

Fuzzy Delphi Identifies Key Crisis Coping Strategies for Psychological Distress Intervention

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Abstract

A study using the Fuzzy Delphi method identified key coping strategies for graduate students during crises. Seven experts reviewed existing research, finding the most effective methods to be: body scan and relaxation, meditation and emotional regulation, acceptance of trauma symptoms, social support, and mindfulness with breathing and gratitude. These strategies offer a framework for targeted interventions to boost student well-being and resilience. Future research should empirically test these methods, explore their integration into programs, analyze technology's role, examine demographic differences, conduct longitudinal studies, and consider student perspectives. The aim is to develop comprehensive approaches for enhancing graduate students' well-being.

Keywords: Coping strategies; Fuzzy Delphi Method; Graduate students; Psychological distress

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1.0 Introduction

Mental health is a top priority for the Malaysian government because of the important role it plays in overall wellbeing (Sohana Abdul Hamid, 2019). Symptoms like disorientation, fear, anxiety, and changed behaviour are the result of significant changes in an individual's mental, emotional, physical, and behavioural states brought on by a crisis. Problems with one's physical and mental health can arise at any age due to a variety of causes, including but not limited to economic, political, environmental, health-related, or personal matters. There are three distinct phases that people go through when responding to a crisis, as outlined by Samsiah Mohd Jais (2020): the acute phase, the outward adjustment phase, and the integrating phase. According to Abdul Aziz. A. et al. (2020) and Ang Shu Qing (2021), when crises go untreated, they can have a significant impact on mental health, altering one's thoughts, feelings, behaviour, and interactions with others.

The frequency and seriousness of mental health problems among students, especially graduate students, have been highlighted by recent statistics. Among graduate students, 39% reported moderate to severe anxiety or depression, making it six times more common than in the general population, according to a worldwide survey by Evans et al. (2023). The National Health and Morbidity Survey 2022 (Institute for Public Health, 2023) found that among adults in Malaysia, 20.5% had depressive symptoms, with the rate being highest

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among those between the ages of 18 and 30. Tan et al. (2024) looked at university postgraduates in Malaysia and found that 35% of them had clinically significant stress, 28% had anxiety symptoms, 22% had depressive symptoms, and 18% had burnout. In addition, anxiety rates might rise by as much as 45 percent during critical academic milestones, according to research by Wong and Lim (2023). While furthering one's education at the graduate level is essential for professional and personal growth, it is not without its difficulties and tensions, which can have a negative impact on one's mental health (Kumar & Feldman, 2020). Academic crises include things like tough research projects, tight due dates, and high expectations for success (Robotham & Julian, 2006). Personal crises include things like relationship troubles, money worries, and health issues (Mason et al., 2020). Graduate students must learn to cope with these challenges by creating and using healthy coping mechanisms that help them overcome emotional discomfort and become more resilient (Bennett et al., 2019).

Recent studies highlight the importance of effective coping mechanisms in managing psychological distress among postgraduate students. Problem-focused strategies, such as time management and seeking academic help, have been linked to reduced stress and better academic performance (Li et al., 2023). Emotion-focused techniques, including mindfulness and social support, effectively alleviate anxiety and depression (Wang et al., 2022). Regular exercise and virtual social connections were particularly helpful in fostering resilience during isolation, especially during the COVID-19 pandemic (Zhao et al., 2024). Digital interventions, like online support groups and mental health apps, also improved student well-being (Chen & Wong, 2023).

This study aims to explore crisis management among graduate students, particularly in Malaysia, to develop evidence-based strategies that address their academic and emotional challenges (Evans et al., 2018). Using the Fuzzy Delphi method, it seeks expert consensus to identify effective interventions for mental health, ultimately enhancing coping skills and fostering an environment conducive to success, which benefits both students and academic institutions (Richardson & Smith, 2024).

