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Consensus Development of Resilience Components in Malaysian Breast Cancer Survivors: Findings from a Delphi Study

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ABSTRACT

INTRODUCTION: Resilience significantly influences the mental health and treatment outcomes of cancer patients. This study aimed to establish expert consensus on key resilience components specific to Malaysian breast cancer survivors using a Delphi method. **MATERIALS AND METHODS:** A Three-Round Modified Delphi Technique was conducted on 10 expert panelists involving psychiatrists, psychologists, and breast cancer survivors. In Round 1, open-ended questions identified initial resilience components. In Rounds 2 and 3, panelists rated the importance of each component using a 5-point Likert scale. Consensus was defined as a mean score ≥4.0 with at least 75% agreement. Both median scores and percentage agreement were used to ensure reliability. **RESULTS:** The final framework consisted of 10 main components and 25 subcomponents, with two subcomponents excluded due to low consensus. Main components included emotional, cognitive, knowledge, physical, religious and spirituality, social support, family support, mental health, financial, and other relevant domains. Endorsed subcomponents included emotional flexibility, self-regulation, optimism, gratitude, knowledge of cancer, physical health, religious coping, spiritual practices, social and family support, mental health self-efficacy, and financial status. **CONCLUSION**: This expert-endorsed framework offers a culturally relevant foundation for developing resilience-building strategies among Malaysian breast cancer survivors. These identified components may guide future psychosocial interventions aimed at improving emotional well-being and treatment outcomes among breast cancer survivors.

INTRODUCTION

Breast cancer remains a major public health issue in Malaysia, affecting not only the physical health of women but also their emotional and social well-being. Although advancements in treatment have led to improved survival rates, the journey from diagnosis through treatment can pose significant challenges, leading to considerable physical and psychological distress. A breast cancer survivors refer to individuals who have completed active treatment following a breast cancer diagnosis. Survivorship begins at the end of treatment end and encompasses ongoing care and long-term health and wellness across multiple aspects of life.

The Delphi method is a widely recognized qualitative research approach study, commonly used across various fields such as business, education, and social sciences.[1-3,5-6] The key factor in the successful implementation of a Delphi study is the active cooperation of participants. Therefore, researchers must play a proactive role in maintaining engagement and ensuring a high response rate.[8] Delphi techniques is considered as one the most popular consensus methods, utilizing a structured process involving multiple rounds of questionnaires to systematically gather and refine input from a panel of selected experts.[3,7] It is particularly valued for its ability to obtain expert consensus on complex issues.

The Delphi method is a powerful tool, particularly well-suited for achieving expert consensus. The justification for using this method becomes stronger when explicitly compared to alternative methods such as focus groups or systematic reviews. Unlike a focus group, the Delphi method is inherently designed for consensus-building. The focus group often is at risk of being influenced by the dominant participants, which then can lead to potential bias and skewed results. The Delphi method maintains participant anonymity, uses a structured feedback process, minimizes the risk of groupthink, and encourage for a more thoughtful and independent input over multiple iterative rounds.[8]

In Delphi, the controlled feedback ensures comprehensive and balance contributions, while preventing any single expert from dominating the discussion.[9] On the other hand, the focus group inhibits the honest expression of opinion due to social pressure or power dynamics among participants.

Resilience is vital for cancer patients, as it significantly enhances mental health and treatment outcomes.[10] It involves overcoming mental and emotional difficulties during a crisis or rapidly returning to a pre-crisis state. Resilience is often regarded as a form of "positive adaptation" following a stressful or adverse situation.[11] It encompasses both the process and outcome experiences, primarily through mental, emotional, and behavioural flexibility in response to both internal and external demands.[11]

Breast cancer survivors face unique challenges and require specialized care to address their long-term medical issues and lifestyle recommendations.[11] According to Seiler and Jenewein, there are numerous factors that contribute to resilience in cancer patients.[12] These include demographic characteristics, cancer-related variables, personality traits, social context, coping strategies, optimism, hope, spirituality, and a sense of coherence. Collectively, these factors serve as the protective elements that help individuals navigate the cancer experience.

