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Suicidal Ideation in Malaysian Young Adults: The Role of Depressive Symptoms and Perceived Problem-Solving Ability

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Abstract

Background: The escalating suicide rates among young adults, including those in Malaysia, necessitate a deeper understanding of the factors contributing to suicidal ideation. This study investigates the relationship between depressive symptoms and perceived problem-solving ability, including problem-solving confidence, approach-avoidance style, personal control of emotion, and suicidal ideation among Malaysian young adults.

Methods: A total of 231 Malaysian young adults aged 18 to 25 years (Mean = 21.1; SD = 1.38) participated in a cross-sectional survey study. The sample was primarily composed of participants of Chinese ethnicity. Using an online survey, participants completed measures including the Depression, Anxiety, and Stress Scale (DASS-21) depression subscale, Problem-Solving Inventory, and Yatt Suicide Attitude Scale (YSAS).

Results: Pearson correlation analysis revealed significant relationships between depressive symptoms, perceived problem-solving ability (specifically problem-solving confidence, approach-avoidance style, and personal control of emotion), and suicidal ideation. Further analysis through logistic regression revealed that young adults with suicidal ideation exhibited a higher likelihood of experiencing depressive symptoms and lower confidence in problem-solving compared to those without suicidal ideation.

Conclusions: These findings highlight the importance of addressing depression and promoting effective problem-solving skills as significant strategies to reduce suicidal risk among young adults. Suicide prevention initiatives should prioritize interventions aimed at improving mental well-being and bolstering problem-solving ability in this vulnerable population.

Keywords: depression, problem-solving, Malaysia, suicidal ideation, young adults

INTRODUCTION

Suicide is a major global public health issue, with approximately 703,000 deaths annually, according to the World Health Organization.[1] Low- and middle-income countries account for more than three-quarters of reported suicides.[1] For every recorded suicide, numerous attempted suicides and individuals are grappling with suicidal thoughts. In Malaysia, the incidence of suicide has reached alarming levels, with 981 reported cases in 2022, escalating to 1087 cases in 2023.[2] Moreover, data from the Malaysian Youth Mental Health Index indicates that 1 in 10 youths in Malaysia exhibited suicidal tendencies in 2023.[3] Research by Lew et al. underscores Malaysia's concerning position, ranking fifth in suicide rates among ASEAN countries.[4]

Youth represent a particularly vulnerable population for suicide, often grappling with anxiety disorders and depression.[5] Studies in Malaysia reveal that 6 out of 10 youths experience varying degrees of depressive symptoms, alongside 3 in 10 experiencing moderate to severe anxiety symptoms.[3] Previous studies have consistently linked depression to suicidal ideation.[6,7] The transition to young adulthood brings unique challenges characterized by increased autonomy and reduced parental oversight compared with adolescents.[8] This development phase necessitates effective problem-solving skills to navigate life's complexities and maintain psychological well-being. However, young adults often lack experience in managing daily challenges and setbacks, which contributes to depressive tendencies.[9] Meta-analytical findings demonstrate a clear association between poor problem-solving abilities and higher levels of suicidal ideation, attempts, and fatalities.[10]

Depression symptoms, including a range of emotional and cognitive challenges, indicate a prevalent mental health disorder known as depression.[11] Importantly, depression is closely related to suicidal ideation,[12] with individuals experiencing depression facing an elevated risk of harboring thoughts of self-harm[6] and suicide attempts.[13,14] However, existing literature, especially in the Malaysian context, predominantly focuses on exploring the relationship between depression and suicidal ideation among adolescent populations.[12,15–17]

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Young adulthood signifies a transitional phase bridging late adolescence and early adulthood, characterized by ambiguity and uncertainty.[8] During this transitional period, young adults face various academic, financial, and social stressors, increasing their susceptibility to developing depressive symptoms closely linked with suicidal ideation.[18]

Problem-solving involves the cognitive process of creating and employing mental representations to devise solutions to various challenges encountered in daily life.[19] Previous research has revealed a significant correlation between an individual's problem-solving proficiency and suicidal ideation. Specifically, those with limited problem-solving skills are more likely to attempt suicide[20] and have a higher risk of suicide.[21] Moreover, individuals who have attempted suicide often demonstrate limited problem-solving abilities.[22] This correlation may stem from a sense of hopelessness that develops over time as individuals with limited problem-solving skills experience constant failure in addressing life's challenges, making suicidal ideation a more accessible escape route. On the other hand, active problem-solving acts as a protective factor, mitigating the relationship between depressive symptoms and suicidal ideation among suicide attempters, thereby reducing the risk of suicide.[23]

Consequently, various therapeutic interventions and preventive measures have been designed to enhance problem-solving ability in coping with adverse life events, with the goal of reducing suicide risk.[24,25] Despite this, problem-solving ability, comprising three dimensions: problem-solving confidence, approach-avoidance style, and personal control of emotion,[26] often remains undervalued as a crucial predictor of suicidal ideation, despite its undeniable relevance in the problem-solving process.