2.0 Literature Review

A crisis occurs when an individual faces a problem that exceeds their ability to cope, disrupts their psychological balance, and renders usual coping mechanisms ineffective, leading to diminished autonomous functioning (Caplan, 1961, 1964; Everly & Mitchell, 1999; Gilland & James, 1988, as cited in Kanel, 2012). Recent research highlights that postgraduate students face crises stemming from academic, personal, and external stressors. Liu et al. (2023) identify unique challenges like conducting innovative research, meeting publishing standards, and managing teaching duties, which require specialized coping strategies. Kanel (2012) links crisis development to the intensity of challenges, while Faberow and Gordon (1981) describe a crisis progression through four stages: heroic, honeymoon, disillusionment, and rebuilding (as cited by Samsiah Mohd Jais, 2020).

Expanding upon this framework, Wang and Chen (2024) introduced a revised crisis progression model for postgraduate students, adding two stages: the "anticipatory stress" phase, occurring before the heroic phase, and the "adaptive learning" phase, following reconstruction. These stages aim to better explain recurring academic crises and guide solutions. The heroic phase involves determination amid high tension to protect oneself after a tragedy, followed by the "honeymoon phase," marked by safety, gratitude, and readiness to return to normalcy. However, disappointment may set in weeks later as the full impact of the crisis becomes apparent.

Recent research has emphasized the significance of acknowledging these stages within the framework of postgraduate education. Zhang et al. (2022) discovered that the disillusionment phase frequently aligns with significant academic milestones, such as comprehensive exams or thesis submissions, resulting in increased psychological discomfort. Their research highlights the importance of proactive support networks that anticipate these crucial intervals and offer timely responses. Individuals experiencing a crisis exhibit symptoms such as confusion and inability to move during this phase. In addition, during this phase, individuals may undergo a variety of feelings, such as rage, frustration, despair, self-blame, and a feeling of inevitability, as if the traumatic event has just begun. Therefore, crisis intervention is crucial at this moment to provide guidance and facilitate the transition of individuals in crisis from the phase of disappointment to the phase of rebuilding.

Tan and Lee (2023) identified academic procrastination, imposter syndrome, and social isolation as common challenges among postgraduate students, emphasizing the role of peer support and mentorship in transitioning from crisis to recovery. The rebuilding phase involves resuming normal life through self-care, external support, or both, highlighting the importance of early intervention to reduce crisis intensity and trauma effects (Everly, Flannery & Mitchell, 2000). Johnson et al. (2024) found that cognitive-behavioral therapy, mindfulness-based stress reduction, and solution-focused brief therapy are effective in improving postgraduate students' psychological well-being during crises.

To effectively identify individuals in a state of distress and aid them in regaining stability, it is imperative to possess a comprehensive understanding of the three primary components of a crisis. The following are the components:

- 1) What truly occurred,
- 2) Personal perspective of the occurrence,
- 3) The usual self-regulating system is incapable of managing the decrease in functionality compared to the state before the event.

Expanding upon these factors, Kim and Park (2023) introduced a fourth component that primarily pertains to the academic consequences of the crisis, particularly for postgraduate students. Their research revealed that comprehending the impact of a crisis on a student's academic performance and advancement is essential for formulating complete intervention measures.

The primary objective of crisis intervention is to facilitate the restoration of normal functioning, modify individuals' perception of the event, and cultivate more effective coping strategies for recovery (Kanel, 2012). Recent studies in the field of postgraduate education have emphasized the need to combine academic assistance with psychological treatments. An example is a study conducted by

Rodriguez et al. (2023) which discovered that crisis interventions that integrated academic skill development (such as time management and research methods) with psychological support were more successful in assisting postgraduate students in overcoming crises compared to interventions that solely targeted mental health.

Research highlights the unique challenges postgraduate students face during crises, necessitating specialized interventions. This is particularly relevant in the evolving landscape of higher education influenced by global events like the COVID-19 pandemic.

