	.878
MSPSS_9	.792	.871
MSPSS_12	.774	.877
Support from Significant Others		
MSPSS_1	.859	.874
MSPSS_2	.831	.884
MSPSS_5	.756	.909
MSPSS_10	.791	.898

The inter-item correlation coefficients within each MSPSS subscale further supports this finding. Support from Family dimension, the correlation ranged from .632 to .704; Support from Friends: correlations ranged from .661 to .732; Support from Significant Others: correlations ranged from .699 to .753. These coefficients demonstrate strong internal coherence within each dimension, suggesting that the items are interrelated and consistently measure their respective constructs. The results from the item-total and inter-item correlation analyses confirm that the MSPSS is a reliable instrument for assessing perceived social support among Malaysian university students.

Table 3
Inter-Item Analysis of the Multidimensional Scale of Perceived Social Support (MSPSS)

Support from Family Dimension			
Item	MSPSS 3	MSPSS 4	MSPSS 8
MSPSS_3			
MSPSS_4	.799		
MSPSS_8	.651	.735	
MSPSS_11	.704	.688	.632
Support from Friends Dimension			
Item	MSPSS 6	MSPSS 7	MSPSS 9
MSPSS_6			
MSPSS_7	.732		
MSPSS_9	.730	.662	
MSPSS_12	.661	.689	.732
Support from Significant Other Dimension			
Item	MSPSS_1	MSPSS_2	MSPSS_5
MSPSS_1			
MSPSS_2	.855		
MSPSS_5	.704	.685	
MSPSS_10	.753	.712	.699

Convergent Validity of the Malaysia version of Multidimensional Scale of Perceived Social Support (MSPSS)

Convergent validity refers to the degree to which measures that are theoretically related are empirically correlated. A correlation coefficient (r) of 0.50 or higher is generally considered acceptable evidence of convergent validity (Nikolopoulou, 2023). Given that the three subscales of the MSPSS: Support from Family, Support from Friends, and Support from Significant Others which designed to assess distinct yet conceptually related sources of perceived social support, it is expected that they would be positively and significantly correlated.

In the current study, the correlation coefficients among the three dimensions of the MSPSS ranged from $r = .477$ to $r = .528$, with all correlations statistically significant at $p < .001$ (see Table 4). Although slightly below the

conventional 0.50 threshold in one case, these coefficients still indicate a moderate and meaningful relationship among the subscales.

The positive and statistically significant intercorrelations among the MSPSS subscales support the instrument's convergent validity. These findings are consistent with the theoretical foundation of the MSPSS, which conceptualizes social support as a multidimensional yet cohesive construct. Thus, the results provide evidence that the three dimensions of the Malaysian version of the MSPSS are appropriately aligned and collectively measure the broader concept of perceived social support adequacy.

Concurrent Validity of the Malaysian Version of the Multidimensional Scale of Perceived Social Support (MSPSS)

According to Nikolopoulou (2023a), strong evidence of concurrent validity is generally indicated by a correlation coefficient (r) of 0.70 or higher, although coefficients ranging from 0.50 to 0.70 may also be considered acceptable depending on the research context (Frost, 2022). In the present study, the correlation coefficients between the three dimensions of the MSPSS and the Yatt Suicide Attitude Scale (YSAS) ranged from $r = -.123$, $p < .05$ to $r = -.385$, $p < .001$ (see Table 4). Similarly, the correlation between MSPSS and the Attitudes Toward Suicide Scale (ATTS) ranged from $r = -.148$, $p < .001$ to $r = -.320$, $p < .001$.

Although the strength of these correlations is weak to moderate, all associations were statistically significant. The negative direction of the correlations indicates that higher perceived social support is associated with more adaptive or protective attitudes toward suicide. This pattern of results is consistent with theoretical expectations and prior empirical findings, which suggest that greater social support is linked to reduced suicidal ideation and more positive coping attitudes.

Therefore, despite the modest effect sizes, the consistent and significant inverse relationships between MSPSS and both YSAS and ATTS scores provide supportive evidence for the concurrent validity of the Malaysian version of the MSPSS. These findings suggest that the MSPSS meaningfully

reflects constructs related to suicidal attitudes, thereby supporting its use in psychological and mental health research within the Malaysian context.

Table 4

Matric Correlation between the dimensions of the Multidimensional Scale of Perceived Social Support (MSPSS), the Yatt Suicide Attitude Scale (YSAS) and the Attitudes Toward Suicide Scale (ATTS).