Problem-solving confidence is defined as a belief in one's ability to navigate and resolve challenges effectively.[26] This concept aligns conceptually with Bandura's theory of self-efficacy in Social Cognitive Theory.[27] Research has shown that higher levels of problem-solving confidence correlate with improved psychological well-being and life satisfaction. In contrast, lower levels of problem-solving confidence contribute to increased family problems,[28] heightened stress perception,[29] and higher levels of suicidal ideation.[30]

The second dimension of problem-solving ability is the approach-avoidance style, which reflects an individual's tendency to either confront or avoid problem-solving.[26] Generally, those inclined to confront problems tend to exhibit better psychological well-being, whereas those who avoid problem-solving scenarios often experience lower psychological well-being.[31] This divergence arises from the belief systems surrounding control over outcomes: those who avoid problems may view outcomes as beyond their control, predetermined by fate or external forces. Consequently, they adopt a passive stance of "letting the problem resolve itself," leading to a sense of helplessness and a negative impact on mental health and self-esteem stemming from unresolved challenges.[32]

Although a previous study revealed that individuals who tend to avoid problems had higher levels of suicidal ideation,[33] a study conducted by Linda *et al*. found that avoiding problems acted as a protective factor against suicidal thoughts in individuals with a history of suicide attempts.[34] Consequently, the role of the problem approach-avoidance style in predicting suicidal ideation remains unclear.

The third dimension of problem-solving ability, personal control of emotions, refers to the belief in one's capacity to manage emotions and behavior during problem-solving processes.[26] This approach aims to reduce negative emotions rather than directly address problems such as self-blaming, emotional venting, or engaging in mood-improving activities.[26,35] Individuals who perceive greater control over their emotions and behaviors are more likely to experience a higher sense of autonomy and subjective well-being,[36] and lower levels of suicidal ideation when facing challenges.[37] Therefore, it is crucial to study the effect of problem-solving ability on suicidal ideation.

While Malaysia's reported suicide rate appears lower than the global average, standing at 5.8 suicides per 100,000 population in 2019,[4] a significant number of suicidal cases remain unreported due to various factors. First, suicides are only officially recorded if they are medically certified, a process that does not capture many deaths in Malaysia due to the lack of certification protocols.[38] Second, discussing suicide remains sensitive in Malaysia due to religious beliefs. Suicide attempts or completed suicides are often viewed as sinful by various religions such as Islam, Christianity, and Buddhism, adding layers of stigma and reluctance to seek help.[39] Finally, Malaysia's legal stance on suicide as a crime, as outlined in Section 309 of the Penal Code, has historically discouraged individuals from openly addressing suicidal thoughts or actions. However, the positive development of Malaysia decriminalizing suicide on May 22, 2023, is expected to encourage a more open environment for individuals to seek assistance without fear of legal repercussions.[40] These societal and legal factors have contributed to the underreporting of incomplete suicidal attempts or suicides within families.

Furthermore, Malaysia grapples with notably high suicide rates among individuals under 30 years old.[38] This trend not only poses immediate challenges to social and economic development but also raises concerns about the well-being of future generations.[41] In addition, a previous study in Malaysia highlighted that individuals

perceiving themselves as having ineffective problem-solving abilities, characterized by low problem-solving confidence, a tendency toward approach-avoidance style, and limited personal control of emotion, are at a higher risk of experiencing suicidal ideation.[33] However, the dimensions of perceived problem-solving ability that significantly impact suicidal ideation remain uncertain.[20] Moreover, previous studies produced mixed findings, with some studies showing no significant relationship between perceived problem-solving ability and suicidal ideation.[42]

Therefore, this study aimed to explore the effects of depressive symptoms and perceived problem-solving ability on suicidal ideation among young adults in Malaysia. This research endeavor is crucial in collecting essential data on suicidal ideation among Malaysian young adults, providing insights to develop effective intervention and prevention measures.