Hence, A crisis model tailored for postgraduate students incorporates six stages:

1. Anticipatory Stress Phase: Anxiety preceding a crisis, fueled by academic pressures like research and publication requirements (Wang & Chen, 2024; Liu et al., 2023).
2. Heroic Phase: Initial heightened response and resource mobilization.
3. Excitement Phase: Brief relief or optimism post-crisis onset, often short-lived.
4. Disillusionment Phase: Recognition of crisis severity, leading to issues like procrastination and imposter syndrome (Zhang et al., 2022; Tan & Lee, 2023).
5. Reconstruction Phase: Recovery efforts emphasizing academic and psychological support (Rodriguez et al., 2023).
6. Adaptive Learning Phase: Reflection and development of new coping strategies, with cognitive-behavioral and mindfulness-based therapies aiding resilience (Wang & Chen, 2024; Johnson et al., 2024).

Continued research on crisis coping techniques is essential for effective postgraduate interventions. The model emphasizes the scholarly impact of crises on academic performance (Kim & Park, 2023), highlighting the need for resilient, flexible coping mechanisms and support networks. With recurrent crises common among graduate students, the role of technology is critical in providing immediate support during initial stages and resources for ongoing learning (Li & Wong, 2024; Wang & Chen, 2024).

This expanded model offers a thorough framework for comprehending the crisis encounter of postgraduate students and can direct the creation of focused, timely responses at every stage of the crisis progression.

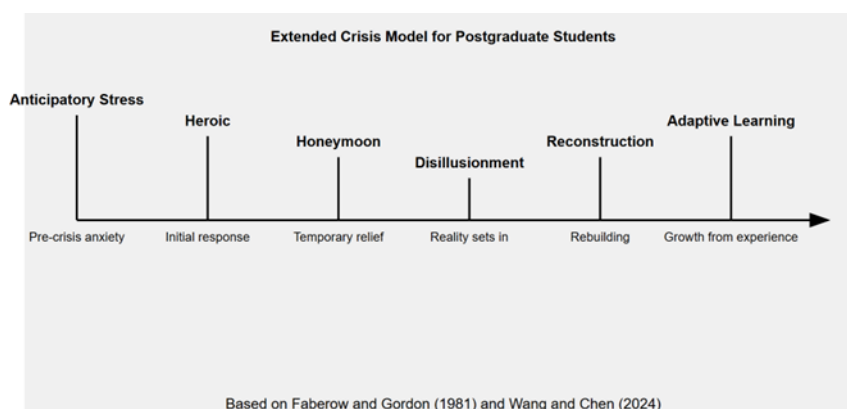


Figure 1: Integrating Crisis Model
(Source Faberow and Gordon (1981) and Wang and Chen (2024))

3.0 Methodology

This investigation adopts a multi-method approach based on Richie and Klein (2007), using design and development research to create adaptable models and structures. It comprises two phases: identifying key sources on the societal impacts of fake news and polling experts using the Fuzzy Delphi Method to achieve consensus. This technique guides the development of a structure and evaluates expert agreement to compile a list of major hoax news effects for analysis.

3.1 Sampling procedure

Purposive sampling is used in this study. The researcher is using this method appropriately since they want to get experts to concur on something that they have already decided. Hasson, Keeney, and McKenna (2000) state that deliberate sampling is the most acceptable technique in the Fuzzy Delphi Method. This investigation included seven specialists at the same time. See Table 1 for a list of the participating experts. Expertise and qualifications were the deciding factors in the selection of these individuals. A team of five to ten experts is required for this analysis, assuming they are all identical. The bare minimum of 10–15 Delphi experts is required for reasonably consistent results (Adler & Ziglio, 1996).