Dimension	Family	Friends	Significant other	Suicidal ideation	Suicide Attempt
Family					
Friends	.477**				
Significant other	.493**	.528**			
Suicidal ideation	-.385**	-.204**	-.315**		
Suicide Attempt	-.286**	-.127*	-.123*	.696**	
Ability to understand and accept suicide	-.320**	-.148*	-.243**	.562**	.482**

DISCUSSION

The findings of this study indicate that the Malaysian version of the Multidimensional Scale of Perceived Social Support (MSPSS) is a reliable and valid instrument for assessing perceived social support in relation to suicidal behavior among university students. The reliability of the scale was supported by high internal consistency, with Cronbach’s alpha values exceeding 0.80 across all three dimensions—Family, Friends, and Significant Others—suggesting strong internal reliability. This is consistent with the standard threshold for acceptable reliability in psychological measures (Nunnally & Bernstein, 1994).

Item analysis further reinforced the reliability of the MSPSS. All items demonstrated item-total correlation coefficients above 0.30, meeting the criterion proposed by Cronbach (1951) for acceptable item retention. Additionally, analyses of Cronbach's alpha values after the removal of individual items did not result in any notable decrease, indicating no redundancy within the scale. These results affirm that the MSPSS items are consistently measuring the same underlying construct without unnecessary overlap.

In terms of construct validity, both convergent and concurrent validity were evaluated. Convergent validity was demonstrated through positive and statistically significant correlations among the three dimensions of the MSPSS. Although the correlation coefficients ranged from $r = .477$ to $r = .528$, which fall just around or slightly below the 0.50 benchmark typically regarded as indicative of strong convergent validity (Nikolopoulou, 2023), the results are still meaningful. They support the theoretical expectation that individuals perceiving high levels of support from one source (e.g., family) are also likely to perceive support from other sources (e.g., friends and significant others).

The findings align with previous research emphasizing the importance of multiple support sources in buffering against psychological distress. For example, family support is particularly significant in collectivist cultures like Malaysia, where close familial bonds are valued, and students often turn to parents for guidance during stressful situations (Alsubaie et al., 2019). Similarly, peer support plays a vital role in the university context, as friends provide both emotional and instrumental resources (Cherry, 2023). Significant others also serve as key support figures, especially during periods of emotional vulnerability, by offering empathy and practical help (Vaingankar et al., 2020).

Regarding concurrent validity, the MSPSS dimensions showed statistically significant but weak negative correlations with both the Yatt Suicide Attitude Scale (YSAS) and the Attitudes Toward Suicide Scale (ATTS), with coefficients ranging from $r = -.123$ to $-.385$. Although these values are below the commonly accepted threshold of 0.50 for strong concurrent validity (Nikolopoulou, 2023), they are consistent with previous studies suggesting that perceived social support does not always have a direct or strong

relationship with suicidal attitudes or behaviors. For instance, Panesar et al. (2021) noted that perceived social support may not function as a direct predictor but rather as a buffering or moderating variable in the relationship between stress and suicidal behavior. Similarly, Endo et al. (2013) found that individuals experiencing high levels of suicidal ideation tend to report lower levels of both received and given social support, which may explain the observed negative correlations in this study.

CONCLUSION

This study provides empirical support for the reliability and validity of the Malaysian version of the Multidimensional Scale of Perceived Social Support (MSPSS) among university students. High internal consistency across the three subscales: Support from Family, Friends, and Significant Others demonstrated that the MSPSS is a reliable instrument for measuring perceived social support in this population. Convergent validity was supported through moderate, positive correlations among the subscales, indicating that each dimension consistently reflects the broader construct of social support. Although the correlations with suicide-related measures (YSAS and ATTS) were weak, the statistically significant negative associations offer partial support for concurrent validity and are consistent with prior literature on the indirect role of social support in suicide-related attitudes and behaviors. Overall, the findings suggest that the MSPSS is a psychometrically sound tool for assessing perceived social support among Malaysian university students, and it can be effectively utilized in both research and applied settings, particularly in the context of mental health and suicide prevention initiatives. Future studies are encouraged to further explore the mediating and moderating roles of social support in the relationship between stressors and suicidal behavior.

Informed Consent Statement

An informed consent form was attached to the front page of the questionnaire. Only participants who provided their consent proceeded to complete the questionnaire.

Conflict of Interest

No conflict of interest.

Ethics Statement

This study was conducted in accordance with the ethical standards of research involving human participants. Ethical approval was obtained from the Universiti Malaysia Sabah, Medical Research Ethics Committee [JKEtika 1/25 (22)].

Author Contributions

Lynne Hsu Shi Xuan, Jodine Koay Rou Wenn, Jennie Liew Kah Nie, Nur Syafiqah Binti Elias, Nur Alya Maisarah Binti Jayazino, involved in data collection and article writing, Chua Bee Seok as corresponding author involved in checking and editing the article.

Funding

This research was supported by the Ministry of Higher Education Malaysia under the Fundamental Research Grant Scheme (FRGS) [Grant Code: FRG0643-1/2024].