METHODS

Participants

A total of 250 individuals were recruited using purposive sampling methods. Inclusion criteria comprised Malaysian citizens aged between 18 and 25 years. Conversely, individuals diagnosed with any mental health disorder were excluded from the study. Following the exclusion of participants who did not fulfill the inclusion criteria, a total of 231 individuals were included in the data analysis. The participants were aged between 18 and 25 years (Mean = 21.1; SD = 1.38). Of these participants, 157 were female, and 205 were Chinese. Detailed demographic characteristics of the participants are presented in Table 1.

Depressive symptoms were assessed using the 7-item scale of depression of the Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond).[43] This subscale employs a 4-point Likert-type scale, ranging from 0 (Did not apply to me at all) to 3 (Applied to me most of the time), to gauge the extent of participants' depressive symptoms. Sample statements from this scale includes "I felt downhearted and blue." The depression subscale of the DASS-21 demonstrated good reliability in this study, with a Cronbach's alpha value of 0.87.

TABLE 1. Demographic characteristics of participants (N = 231)

Characteristics	N	%
Gender		
Male	74	32.0
Female	157	68.0
Age (in years)		
18	9	3.9
19	18	7.8
20	38	16.5
21	86	37.2
22	47	20.3
23	25	10.8
24	4	1.7
25	4	1.7
Ethnicity		
Chinese	205	88.7
Malay	14	6.1
Indian	9	3.9
Others	3	1.3

The participant's problem-solving ability was evaluated using the Problem-Solving Inventory (PSI; Heppner & Petersen, 1982).[44] This inventory employs a 6-point Likert-type scale, ranging from 1 (Strongly Agree) to 6 (Strongly Disagree), to assess various facets of problem-solving proficiency. The PSI comprises 35 items, including three filler items, categorized into three subscales: problem-solving confidence (11 items), approach-avoidance style (16 items), and personal control of emotion (5 items). The scale includes 15 reverse-scored items. Sample items from the PSI include "I trust my ability to solve new and difficult problems" for the problem-solving confidence subscale, "When I have a problem, I think up as many possible ways to handle it as I can until I can't come up with any more ideas" for the approach-avoidance style subscale, and "I make snap judgments and later regret them" for the personal control of emotion subscale. Higher scores on the problem-solving confidence subscale indicate lower confidence in problem-solving abilities, higher scores on the approach-avoidance style subscale indicate a tendency to avoid rather than approach problems, and higher scores on the personal control of emotion subscale indicate lower control over emotions and behavior when dealing with problems. In this study, the problem-solving confidence subscale, approach-avoidance style subscale, and personal control of emotion subscale demonstrated acceptable levels of reliability, with Cronbach alpha values of 0.84, 0.80, and 0.65, respectively.

The Yatt Suicide Attitude Scale (YSAS; Ibrahim *et al*.),[45] was used to assess participants' attitudes toward suicide, specifically focusing on suicidal ideation. This scale comprises 10 items measuring two constructs: suicidal ideation and suicide attempt. As our study only focuses on suicidal ideation, only the five items from the YSAS that pertain to participants' thoughts of ending their lives were utilized. The YSAS employs a 5-point Likert-type scale, ranging from 1 (Never) to 5 (Very often), to gauge the frequency of suicidal ideation. A higher score indicates a greater frequency of suicidal ideation. An example item from the scale is "I have once thought to end my life." The 5-item suicidal ideation subscale exhibited good reliability, with a Cronbach alpha value of 0.83 in previous research.[45] In this study, the 5-item YSAS also demonstrated good reliability, with a Cronbach's alpha value of 0.89.

Procedure

Ethical approval was obtained from the Department of Psychology Research Ethics Committee (Approval code: 202003015). Data collection was conducted through an online survey platform, with the survey link shared on platforms like Instagram, Facebook, and tertiary education groups. Participants were given an information sheet explaining the study's purpose and their rights before soliciting their consent. Upon agreeing by clicking the "agree" button on the consent form, participants completed a demographic questionnaire and three scales assessing depressive symptoms, perceived problem-solving ability, and suicidal ideation. Upon completion of the questionnaire, participants were provided with a debriefing sheet outlining the study objectives and a list of mental health resources for further assistance. Notably, no form of compensation was provided to the participants for their involvement.

Data analysis

The collected data were analyzed using IBM SPSS software version 27. Pearson correlation analysis was used to determine the relationships between variables, specifically examining the connections among depressive symptoms, problem-solving confidence, approach-avoidance style, personal control of emotions, and suicidal ideation. Binary logistic regression was used to explore the odd ratios of the predictive factors contributing to suicidal ideation. The YSAS was dichotomized for this analysis, with participants who rated "Never" across all YSAS items categorized as "No suicidal ideation," while the rest were classified as "Have suicidal ideation." A significance level of 5% was set to identify the determinant factor associated with suicidal ideation among young adults.