Table 1: List of experts

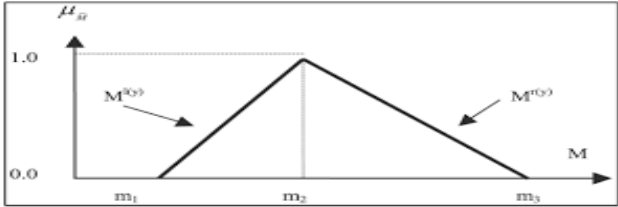
Expert	Field of expertise	Institution
7 Postgraduate Students	Mathematic Psychology Science Biology Islamic Studies	5 Public University

3.2 Expert criteria

Experts are defined as individuals with extensive credentials, training, experience, and peer recognition in their field (Booker & McNamara, 2004; Nikolopoulos, 2004; Perera et al., 2012). Expertise is determined by field knowledge or first-hand experience (Cantrill et al., 1996; Mullen, 2003; Kaynak & Macauley, 1984). In Fuzzy Delphi studies, rigorous expert selection is critical to ensure credible results, with researchers selecting those with at least seven years of relevant experience (Mustapha & Darussalam, 2017). So, in this study, the selection of experts is based on experience as a postgraduate student who is still studying, while the exception of experts in this study are undergraduate students and post-graduate students who have completed their studies.

3.3 Fuzzy Delphi Step

Table 2: Fuzzy Delphi step

Step	Formulation
1. Expert selection	<ul style="list-style-type: none"> This research incorporates the opinions of seven different specialists. In order to determine which aspects will be examined using linguistic variables, an expert panel was convened to weigh the relevance of the evaluation criteria. and descriptions of possible issues with the work, and so on.
2. Determining linguistic scale	<ul style="list-style-type: none"> This approach involves converting all linguistic variables into the quantification of fuzzy triangles (triangular fuzzy numbers). This action also encompasses the incorporation of imprecise numbers into the conversion of linguistic variables (Hsieh, Lu and Tzeng, 2004). The Triangular Fuzzy Number is a representation of values m_1, m_2, and m_3, and is denoted as (m_1, m_2, m_3). m_1 denotes the minimum value, m_2 represents a rational number, and m_3 represents the maximum value. The Triangular Fuzzy Number is employed to create a Fuzzy Scale, which facilitates the conversion of linguistic variables into fuzzy numbers.
 <p>Figure 1: Triangular fuzzy number</p>	
3. The Determination of Linguistic Variables and Average Responses	<ul style="list-style-type: none"> After obtaining input from the designated expert, the researcher must transform all measurement findings into Fuzzy scales. This is commonly acknowledged as the recognition of every answer (Benitez, Martin & Roman, 2007).
4. The determination of threshold value "d"	<ul style="list-style-type: none"> The threshold value plays a critical role in defining the level of consensus among experts (Thomaidis, Nikitakos & Dounias, 2006). The distances between each fuzzy integer $m = (m_1, m_2, m_3)$ and $n = (n_1, n_2, n_3)$ are calculated using the following formula: $d(\bar{m}, \bar{n}) = \sqrt{\frac{1}{3} [(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2]}$
5. Identify the alpha cut aggregate level of fuzzy assessment	<ul style="list-style-type: none"> Once an expert consensus is established, each item is issued a fuzzy number (Mustapha & Darussalam, 2017). The following is the methodology for computing and quantifying fuzzy values: The expression (1) represents the maximum amplitude, A_{max}, of a current, which is equal to 4 times the sum of m_1, $2m_2$, and m_3.
6. Defuzzification process	<ul style="list-style-type: none"> This process uses the formula $A_{max} = (1/4) (a_1 + 2a_m + a_3)$. If the researcher uses Average Fuzzy Numbers or average response, the resulting score number is a number that is in the range 0 to 1 (Ridhuan et al.2014). In this process, there are three formulas namely: i. $A = 1/3 * (m_1 + m_2 + m_3)$, or; ii. $A = 1/4 * (m_1 + 2m_2 + m_3)$, or; iii. $A = 1/6 * (m_1 + 4m_2 + m_3)$. A-cut value = median value for '0' and '1', where α-cut = $(0 + 1) / 2 = 0.5$. If the resulting A value is less than the α-cut value = 0.5, the item will be rejected because it does not indicate an expert agreement. According to Bojdanova (2006) the alpha cut value should exceed 0.5. It is supported by Tang & Wu (2010) who stated that the α-cut value should be more than 0.5.
7. Ranking process	<ul style="list-style-type: none"> The positioning method involves defining elements based on defuzzification values determined by expert consensus. The element with the highest importance is considered the most critical decision point (Fortemps & Roubens, 1996).