In a similar study, three protective factors were identified:- biological (gene-environment), personal (sense of coherence, optimism, and hope), and social (social support). These three factors are associated with positive life changes and plays a significant role in fostering resilience among cancer patients. The enhanced resilience, in turn, contributes to improved psychological well-being and better treatment-related outcomes.

The study highlighted the biological domain as particularly critical when individuals are confronted with serious stressors, such as a cancer diagnosis. Within this domain, the researchers identified factors including a coherent self-concept, self-esteem, optimism, and positive emotions as key contributors to resilience. In terms of personal factors, a sense of personal control was noted as an important personality-related trait that promote resilience in cancer patients. As for the social domain, social support derived from social engagement initiatives was found to enhance coping mechanisms, strengthen resilience, and foster the social connectedness, and contribute positively to both physical and mental health.[10]

In addition, a previous study identified three protective factors of resilience for breast cancer patients: social support, the ability to cope with diagnosis and treatment, and optimism.[13] These factors were associated with positive psychological outcome and improved overall well-being. Furthermore, a global survey reported that 59% of people worldwide consider themselves as religious.[12] Many cancer patients turn to religion as a coping mechanism during their illness and treatment journey. A recent study conducted in year 2020 found that religion can foster resilience and play a significant role in helping patients manage the stress associated with breast cancer.[14]

In promoting resilience, it is essential to enhance patients' religiosity and psychological resilience skills through counseling interventions. Such efforts can help alleviate the adverse effects of cancer treatment. Additionally, breast cancer patients who possess strong biological and psychological resources are more likely to respond positively to their illness. One study identified five key resilience factors focused on biological and psychological aspects: hardiness, optimism, confidence, gratitude, and mastery.[15] In Malaysian, a study on local cancer survivors highlighted the significance of three core components that contribute to enhanced resilience, namely community support, personal coping mechanisms, and spiritual well-being.[16] Further evidence suggests that five protective factors, such as self-efficacy, perceived social support, optimism, and mastery, can significantly improve resilience among breast cancer patients.[17]

Despite the extensive discussion of protective factors that optimize resilience, current clinical practice still lacks the integration of psychosocial interventions that specifically leverage these factors specifically to support resilience breast cancer patients. Psychosocial interventions grounded in the protective elements identified above have the potential to enhance recovery and strengthen resilience in this population, particularly within the Malaysian context.

Similarly, previous research has highlighted the importance of resilience across various populations, including cancer survivors. However, a comprehensive understanding of resilience components specific to Malaysian breast cancer survivors remains limited. This study aims to address this gap by establishing a consensus on the key components and subcomponents of a resilience framework tailored for Malaysian breast cancer survivors.

Given the scarcity of local evidence on resilience in breast cancer survivors in Malaysia, developing a culturally sensitive and contextually relevant framework is critical. By seeking the expert consensus on the essential elements of resilience, this study aspires to provide invaluable insights for developing targeted psychosocial interventions that can improve the resilience and enhance the overall quality of life for Malaysian breast cancer survivors. Utilizing a Three-Round Modified Delphi Technique, this research will produce a comprehensive and expert-endorsed consensual understanding of resilience components that are directly aligned with the lived experiences and cultural context of Malaysian breast cancer survivors.

MATERIAL AND METHODS

A Delphi study was conducted in three stages to propose components and subcomponents of resilience for cancer survivors in Malaysia.

Stage I: Generation of Initial Domains

Data were obtained through three methods: face-to-face interviews with the patients, individuals, and specialists at the Breast Cancer Awareness and Research Unit (BestARi) in Specialist Universiti Sains Malaysia Hospital (HPUSM), an intensive reviews of previous studies in the examined area; and exploration of models and theoretical framework on resilience among cancer survivors. A total of 10 expert panel members participated in the study. A purposive sampling was used to identify eligible participants.

According to existing literature, the number of panel participants in Delphi studies ranges from a few to several hundred.[18-21] For homogenous groups, the ideal panel size may range between 10 to 15 participants.[22] Another study also supported the use of small panels, suggesting that a group of 10 to 15 experts is sufficient to achieve a quality outcomes.[23] Thus, this study included 10 expert panelists in the Delphi process.