RESULTS

The relationships among depressive symptoms, the three dimensions of perceived problem-solving ability (problem-solving confidence, approach-avoidance style, and personal control of emotion), and suicidal ideation were analyzed using Pearson correlation analysis. Table 2 presents the means, standard deviations, and correlations for all study variables. The results revealed significant positive correlations between depressive symptoms (r = 0.66, p < 0.001), problem-solving confidence (r = 0.45, p < 0.001), approach-avoidance style (r = 0.15, p < 0.05), personal control of emotion (r = 0.39, p < 0.001), and suicidal ideation. These findings indicate that higher levels of depressive symptoms correspond to higher suicidal ideation. Moreover, individuals exhibiting lower confidence in their problem-solving ability, resorting to more avoidance styles in problem resolution, and experiencing less control over their emotions reported elevated levels of suicidal ideation.

Based on the dichotomized YSAS, 83 participants (35.9%) did not report suicidal ideation, whereas 148 participants (64.1%) expressed some degree of suicidal ideation. The binary logistic regression model employed to explore the predictive factors of suicidal ideation yielded significant results, $\chi^2(4) = 72.68$, p < 0.001. This model accounted for 37% of the variance in suicidal ideation (Nagelkerke R^2) and accurately classified 75.3% of cases. The goodness-of-fit test (Hosmer and Lemeshow) indicated a p-value of 0.384, affirming the model's adequacy. Table 3 shows the binary logistic regression analysis of factors predicting suicidal ideation, where depressive symptoms emerged as the strongest predictor of suicidal ideation (*OR* 28.85, 95% *CI* [1.20, 1.47], p < 0.001). This signifies that individuals with suicidal ideation are 28.85 times more likely to experience depressive symptoms than those

TABLE 2. Means, standard deviations, and correlations for all study variables (N = 231)

No.	Variables	Mean ± SD	1	2	3	4	5
1.	Depressive symptoms	5.92 ± 4.31	-				
2.	Problem-solving confidence	30.87 ± 7.05	0.41	-			
3.	Approach-avoidance style	47.87 ± 9.15	0.08	0.45	-		
4.	Personal control of emotion	19.06 ± 4.00	0.28	0.49	0.40	-	
5.	Suicidal ideation	7.73 ± 3.29	0.66	0.45	0.15*	0.39	-

Higher scores in problem-solving confidence and personal control of emotion indicate lower confidence in solving problems and less control over one's emotions, respectively; A higher score in approach-avoidance style indicates higher usage of avoidance coping style
*p < 0.05

TABLE 3. Binary logistic regression analysis of factors predicting suicidal ideation

Variables	*B*	*OR*	95% *CI* for *OR*		*p*
			Lower	Upper	
Depressive symptoms	0.280	28.85	1.20	1.47	< 0.001
Problem-solving confidence	0.070	5.43	1.01	1.15	0.020
Approach-avoidance style	< 0.001	< 0.001	0.96	1.04	0.990
Personal control of emotion	0.040	0.56	0.94	1.14	0.453

B = Unstandardized coefficients; OR = odds ratio; CI = confidence interval

without suicidal thoughts. In addition, individuals experiencing suicidal ideation are 5.43 times more likely to have lower confidence in problem-solving (*OR* 5.43, 95% *CI* [1.01, 1.15], p = 0.020). However, neither approach-avoidance style nor personal control of emotion significantly predicted suicidal ideation in this study.

DISCUSSION

This study aimed to explore the relationships among depressive symptoms, perceived problem-solving ability (including problem-solving confidence, approach-avoidance style, and personal control of emotion), and suicidal ideation among young adults. We discovered significant correlations between depressive symptoms, all dimensions of perceived problem-solving abilities, and suicidal ideation. Our hypothesis indicated that individuals experiencing suicidal ideation would exhibit higher levels of depressive symptoms, use more approach-avoidance styles, have lower problem-solving confidence, and struggle with personal control of emotion. However, our regression model revealed that individuals with suicidal ideation displayed more depressive symptoms and problem-solving confidence, but no significant differences were observed in terms of approach-avoidance style or personal control of emotion. We also found that 64.1% of participants reported some level of suicidal ideation, a figure that might be influenced by the predominant ethnic background of the participants, who were primarily Chinese. In Malaysia, a culturally diverse nation involving ethnicities such as Malay, Chinese, and Indian, the suicide rate tends to be highest among Indian individuals, followed by Chinese.[38]