Acknowledgement

The author extends sincere appreciation to the Ministry of Higher Education Malaysia for its generous support through the Fundamental Research Grant Scheme (FRGS) [Grant Code: FRG0643-1/2024]. This funding was pivotal in the successful implementation of the project titled "*Fostering Adolescents' Positive Mental Health Using Positive Psychology Resilience Building Module*." Many thanks also to those who participated as respondents in this study. The resources provided have meaningfully contributed to advancing research in the areas of adolescent mental health and resilience.

Data Availability Statement

Not Applicable

REFERENCES

- Aizpurua, E., Caravaca-Sánchez, F., & Taliaferro, L. (2021). Suicidality Among College Students in Spain: Prevalence and Associations with Substance Use, Social Support, and Resilience. *Death Studies*, 46, 2025 - 2030. <https://doi.org/10.1080/07481187.2021.1888823>
- Alsubaie, M., Stain, H., Webster, L., & Wadman, R. (2019). The role of sources of social support on depression and quality of life for university students. *International Journal of Adolescence and Youth*, 24, 484 - 496. <https://doi.org/10.1080/02673843.2019.1568887>
- Bugajski, A., Frazier, S. K., Moser, D. K., Lennie, T. A., & Chung, M. (2019). Psychometric testing of the Multidimensional Scale of Perceived Social Support in patients with comorbid COPD and heart failure. *Heart & Lung*, 48(3), 193–197. <https://doi.org/10.1016/j.hrtlng.2018.09.014>
- Calderon, C., Ferrando, P. J., Lorenzo-Seva, U., Gomez-Sanchez, D., Fernandez-Montes, A., Palacin-Lois, M., Antonanzas-Basa, M., Rogado, J., Manzano-Fernandez, A., Ferreira, E., Asensio-Martinez, E., & Jimenez-Fonseca, P. (2021). Multidimensional Scale of Perceived Social Support (MSPSS) in Cancer Patients: Psychometric Properties and Measurement Invariance. *Psicothema*, 33(1), 131–139. <https://doi.org/10.7334/psicothema2020.263>
- Chan, S. Y., & Ch'ng, C. K. (2022). Analysis of Risk Factors Affecting Suicidal Ideation among Public University Students in Malaysia using Analytic Hierarchy Process. *ASM Science Journal*, Volume 17. <https://doi.org/10.32802/asmscj.2022.1289>
- Cherry, K. (2023, March 3). *How Social Support Contributes to Psychological Health*. Verywell Mind. <https://www.verywellmind.com/social-support-for-psychological-health-4119970>
- Chu, H., Yang, Y., Zhou, J., Wang, W., Qiu, X., Yang, X., Qiao, Z., Song, X., & Zhao, E. (2021). Social Support and Suicide Risk Among Chinese University Students: A Mental Health Perspective. *Frontiers in Public Health*, 9. <https://doi.org/10.3389/fpubh.2021.566993>
- Clark, L. A., & Watson, D. (2016). Constructing validity: Basic issues in objective scale development. In A. E. Kazdin (Ed.), *Methodological issues and strategies in clinical research* (pp. 187–203). American Psychological Association. <https://doi.org/10.1037/14805-012>

- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/10.1007/bf02310555>
- Duncan, J. M., Lucier-Greer, M., Ferraro, A. J., & Reed-Fitzke, K. (2019). The Role of Social Support in Predicting Depression and Task Overload Among College Students. *Journal of Human Sciences and Extension*, 7(1), 12. <https://doi.org/10.54718/BBL59127>
- Ebrahim, M. T., & Alothman, A. A. (2022). The reliability and validity of the multidimensional scale of perceived social support (MSPSS) in mothers of children with developmental disabilities in Saudi Arabia. *Research in Autism Spectrum Disorders*, 92, 101926. <https://doi.org/10.1016/j.rasd.2022.101926>
- Ellinor Salander Renberg, & Lars Jacobsson. (2003). Development of a questionnaire on attitudes towards suicide (ATTS) and its application in a Swedish population. *Suicide & Life - Threatening Behavior*, 33(1), 52–64. <https://www.proquest.com/scholarly-journals/development-questionnaire-on-attitudes-towards/docview/224872272/se-2?accountid=44242>
- Endo, G., Tachikawa, H., Fukuoka, Y., Aiba, M., Nemoto, K., Shiratori, Y., Matsui, Y., Doi, N., & Asada, T. (2013). How perceived social support relates to suicidal ideation: A Japanese social resident survey. *International Journal of Social Psychiatry*, 60(3), 290–298. <https://doi.org/10.1177/0020764013486777>
- Frost, J. (2022, November 19). *Concurrent validity: definition, assessing & examples*. Statistics by Jim. <https://statisticsbyjim.com/basics/concurrent-validity/>
- Holliman, A., Waldeck, D., Jay, B., Murphy, S., Atkinson, E., Collie, R., & Martin, A. (2021). Adaptability and Social Support: Examining Links With Psychological Wellbeing Among UK Students and Non-students. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.636520>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling*, 6(1), 1–55.