The inclusion criteria required experts to have a minimum three years of professional experience in relevant fields, along with direct clinical experience in managing breast cancer cases in Malaysia. The research team carefully evaluated examined each candidate's expertise, and two independent researchers reviewed and selected the final panel members.

Data collection was conducted over a three month period in 2023. Participation is voluntary, and could withdraw from the interview sessions without penalty. Informed consent was obtained from all participants. Each interview was audio-recorded with participants' permission to prevent data recorded to avoid missing data and only started after getting permission from the participants. Data collection commenced following an approval from the relevant ethics committee.

Thematic analysis method was used to analyze the qualitative data. Interview transcripts were transcribed verbatim and thoroughly reviewed to ensure familiarity with the content. Open coding was conducted whereby meaningful data segments were assigned descriptive codes. Initial codes were generated and assessed independently by two researchers. These codes were then grouped into categories based on similarities and emerging patterns which were refined iteratively into overarching themes. For example, in analyzing participants' coping strategies, initial codes such as "nuclear family" and "extended family" were categorized under the theme "family support.".

Any disagreements between coders were resolved through discussion and mutual agreement. The research team discussed and refined the identified themes, reaching consensus through collaborative dialogue. As a result, a preliminary framework of 10 components and 27 subcomponents was developed. This draft was submitted to the expert panel for review and consensus through three iterative rounds of the Delphi process.

In the context of Delphi studies, selecting an appropriate threshold is essential to guide decision-making and establish the validity of findings. A widely accepted threshold is a mean score of 4.0 or higher on a likert-type scale, along with a minimum of 75% agreement among experts. The rationale for this criterion is to ensure a strong level of expert agreement in qualitative assessments.

Previous studies have suggested that consensus thresholds in Delphi studies may vary, with many recommending at least a 60% to 75% agreement to validate results effectively.[24] Moreover, Delphi panels typically predefine a percentage threshold for consensus, often ranging from 51% to 100%, with 75% representing a decisive majority and reflecting a robust consensus.[25] Therefore, using a mean score threshold of 4.0 or higher and a 75% agreement rate in this study aligns with established best practices, helping to ensure clarity, reduce bias, and validate the credibility of expert consensus outcomes.

Stage II: Initial survey

Before being submitted to the expert panels for the Delphi process, the proposed components and subcomponents were reviewed by four academicians to assess the readability and feasibility of the module. Based on their feedback, the initial components and subcomponents module were refined and finalized for use in the Delphi technique (Table I). Expert panel members of the Delphi technique must meet specific criteria: (i) they must be knowledgeable and experienced in the area of study, (ii) capable of active participation, (iii) able to communicate effectively, and (iv) available during the study period.[26] In Delphi methodology, a small number of expert panelists can be sufficient to yield meaningful results.[19,27] For this study, 10 expert panels were selected to participate in the Delphi process. They were the breast cancer patients, counselors, religious leaders, a medical specialist, and a matron.

Table I: Initial components and sub-components of Resilience module for breast cancer survivors

No	Component	Subcomponents	
1	Emotional	1	Emotional flexibility - Positive feeling
		2	Emotional self-regulation/self-control skills
2	Cognitive	3	Mental flexibility
		4	Positive thought
		5	Optimistic view
		6	Gratitude
3	Knowledge	7	Knowledge of cancer diagnosis
		8	Intelligent
4	Physical	9	Physical fitness - Exercise status
		10	Physical health - Good nutrition intake
		11	Physical Activities
5	Religion and spirituality	12	Religious coping - religious belief
		13	Spiritual relaxation activities
		14	Regular religious attendance
		15	Commitment of core values
		16	Flexibility and tolerance of other's belief
6	Social support	17	Social networking - friend/neighbour
		18	Medical professional
		19	Cancer group
		20	Resilient role model
7	Family support	21	Nucleus family
		22	Extended family
8	Mental health	23	Mental health
9	Financial	24	Financial status
10	Others	25	Self-efficacy
		26	Cancer stages
		27	Gender

Stage III: Seeking a consensus via the Delphi study

Delphi Round 1

In the first round, expert panelists were emailed an invitation letter, the module, and informed consent form. The module consisted of 10 components and 27 subdomains. The participants were asked to review and rate each domain and items using a 5-point likert scale ranging from I (extremely not important) to 5 (strongly very important). They were also encouraged to suggest addition, modification, or removal of components or subcomponents as appropriate. The mean scores and percentage agreement (ratings of “important” or “very important”) were calculated to determine the level of consensus for each item. These results were then used to revise the questionnaire and prepare it for the second round of the Delphi process.