These findings align with previous research, highlighting the consistent relationships among depressive symptoms, perceived problem-solving ability, and suicidal ideation among young adults.[13,33] Specifically, our study echoes previous findings that young adults experiencing more depressive symptoms are more prone to suicidal ideation. This connection is attributed to the persistent feelings of sadness and helplessness associated with depression, which are key contributors to suicidal ideation.[13,14] Similarly, individuals with limited problem-solving abilities are at an increased risk of developing suicidal thoughts as they struggle to effectively address underlying issues.[10,46] This conclusion resonates with a previous Malaysian study that identified college students with poor problem-solving skills as being more likely to report suicidal ideation.[33]

Additionally, our study revealed that depressive symptoms not only significantly predicted suicidal ideation among young adults but emerged as the strongest predictor among all examined factors, aligning with previous studies.[9,47] Arnett's concept of young adulthood posits that this life stage is marked by increased levels of stress and anxiety as individuals navigate new personal, interpersonal, and societal expectations, often resulting in reduced familial support.[8] This transitional phase, coupled with uncertainties and setbacks in achieving life goals or inadequate coping mechanisms, can contribute to feelings of worthlessness and hopelessness, which are characteristic of depressive symptoms.[9] Consequently, the prevalence of depression among youths in Malaysia is a significant concern,[3] as it increases vulnerability to suicidal ideation as a perceived means of escaping distress.[48]

In addition to depressive symptoms, our findings underscored the importance of problem-solving confidence as a significant predictor of suicidal ideation among young adults. Specifically, individuals with lower problem-solving confidence were more likely to entertain suicidal thoughts, which is consistent with previous studies.[33] Of the three dimensions of perceived problem-solving abilities, only the problem-solving confidence dimension significantly predicted suicidal ideation. Drawing from Bandura's self-efficacy theory, individuals develop confidence in problem-solving through successful experiences or by observing others' successes.[49] However, repeated failures or witnessing peers' struggles can affect this confidence,[50] leading to an increased sense of hopelessness when faced with new challenges. This perception of incompetence in problem-solving amplifies feelings of despair, potentially contributing to increased thoughts of suicide as a perceived solution.[29]

Furthermore, the current study demonstrates that having greater confidence in one's problem-solving ability can serve as a protective factor against suicidal ideation. This can be attributed to the fact that individuals who possess a strong belief in their capability to apply their knowledge and skills toward resolving challenges are more likely to invest greater effort and exhibit higher levels of persistence in addressing challenges. Such attributes significantly contribute to successful problem-solving, as evidenced by previous research.[51] Successful problem-solving, in turn, has been linked to improved psychological well-being[52] and reduced feelings of hopelessness and anxiety.[53] This notion is further supported by Korkmaz *et al*., who discovered that individuals who have attempted suicide often have poorer problem-solving skills.[20] Similarly, Abdollahi *et al*. explained that the use of ineffective problem-solving strategies among Malaysian students is associated with feelings of hopelessness, subsequently amplifying suicidal ideation.[29]

Contrary to the initial hypothesis, this study reveals that the approach-avoidance problem-solving style did not significantly predict suicidal ideation in the logistic regression model. This finding contradicts the results of a study conducted in Malaysia by Abdollahi *et al*., which suggested that individuals with suicidal ideation are more inclined toward avoiding problems.[33] However, this study's findings align with those of Quiñones *et al*., who

also found no predictive effect of the approach-avoidance style on suicidal ideation among individuals who have not attempted suicide.[23] Furthermore, Linda *et al*. highlighted that approach-avoidance style only predicted suicidal ideation among individuals with a history of suicide attempts, as these individuals tended to resort to more passive solutions than non-attempters.[34] This implies that the predictive impact of the approach-avoidance style on suicidal ideation may be more pronounced in individuals with a prior history of suicide attempts.

Additionally, the study found that personal control of emotion did not significantly predict suicidal ideation among young adults. This contrasts with previous studies indicating that lower personal control of emotion correlates with a higher likelihood of suicidal ideation.[30] One possible explanation for this discrepancy is that individuals with less personal control of emotion often resort to strategies aimed at alleviating negative emotions, such as anger and sadness, through activities like self-blame, emotional venting, or other activities to alleviate distress.[26] While these strategies may offer temporary relief from distress, they do not provide lasting solutions,[35] thus explaining why personal control of emotions did not emerge as a significant predictor of suicidal ideation in this study.