3.4 Instrumentation

The researcher developed the Fuzzy Delphi research tool by utilising relevant current literature. Researchers have the ability to generate questionnaire items by drawing from literature, pilot studies, and their own experience (Skulmowski, Hartman, & Krahn, 2007). When formulating questions for the Fuzzy Delphi method, researchers relied on research literature, expert interviews, and focus group methodologies (Mustapha & Darussalam, 2017). In addition, Okoli and Pawlowski (2004) contend that the process of creating research items and content should commence with a comprehensive examination of pertinent literature.

Consequently, scholars gathered the primary consequences of false news on society by analysing existing research and literature. Subsequently, a compilation of specialised enquiries is generated employing a 7-point rating system. The use of the 7-point scale was based on the understanding that using more scales will lead to more precise and accurate results, as demonstrated by Chen, Hsu, and Chang (2011). To facilitate the response process for professionals, the researcher modified the Fuzzy value in Table 4 to a 1-7 scale value, as depicted:

Table 3: Fuzzy scale

Item	Fuzzy number
Strongly disagree	(0.0, 0.0, 0.1)
Disagree	(0.0, 0.1, 0.3)
Somewhat Disagree	(0.1, 0.3, 0.5)
Neutral	(0.3, 0.5, 0.7)
Somewhat agree	(0.5, 0.7, 0.9)
Agree	(0.7, 0.9, 1.0)
Strongly agree	(0.9, 1.0, 1.0)

3.5 The List of The Coping Techniques For Intervening In Psychological Distress

Table 4:

The researchers emphasised the essential aspects of coping techniques for intervening in psychological distress based on a literature study. Next, the researchers will employ the Fuzzy Delphi method to assess the accuracy and agreement among experts over the suitability of incorporating this aspect into the model.

	Early item rank	Hoax news impact
The impact of hoax news	IHN 1	Mindfulness, breathing, and gratitude
	IHN 2	Body scan and relaxation
	IHN 3	Meditation and emotional regulation
	IHN 4	Acceptance and trauma symptom
	IHN 5	Support from significant others

4.0 Results

This section will provide an expert opinion on many elements of the human impact of fake news. Seven subject-matter experts were polled using Fuzzy Delphi questions, and the results were compiled from their replies. The results of the study are as follows:

Table 5: The analysis result

Results	Item1	Item2	Item3	Item4	Item5
Expert1	0.1897	0.0165	0.07423	0.09897	0.03299
Expert2	0.09897	0.0165	0.0165	0.0165	0.19795
Expert3	0.1897	0.0165	0.21444	0.0165	0.09073
Expert4	0.04124	0.04124	0.09897	0.07423	0.09073
Expert5	0.09897	0.04124	0.07423	0.0165	0.09073
Expert6	0.04124	0.0165	0.07423	0.09897	0.19795
Expert7	0.09897	0.0165	0.07423	0.07423	0.09073

Statistics	Item1	Item2	Item3	Item4	Item5
Value of the item	0.1084	0.02357	0.08955	0.05656	0.11312
Value of the construct					0.07824
Item < 0.2	7	7	6	7	7
% of item < 0.2	100%	100%	85%	100%	100%
Average of % consensus					97
Defuzzification	0.82857	0.97143	0.87143	0.87143	0.84286
Ranking	4	1	2	2	3
Status	Accept	Accept	Accept	Accept	Accept

The study findings show that, after processing the data, the bold threshold value is greater than 0.2 (> 0.2), as shown in table 5. To rephrase, there are specialists whose opinions differ or even disagree on specific issues. In contrast, at less than 0.2, the average threshold value (d) for all Hoax news impacts is 0.05329. There is a high degree of expert agreement for an item if the average (d) value is less than 0.2 (Cheng & Lin, 2002; Chang, Hsu & Chang, 2011). At the same time, the required level of expert agreement on this item has been satisfied with a total percentage of 97%, which is more than 75%.