Delphi Round 2

In the second round, the expert panelists were once again asked to review the responses obtained from the previous round and rate each item using the same 5-point likert scale. The objective of this round was to seek consensus among the participants. The collected data were them analyzed to determine the level of agreement and refine the proposed components accordingly.

Delphi Round 3

In the third round, each Delphi panelist received a questionnaire that included the components, subcomponents, and aggregated ratings from the previous round, as summarized by the researchers. The panelists were invited to reconsider their judgments to help achieve consensus. They were asked to review their prior responses, re-rate the items using the same scale, and provide any additional comments. Selected comments are cited in the text, while others are presented in the results of Delphi Round 3.

This round successfully established consensus on the components and subcomponents of the proposed resilience module for breast cancer survivors. The mean score represented the importance of each items of components and subcomponents, while the percentage agreement represented the proportion of panelists rating an item as "important" or "very important. A mean score of 4.0 or higher, along with a percentage agreement of 75% or more, was considered indicative of consensus.[20,21]"

RESULTS

Profile of Delphi expert panels

A total of 10 expert panelists participated in all three rounds of the modified Three-Round Modified Delphi study. The majority of participants were female (70%), while the remaining 30% were male. In terms of professional experience, nine experts possessed more than five years of relevant service, while one participant was a cancer survivor provided valuable insights based on lived experience with a breast cancer diagnosis. Among the panelists, three experts (30%) were medical specialists including two psychiatrists and one pathologist. Another three experts (30%) comprised of matron (head nurse), a clinical psychologist and a counselor. The remaining four experts (40%) included two religious leaders, an educator, and the breast cancer survivor (Table II).

Table II: Profile of the Delphi expert panels.

Item	Round 1	Round 2	Round 3
Gender, n(%)			
Male	3 (30%)	3 (30%)	3 (30%)
Female	7 (70%)	7 (70%)	7 (70%)
Work experience (years) n (%)			
< 5	1 (10%)	1 (10%)	1 (10%)
> 5	9 (90%)	9 (90%)	9 (90%)
Background, n (%)			
(Medical doctor)	3 (30%)	3 (30%)	3 (30%)
Psychiatrists	2		
Pathologist	1		
(Non-medical doctor)	7 (70%)	7 (70%)	7 (70%)
Matron	1		
Clinical psychologist	1		
Counsellor	1		
Religious counsel	2		
Educator	1		

Delphi Round 1

Following the expert panels’ evaluation of the questionnaire, all ten components and 27 subcomponents were retained. The median (M), interquartile range, and quartile deviation (QD) were calculated for Delphi Rounds 1, 2, and 3. In the first round, the QD values for all subcomponents ranged from 0.38 to 1.38. Subcomponents 8 and 27 recorded QD values greater than 1.0 specifically, 1.38 and 1.25 indicating a low level of consensus was low and, therefore no consensus. Although these two subcomponents did not meet the consensus threshold (QD>1.0), they were still rated as “important” or “very important” with a median of 4 or higher. In contrast, the remaining subcomponents had QD Values less than or equal to 0.5 (QD<0.5), reflecting a high level of consensus and importance. Furthermore, the median (M) scores were used to assess overall expert agreement. All subcomponents recorded median scores of 4.0 or above (M>4), indicating a generally high level of consensus across the panel.