- Ibrahim, N., Che Din, N., Amit, N., Ghazali, S. E., Mohd Safien, A., & Siau, C. S. (2022). Psychometric Properties and the Cut-Off Point of the English Version of the Yatt Suicide Attitude Scale. *Inquiry (United States)*, 59, 1–9. <https://doi.org/10.1177/00469580221096276>
- Laksmita, O. D., Chung, M-H., Liao, Y-M., Chang, P-C. (2020). Multidimensional Scale of Perceived Social Support in Indonesian adolescent disaster survivors: A psychometric evaluation. *PLoS ONE*, 15(3). <https://doi.org/10.1371/journal.pone.0229958>
- Lau, E., Chan, K., & Lam, C. (2018). Social Support and Adjustment Outcomes of First-Year University Students in Hong Kong: Self-Esteem as a Mediator. *Journal of College Student Development*, 59, 129 - 134. <https://doi.org/10.1353/csd.2018.0011>
- Lavrakas, P. (2013). Convenience Sampling. *Encyclopedia of Survey Research Methods*, December. <https://doi.org/10.4135/9781412963947.n105>
- Mulyadi, P., Zamralita., & Saraswati, K. (2020). Social Support and Students' Academic Engagement. *Proceedings of the 2nd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2020)*. <https://doi.org/10.2991/assehr.k.201209.068>.
- Nikolopoulou, K. (2023a, June 22). *What is concurrent validity? | Definition & examples*. Scribbr. <https://www.scribbr.com/methodology/concurrent-validity/>
- Panesar, B., Rosic, T., Rodrigues, M., Sanger, N., Baptist-Mohseni, N., Hillmer, A., Chawar, C., D'Elia, A., Minuzzi, L., Thabane, L., & Samaan, Z. (2021, September 10). The Role of Perceived Social Support in the Association Between Stressful Life Events and Suicidal Behavior. https://www.researchgate.net/publication/354509685_The_Role_of_Perceived_Social_Support_in_the_Association_Between_Stressful_Life_Events_and_Suicidal_Behavior
- Robu, V., Sandovici, A., & Ciudin, M. (2021). Measuring Perceived Social Support In Romanian Adolescents: Psychometric Properties Of The Multidimensional Scale Of Perceived Social Support. *Journal of Innovation in Psychology, Education and Didactics*, 24(1), 65–90.
- Senthilnathan, S. (2019). Usefulness of Correlation Analysis. *SSRN Electronic Journal*, July. <https://doi.org/10.2139/ssrn.3416918>

-
- Sivertsen, B., Hysing, M., Knapstad, M., Harvey, A. G., Reneflot, A., Lønning, K. J., & O'Connor, R. C. (2019). Suicide attempts and non-suicidal self-harm among university students: prevalence study. *BJPsych open*, 5(2), e26. <https://doi.org/10.1192/bjo.2019.4>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Turecki, G., & Brent, D. A. (2016). Suicide and suicidal behaviour. *Lancet (London, England)*, 387(10024), 1227–1239. [https://doi.org/10.1016/S0140-6736\(15\)00234-2](https://doi.org/10.1016/S0140-6736(15)00234-2)
- Vaingankar, J. A., Abdin, E., & Chong, S. A. (2012). Exploratory and confirmatory factor analyses of the Multidimensional Scale of Perceived Social Support in patients with schizophrenia. *Comprehensive psychiatry*, 53(3), 286–291. <https://doi.org/10.1016/j.comppsy.2011.04.005>
- Vaingankar, J. A., Abdin, E., Chong, S. A., Shafie, S., Sambasivam, R., Zhang, Y. J., et. al., (2020). The Association of Mental Disorders with perceived social support, and the role of marital status: Results from a national cross-sectional survey. *Archives of Public Health*, 78(1). <https://doi.org/10.1186/s13690-020-00476-1>
- Wu, R., Zhu, H., Wang, Z. J., & Jiang, C. L. (2021). A Large Sample Survey of Suicide Risk among University Students in China. *BMC Psychiatry*, 21(1), 474. <https://doi.org/10.1186/s12888-021-03480-z>
- Zhou, E. S. (2014). Social Support. In Michalos, A. C. (Ed.), *Encyclopedia of Quality of Life and Well-Being Research*. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-0753-5_2789
- 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, 30–41. https://doi.org/10.1207/s15327752jpa5201_2