Table 6: The new item rank and hoax impact

	Early item rank	New item rank	Hoax news impact
Expert 1	IHN1	IHN 2	Body scan and relaxation

	IHN 2	IHN 3 & IHN 4	Meditation and emotional regulation Acceptance and trauma symptom
	IHN 3	IHN 5	Support from significant others
	IHN 4	IHN 1	Mindfulness, breathing, and gratitude

5.0 Discussion

The Malaysian government prioritizes mental health due to its significant impact on overall well-being. Neglecting mental health during crises can lead to profound effects on individuals' emotions, actions, and relationships. Graduate students face considerable stress from academic, financial, and social pressures, leading to common challenges like anxiety, depression, and stress. Effective coping strategies are essential for managing these challenges and enhancing well-being.

Problem-focused tactics, such as time management and seeking academic support, alongside emotion-focused measures like mindfulness, have shown promise in reducing stress. Oswalt and Riddock (2007) identified yoga, meditation, and improved communication as effective strategies. During crises, maintaining routines and engaging in religious practices reduced anxiety and depression (Scorsolini-Comin et al., 2021). Social support also plays a crucial role; Wang et al. (2018) found that problem-solving and strong networks improve mental health, while self-blame worsens it. Mindfulness practices, including meditation, were ranked highly effective (Klonoff-Cohen, 2022). Proactive coping and supportive relationships significantly reduced burnout (Thompson et al., 2016).

This study aimed to identify expert-approved coping mechanisms for graduate students using the Fuzzy Delphi technique. Seven experts evaluated coping strategies on a 7-point scale. Findings revealed a strong consensus on effective tactics: mindfulness, breathing, gratitude, body scans, relaxation, meditation, emotional regulation, acceptance of trauma, and social support. These strategies collectively foster resilience and enhance students' well-being.

The study emphasizes integrating these coping mechanisms into graduate programs, orientations, and support services to improve mental health and academic performance. Digital tools like mobile apps and online support groups can facilitate their dissemination. Tailored interventions that account for cultural, gender, and academic differences are crucial. Long-term studies are recommended to explore the sustained impact of these strategies on mental health, academic success, and professional outcomes. Expanding data collection to include diverse graduate student populations would improve the model's generalizability and ensure inclusivity. These findings provide a foundation for developing evidence-based interventions that support resilience and promote wellness in higher education.

6.0 Conclusion

This study identified key coping mechanisms to help graduate students manage psychological distress during crises, including body scans, meditation, emotional regulation, acceptance, social support, and mindfulness. Implementing these strategies can foster an environment conducive to personal and academic success. Future research should empirically test these coping mechanisms in graduate programs, orientations, and support services. Investigating digital tools, such as mobile apps and online support groups, can enhance the dissemination and accessibility of these strategies. Studies exploring how gender, academic major, and cultural background influence the effectiveness of coping techniques will enable more targeted interventions. Longitudinal research tracking students' mental health, academic outcomes, and professional achievements can provide deeper insights into the long-term benefits of these practices. Additionally, gathering graduate students' perspectives on these coping strategies, including their preferences and challenges, can inform the development of evidence-based approaches to support mental health and resilience in higher education.

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Article Contribution to Related Field of Study

The authors declare that they have no conflicts of interest to report regarding the present study.