Delphi Round 2

In the second round of the Delphi process, modifications were made to the subcomponents based on expert feedback from Round 1. However, subcomponent 8 continued to show a low and no consensus, while a quartile deviation (QD) value remaining above 1.0 (QD>1.0), indicating a persistent disagreement among experts. The median (M) scores were used to further analyse the level of expert consensus. For subcomponent 27, the median score was less than 3.5 (M=3), indicating limited perceived importance. Nevertheless, subcomponent 27 showed some improvement in agreement with a QD value of 1.0, suggesting a moderate level of consensus. This outcome may indicate that some experts continued to rate the subcomponent as "not relevant" (scale rating of 2), despite the modifications made in response to their previous comments. In contrast, all remaining subcomponents demonstrated high level of consensus, with QD value less than or equal to 0.5 (QD≤0.5) and median scores of 4.0 or above. These results reflect strong agreement among the expert panel regarding the importance of those subcomponents.

Delphi Round 3

In the third round of Delphi process, further modifications were made based on expert feedback. Despite these efforts, subcomponents 8 and 27 still failed to reach acceptable level of consensus and were therefore removed from consideration. Both subcomponents showed low consensus and importance, with QD values of 1.375 and 1.0, respectively. Additionally, the median scores for these subcomponents were below 3.5, with an average of 3 (M=3), indicating low perceived relevance among panelists. Subcomponents 7 and 22 showed differing results. Although both had QD values of 0.875 (QD>0.5), indicating moderate consensus, they were still regarded as “important” and “very important”, with median scores above 4 (M>4). All remaining subcomponents, excluding subcomponents 7, 8, 22, and 27, achieved high levels of consensus, with QD values less than or equal to 0.5 (QD≤0.5), and were considered “important” and “very important” with median scores of 4.0 or higher. The final results of all three Delphi rounds are summarized in Table III,

Table III: Consensus in resilience module component and subcomponent for breast cancer through Three-Round Modified Delphi Technique

Bil	**Component**	**Sub components**	**Round of Delphi**								
			Round 1			Round 2			Round 3		
			Median	Mean	QD*	Median	Mean	QD*	Median	Mean	QD*
1	Emotional	1	5	4	0	5	4	0	5	4	0.375
		2	5	4	0.38	5	4	0.375	5	4	0
		3	5	4	0	5	4	0	5	4	0
2	Cognitive	4	5	4	0	5	3	0.5	4.5	3	0.5
		5	5	2	0	4.5	3	0.5	4	3	0.5
		6	5	4	0.38	5	4	0	5	4	0.375
3	Knowledge	7	5	3	0.5	5	3	0.375	5	3	0.875
		8	4	1	1.38	3.5	1	1.375	3	1	1.375
		9	4	1	1	5	4	0	5	3	0.5
4	Physical	10	5	4	0	5	5	0	5	4	0
		11	5	3	0.38	5	4	0	5	4	0.375
		12	5	5	0	5	5	0	5	5	0
5	Religion and spirituality	13	5	1	0	5	4	0.38	5	5	0
		14	4	1	0.5	5	3	0.375	5	3	0.375
		15	5	2	0	5	4	0	5	2	0.375
		16	4	3	0.38	4	3	0.5	4	3	0
		17	5	4	0	5	5	0	5	5	0
6	Social support	18	5	3	0	5	3	0.5	5	4	0
		19	5	4	0.5	5	4	0	5	3	0
		20	4	1	0.38	4.5	4	0.5	4	4	0.5
7	Family support	21	5	3	0.88	5	3	0	5	3	0
		22	5	2	0	4	2	1	4.5	2	0.875
8	Mental health	23	5	2	0	5	4	0	5	4	0
	Financial	24	5	2	0	5	4	0.375	5	4	0
		25	5	3	0	5	4	0	5	3	0
10	Others	26	5	3	0.38	4.5	1	1	5	3	0.5
		27	5	1	1.25	3	1	1	3	2	1

Finally, the researchers achieved a high level of consensus from the Delphi expert panel on ten components and twenty-five subcomponents of the resilience module (Table IV).