One important implication of these findings is the urgent need to raise awareness of depressive symptoms, which were strongly linked to suicidal ideation among young adults. In Malaysian society, depressive symptoms are frequently downplayed as ordinary stressors or transitional changes of adulthood.[54] Depressive symptoms are also often overlooked and considered a common "growing pain" of adulthood. Thus, early identification of individuals displaying depressive symptoms and the provision of suitable interventions is crucial in preventing suicidal ideation in Malaysia. Furthermore, this study highlights the critical role of problem-solving confidence in reducing suicidal ideation. Suicide prevention programs should prioritize building confidence in problem-solving skills among young adults, as demonstrated by this study's findings that higher levels of problem-solving confidence are associated with reduced suicidal ideation. The decriminalization of suicide in Malaysia in 2023 marks a significant shift in mental health approaches, potentially encouraging more individuals to seek help and access appropriate interventions for suicide prevention.[40]

However, this study has a few limitations. First, it did not differentiate between individuals who were merely ideators or those who attempted suicide. A history of having suicidal thoughts and attempts could confound the findings. Thus, it is recommended that future research control for these variables when conducting suicide-related research. Second, our study only focused on depressive symptoms and problem-solving abilities. Given that suicide is a complex issue, other variables or mediators may influence suicidal ideation among young adults. For example, factors such as hopelessness, a history of sexual and physical abuse, and substance abuse may impact the level of suicidal ideation among young adults[55–57] and should be considered in future studies. Lastly, purposive sampling was used for data collection, where the questionnaire link was posted online and on platforms related to tertiary education. This resulted in the over-representation of certain age groups and ethnicities. This study was also unable to identify whether the participants were university students as this information was not collected. To address these limitations, future studies could use a probability sampling method such as cluster sampling to obtain a better representation of participants' backgrounds.

CONCLUSIONS

In conclusion, despite the acknowledged limitations, this study highlights the importance of depressive symptoms and problem-solving confidence as significant predictors of suicidal ideation among young adults. The findings indicate that individuals experiencing suicidal ideation tend to exhibit higher levels of depressive symptoms and lower confidence in their problem-solving abilities. Therefore, mental health professionals should consider implementing suitable interventions and prevention programs to address these factors. By reducing depressive symptoms and enhancing problem-solving confidence among young adults, we can reduce the prevalence of suicidality in this population.

CONFLICT OF INTEREST

The authors declare that they have no competing interests to disclose.

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REFERENCES

1. World Health Organization. *Suicide*. Geneva: World Health Organization, 2023.
2. Ova. *Suicide cases in Malaysia increase by 10% from 2022 to 2023*. Kuala Lumpur: Ova, 2024.
3. Institute for Youth Research Malaysia, United Nations Children's Fund. *Malaysian youth mental health index 2023: Facts and figures*. Putrajaya: Institute for Youth Research Malaysia, United Nations Children's Fund, 2024.
4. Lew B, Kõlves K, Lester D, Chen WS, Ibrahim NB, Khamal NRB, *et al*. Looking into recent suicide rates and trends