References

- Adler, M., & Ziglio, E. (1996). *Gazing into the Oracle: The Delphi method and its application to social policy and public health*: Jessica Kingsley Publisher
- Annie Gowen, (2018) 'As Mob Lynchings Fueled by Whatsapp Messages Sweep India, Authorities Struggle to Combat Fake News,' *Washington Post*, 2 July 2018
- Abdul Aziz, A., Sukor, N. M., & Ab Razak, N. H. (2020). Mental health status among university students in Malaysia during COVID-19 pandemic. *International Journal of Academic Research in Business and Social Sciences*, 10(8), 638-651.

- Abdullah, M. C., & Elias, H. (2018). Stress and coping behaviours of postgraduate students in a Malaysian public university. *International Journal of Education, Psychology and Counseling*, 3(9), 58-71.
- Ang Shu Qing, L. (2021). The impact of COVID-19 on mental health: A study on Malaysian university students. *Asian Journal of University Education*, 17(1), 25-37.
- Bennett, K., Shepherd, J., & Janca, A. (2019). Personality disorders and coping among university students. *Journal of College Student Psychotherapy*, 33(2), 145-162.
- Benítez, J. M., Martín, J. C., & Román, C. (2007). Using fuzzy number for measuring quality of service in the hotel industry. *Tourism management*, 28(2), 544-555.
- Booker, J. M., & McNamara, L. a. (2004). Solving black box computation problems using expert knowledge theory and methods. *Reliability Engineering & System Safety*, 85(1–3), 331–340.
- Bodjanova, S. (2006). Median alpha-levels of a fuzzy number. *Fuzzy Sets and Systems*, 157(7), 879–891. doi: 10.1016/j.fss.2005.10.015
- Caplan, G. (1961). *An approach to community mental health*. Grune & Stratton.
- Caplan, G. (1964). *Principles of preventive psychiatry*. Basic Books.
- Chang, P.-L., Hsu, C.-W., & Chang, P.-C. (2011). Fuzzy Delphi method for evaluating hydrogen production technologies. *International Journal of Hydrogen Energy*, 36(21), 14172–14179. doi: 10.1016/j.ijhydene.2011.05.045
- Cheung, C. M. K., Chiu, P. Y., & Lee, M. K. O. (2011). Online social networks: Why do students use facebook? *Computers in Human Behavior*. <https://doi.org/10.1016/j.chb.2010.07.028>
- Cheng, C. H., & Lin, Y. (2002). Evaluating the best main battle tank using fuzzy decision theory with linguistic criteria evaluation. *European journal of operational research*, 142(1), 174-186.
- Everly, G. S., & Mitchell, J. T. (1999). Critical incident stress management (CISM): A new era and standard of care in crisis intervention. *Chevron*.
- Everly Jr, G. S., Flannery Jr, R. B., & Mitchell, J. T. (2000). Critical incident stress management (CISM): A review of the literature. *Aggression and Violent Behavior*, 5(1), 23-40.
- Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*. <https://doi.org/10.1046/j.1365-2648.2000.t01-1-01567.x>
- Hsieh, T. Y., Lu, S. T., & Tzeng, G. H. (2004). Fuzzy MCDM approach for planning and design tenders selection in public office buildings. *International Journal of Project Management*. <https://doi.org/10.1016/j.ijproman.2004.01.002>
- Institute for Public Health. (2023). National Health and Morbidity Survey 2022: Mental Health Status Among Adults in Malaysia. Ministry of Health Malaysia.
- Kaliyar, R.K.; Goswami, A.; Narang, P. (2021) FakeBERT: Fake news detection in social media with a BERT-based deep learning approach. *Multimed. Tools Appl.* 2021, 80, 11765–11788.
- Kanel, K. (2012). *A guide to crisis intervention* (4th ed.). Brooks/Cole, Cengage Learning.
- Kaynak, E., & Macaulay, J. A. (1984). The Delphi technique in the measurement of tourism market potential. *Tourism Management*, 5(2), 87–101.
- Mustapha, R, & Darusalam, G. (2017). Aplikasi kaedah Fuzzy Delphi dalam Kajian Sians Sosial. Penerbitan Universiti Malaya. Kuala Lumpur