Table IV: The final components and subcomponents of the resilience module for breast cancer

No	Component	Subcomponents	
1	Emotional	1	Emotional flexibility - Positive feeling
		2	Emotional self-regulation/self-control
2	Cognitive	3	Mental flexibility
		4	Positive thought
		5	Optimistic view
		6	Gratitude
3	Knowledge	7	Knowledge of cancer diagnosis
4	Physical	9	Physical fitness - Exercise status
		10	Physical health - Good nutrition intake
		11	Physical Activities
5	Religion and spirituality	12	Religious coping - religious belief
		13	Spiritual relaxation activities
		14	Regular religious attendance
		15	Commitment of core values
		16	Flexibility and tolerance of other's belief
6	Social support	17	Social networking - friend/neighbour
		18	Medical professional
		19	Cancer group
		20	Resilient role model
7	Family support	21	Nucleus family
		22	Extended family
8	Mental	23	Mental health
9	Financial	24	Financial status
10	Others	25	Self-efficacy
		26	Cancer stages

DISCUSSION

The aim of the study was to achieve expert consensus on the components and subcomponents of a resilience module tailored for breast cancer survivors. Initially, ten components and 27 subcomponents were proposed to the panel of experts. After three Delphi rounds, a high level of consensus was achieved on ten components and 25 subcomponents of the resilience module. However, the subcomponents 8 (intelligence) and 27 (gender) were removed due to low consensus. Previous research supports this exclusion, suggesting that psychological constructs are more influential for resilience than inherent traits such as gender or intelligence.[28] For example, one study found that while the clinical stage of cancer correlated with resilience, variables including age, marital status, and socio-economic status did not show a significant relationship with resilience.[29] In fact, by emphasizing the adaptive skills and coping strategies, patients can enhance their resilience and quality of life, not through cognitive intelligence or gender, but by fostering effective emotional responses when dealing with cancer.[30] This finding suggests that resilience is influenced more by environment and relational factors than by inherent traits such as gender or intelligence.

Almost all the components and subcomponents were rated as highly important, with only a few receiving lower levels of consensus. These findings are consistent with previous studies which identified emotion, knowledge, physical, religious and spiritual, social support, family support, and mental health as key domains from the perspective of cancer survivors.[15,17,31-33] The following discussion will justify why these subcomponents received strong consensus from the expert panels. Breast cancer is often a traumatic experience, and many survivors face emotional challenges such as anxiety, depression, fear, and others. Therefore, strong emotional support from family, friends, and healthcare providers is essential. Emotional abilities, such as emotional intelligence, emotion management, mood repair, and coping, play a crucial role in the quality of life of breast cancer survivors.[34] The high level of consensus on the emotional subcomponent reflects its central and unique role in survivorship care.

The cognitive component is essential for breast cancer survivors, as many experience changes in cognitive functioning, including difficulties with memory, attention, and concentration. As a result, cognitive rehabilitation programs are important to help survivors manage these challenges effectively. In addition, breast cancer survivors need accurate and up-to-date information about their diagnosis, treatment options, and potential long-term effects to make informed decisions about their health and well-being. These considerations support the strong consensus on cognitive subcomponents, highlighting the critical role of cognition in overcoming the challenges faced by breast cancer survivors. Similarly, the physical component is equally important and was appropriately prioritized by the expert panels. Breast cancer survivors often endure a range of physical side effects from treatment, such as fatigue, pain, and lymphedema. Interventions like exercise and physical therapy have been shown to alleviate these symptoms and enhance overall physical functioning.[35] The high consensus on the physical subcomponents reflects their practical relevance in supporting recovery and improving quality of life.

A previous study found that religion and spirituality can serve as an important sources of comfort and support for many breast cancer survivors.[27] The strong agreement among expert panelists on the significance of religion and spirituality as tools for resilience reinforces the findings. For example, Malaysian participants frequently emphasized the role of "tawakkal" (trust in God) and "solat" (prayer) as powerful sources of emotional strength. This cultural dimension highlights the need for tailored psychosocial interventions that respect and incorporate diverse spiritual practices, thereby promoting a more inclusive and culturally relevant approach to building resilience among breast cancer survivors in Malaysia. Similarly, social support from family, friends, and support groups plays a critical role in helping survivors cope with the emotional and physical challenges of diagnosis and treatment.[36] Moreover, family members of breast cancer patients often face their own emotional and practical burdens. Family support programs are therefore essential not only for patients but also for their loved ones, helping to create a more supportive and resilient care environment.[36]