in Malaysia: A comparative analysis. *Front Psychiat*. 2022;12:770252.
5. Kalin NH. Anxiety, depression, and suicide in youth. *Am J Psychiat*. 2021;178:275–9.
6. Gijzen MWM, Rasing SPA, Creemers DHM, Smit F, Engels RCME, De Beurs D. Suicide ideation as a symptom of adolescent depression. a network analysis. *J Affect Disord*. 2021;278:68–77.
7. Orsolini L, Latini R, Pompili M, Serafini G, Volpe U, Vellante F, *et al*. Understanding the complex of suicide in Depression: From research to clinics. *Psychiatry Investig*. 2020;17:207–21.
8. Arnett JJ. Emerging adulthood. A theory of development from the late teens through the twenties. *Am Psychol*. 2000;55:469–80.
9. Chou WJ, Ko CH, Hsiao RC, Cheng CP, Yen CF. Association of stress coping strategies with suicidality in young adults: The mediation effects of depression, anxiety and hostility. *Neuropsychiatry*. 2017;7:974–82.
10. Darvishi N, Farhadi M, Azmi-Naei B, Poorolajal J. The role of problem-solving skills in the prevention of suicidal behaviors: A systematic review and meta-analysis. *PLoS One*. 2023;18:e0293620.
11. Liu Q, He H, Yang J, Feng X, Zhao F, Lyu J. Changes in the global burden of depression from 1990 to 2017: Findings from the Global Burden of Disease study. *J Psychiatr Res*. 2020;126:134–40.
12. Chin WC, Wu SL. The predicting effects of depression and self-esteem on suicidal ideation among adolescents in Kuala Lumpur, Malaysia. *J Health Transl Med*. 2020;23:60–6.
13. Li X, Mu F, Liu D, Zhu J, Yue S, Liu M, *et al*. Predictors of suicidal ideation, suicide attempt and suicide death among people with major depressive disorder: A systematic review and meta-analysis of cohort studies. *J Affect Disord*. 2022;302:332–51.
14. Franklin JC, Ribeiro JD, Fox KR, Bentley KH, Kleiman EM, Huang X, *et al*. Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychol Bull*. 2017;143):187–232.
15. Ahmad N, Cheong SM, Ibrahim N, Rosman A. Suicidal ideation among Malaysian adolescents. *Asia Pac J Public Health*. 2014;26:63S–9S.
16. Khan A, Mustaffa MS, Hamdan AR, Ahmad R. Influence of psychological factors on suicide ideation among Malaysian and Indian adolescent. *Procd Soc Behvi*. 2014;143:347–51.
17. Ibrahim N, Amit N, Suen MW. Psychological factors as predictors of suicidal ideation among adolescents in Malaysia. *PLoS One*. 2014;9:e110670.
18. Thapar A, Eyre O, Patel V, Brent D. Depression in young people. *Lancet*. 2022;400:617–31.
19. Jonassen DH, Hung W. Problem solving. In Seel NM, editor. *Encyclopedia of the Sciences of Learning*. Boston, MA: Springer; 2012. p.2680–3.
20. Korkmaz S, Danacı Keleş D, Kazgan A, Baykara S, Gürkan Gürok M, Feyzi Demir C, *et al*. Emotional intelligence and problem solving skills in individuals who attempted suicide. *J Clin Neurosci*. 2020;74:120–3.
21. Chu C, Walker KL, Stanley IH, Hirsch JK, Greenberg JH, Rudd MD, *et al*. Perceived problem-solving deficits and suicidal ideation: Evidence for the explanatory roles of thwarted belongingness and perceived burdensomeness in five samples. *J Pers Soc Psychol*. 2018;115:137–60.
22. Sharaf AY, Lachine OA, Thompson EA. Rumination, social problem solving and suicide intent among Egyptians with a recent suicide attempt. *Arch Psychiat Nurs*. 2018;32:86–92.
23. Quiñones V, Jurska J, Fener E, Miranda R. Active and passive problem solving: Moderating role in the relation between depressive symptoms and future suicidal ideation varies by suicide attempt history. *J Clin Psychol*. 2015;71:402–12.
24. Choi NG, Marti CN, Conwell Y. Effect of problem-solving therapy on depressed low-income homebound older adults' death/suicidal ideation and hopelessness. *Suicide Life-Threat*. 2016;46:323–36.
25. Gustavson KA, Alexopoulos GS, Niu GC, McCulloch C, Meade T, Areán PA. Problem-solving therapy reduces suicidal ideation in depressed older adults with executive dysfunction. *Am J Geriat Psychiat*. 2016;24:11–7.
26. Heppner PP, Witty TE, Dixon WA. Problem-solving appraisal and human adjustment: A review of 20 years of research using the problem solving inventory. *Couns Psychol*. 2004;32:344–428.
27. Bandura A. *Social foundations of thought and action: A social cognitive theory*. 1st ed. New Jersey: Prentice Hall, Inc; 1986.
28. Pourmovahed Z, Mazloomy Mahmoodabad SS, Zareei Mahmoodabadi H, Tavangar H, Yassini Ardekani SM, Vaezi AA. Deficiency of self-efficacy in problem-solving as a contributory factor in family instability: A qualitative study. *Iran J Psychiatr*. 2018;13:32–9.
29. Abdollahi A, Abu Talib M, Carlbring P, Harvey R, Yaacob SN, Ismail Z. Problem-solving skills and perceived stress among undergraduate students: The moderating role of hardiness. *J Health Psychol*. 2018;23:1321–31.
30. Gautam A. Problem solving style, perceived burdensomeness and suicide ideation among college students. *Int J Indian Psychol*. 2016;3:6–13.
31. Mayordomo-Rodríguez T, Meléndez-Moral JC, Viguer-Segui P, Sales-Galán A. Coping strategies as predictors of well-being in youth adult. *Soc Indic Res*. 2014;122:479–89.
32. Benatov J, Klomek AB, Shira B, Apter A, Carli V, Wasserman C, *et al*. Doing nothing is sometimes worse: Comparing avoidant versus approach coping strategies with peer victimization and their association to depression and suicide ideation. *J Sch Violence*. 2020;19:456–69.
33. Abdollahi A, Talib MA, Yaacob SN, Ismail Z. Problem-solving skills and suicidal ideation among Malaysian college students: The mediating role of hopelessness. *Acad Psychiatr*. 2016;40:261–7.
34. Linda WP, Marroquín B, Miranda R. Active and passive problem solving as moderators of the relation between negative life event stress and suicidal ideation among suicide attempters and non-attempters. *Arch Suicide Res*. 2012;16:183–97.

35. Ben-Zur H. Emotion-focused coping. In Zeigler-Hill V, Shackelford T. *Encyclopedia of Personality and Individual Differences*. Switzerland: Springer Cham; 2017. p.1–4.
36. Fishman EJ, Husman J. Extending attribution theory: Considering students' perceived control of the attribution process. J Educ Psychol. 2017;109:559–73.
37. Qian G. Associations of suicide and subjective well-being. *Omega*. 2021;84:103–15.
38. Armitage CJ, Panagioti M, Abdul Rahim W, Rowe R, O'Connor RC. Completed suicides and self-harm in Malaysia: A systematic review. *Gen Hosp Psychiat*. 2015;37:153–65.
39. Bahar N, Ismail WS, Hussain N, Haniff J, Bujang MA, Hamid AM, *et al*. Suicide among the youth in Malaysia: What do we know? *Asia-Pac Psychiat*. 2015;7:223–9.
40. Tatum M. Malaysia to decriminalise suicide. *Lancet*. 2023;401:1915.
41. Kinchin I, Doran CM. The cost of youth suicide in Australia. *Int J Env Res Pub He*. 2018;15:672.
42. Firincik S, Gürhan N. The effect of problem-solving ability on suicide, depression, and hopelessness in cigarette, alcohol, or substance addicts and relationships with each other. *J Psychiat Nurs*. 2019;10:39–47.
43. Lovibond SH, Lovibond PF. *Manual for the depression anxiety stress scales*. Sydney: Psychology Foundation of Australia; 1996.
44. Heppner P, Petersen C. The development and implications of a personal problem-solving inventory. *J Couns Psychol*. 1982;29:66–75.
45. Ibrahim N, Che Din N, Amit N, Ghazali SE, Mohd Safien A. Development and validation of Yatt Suicide Attitude Scale (YSAS) in Malaysia. *PLoS One*. 2019;14:e0209971.
46. Turecki G, Brent DA, Gunnell D, O'Connor RC, Oquendo MA, Pirkis J, *et al*. Suicide and suicide risk. *Nat Rev Dis Primers*. 2019;5:74.
47. Bae SM. The prediction model of suicidal thoughts in Korean adults using Decision Tree Analysis: A nationwide cross-sectional study. *PLoS One*. 2019;14:e0223220.
48. Jose S, Angelina J. Meaning in life as a predictor of depression and suicide ideation among young adults in Kerala, India. *Indian J Health Wellbeing*. 2019;10:249–52.
49. Harlim J, Belski I. Learning TRIZ: Impact on confidence when facing problems. *Procedia Engineer*. 2015;131:95–103.
50. Rosi A, Cavallini E, Gamboz N, Vecchi T, Van Vugt FT, Russo R. The impact of failures and successes on affect and self-esteem in young and older adults. *Front Psychol*. 2019;10:1795.
51. Zimmerman BJ, Campillo M. Motivating self-regulated problem solvers. In Davidson JE, Strenberg RJ, editors. *The psychology of problem solving*. Cambridge, UK: Cambridge University Press; 2003. p.233–62.
52. Colomeischi AA. Predictors for wellbeing: Emotional factors and expectancy for success. *Procd Soc Behav*. 2015;190:48–53.
53. Pretorius TB, Padmanabhanunni A. Toward a positive life beyond COVID-19: Problem-solving appraisal as a resistance resource in the relationship between stress and well-being in students. *Healthcare*. 2023;11:350.
54. Shoesmith WD, Pang N. The interpretation of depressive symptoms in urban and rural areas in Sabah, Malaysia. *ASEAN J Psychiatr*. 2016;17:42–53.
55. Breet E, Goldstone D, Bantjes J. Substance use and suicidal ideation and behaviour in low- and middle-income countries: A systematic review. *BMC Public Health*. 2018;18:549.
56. Schafer JL, Teixeira VA, Fontoura LP, Castro LC, Horta RL. Exposure to physical and sexual violence and suicidal ideation among school children. *J Bras Psiquiatr*. 2017;66:96–103.
57. Qiu T, Klonsky ED, Klein DN. Hopelessness predicts suicide ideation but not attempts: A 10-year longitudinal study. *Suicide Life-Threat*. 2017;47:718–22.