The breast cancer survivors may experience anxiety, depression, and other mental health challenges. These challenges can arise from physical issues such as illness or disability, psychological stress, family-related concerns, and social factors, including challenges related to employment, insurance, and supportive care access Mental health services such as counseling and psychotherapy are essential in addressing these concerns.[37] Additionally, financial burdens can significantly affect the well-being of breast cancer survivors. The high cost of treatment, coupled with potential loss of income and other related expenses, can lead to financial distress. Financial counseling and support programs play a vital role in helping survivors manage these economic challenges.[38] The expert panel's strong consensus on the importance of mental health and financial status subcomponents highlights their critical relevance. This is supported by various sources, including the report Supporting Child and Student Social, Emotional, Behavioral, and Mental Health Needs by the U.S. Department of Education, which underscores the importance of mental health across all life stages.[39]

The findings of this study underscore the need for a resilience framework specifically tailored the to breast cancer survivors in Malaysia. This has important implications for both future research and clinical practice. In terms of clinical applications, interventions such as resilience training programs designed explicitly for breast cancer survivors could be developed and implemented. These programs may include modules focused on enhancing social support, strengthening coping mechanisms, fostering optimism, and integrating spirituality elements that are culturally relevant and aligned with the survivors' needs.

Group therapy sessions can foster peer support and shared experiences, providing a sense of community and mutual understanding among breast cancer survivors. Individual counseling, on the other hand, may enhance personal coping strategies and foster greater optimism. Additionally, incorporating religious and spiritual counseling into oncology care is essential for addressing the unique cultural and spiritual needs of Malaysian patients. Future research should evaluate the effectiveness of these interventions in improving psychological well-being and treatment outcomes. Ultimately, such efforts would support a more comprehensive, patient-centered approach to cancer care that prioritizes resilience as a core component of recovery and survivorship.

The findings of this study highlight the critical importance of developing a resilience framework specifically tailored for breast cancer survivors in Malaysia. This has significant implications for both future research and clinical practice. Clinically, targeted interventions such as resilience training programs can be implemented to support survivors throughout their recovery journey. These programs may include structured modules focusing on social support, effective coping strategies, optimism, and spirituality in which these components identified as particularly relevant within the Malaysian cultural and healthcare context. For instance, a study conducted in South Korea identified resilience as a key coping resource, with its effectiveness significantly enhanced by the presence of social support. This mirrors the Malaysian context, where family and community support play a vital role in stress adaptation.[40] Similarly, previous research has shown that resilience is closely tied to socio-cultural dynamics, with individuals from collectivist societies often exhibiting higher resilience due to strong interpersonal relationships.[29]

In European populations, resilience outcomes have been found to vary based on cultural attitudes toward illness and coping mechanisms.[13] Studies from various countries including China also suggested that resilience mediates the relationship between psychological well-being and quality of life in cancer survivors.[41-42] This body of research underscores the universal value of resilience in mitigating distress and improving overall health outcomes. Nevertheless, while the experience of breast cancer is a shared global challenge, the frameworks through which resilience is developed and expressed are shaped by cultural context. In Malaysia, resilience is deeply influenced by local beliefs and support systems, highlighting the need for culturally sensitive approaches to supportive care.[43] These findings reinforce the importance of tailoring resilience frameworks to reflect the unique social responses and collective coping strategies found across different societies.

In developing a resilience module for breast cancer patients, it is essential to draw upon elements from existing psycho-oncology interventions that support psychological well-being during treatment and recovery. Research indicates that interventions aimed at enhancing resilience can lead to improved coping mechanisms, reduced psychological distress, and better overall quality of life for breast cancer patients.

Multiple practical approaches have been recommended in the literature to incorporate resilience components into psycho-oncology care. First, resilience training should integrate evidence-based therapeutic modalities such as Cognitive Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and mindfulness techniques.These methods enhance psychological flexibility and can be tailored to meet individual patient needs.[10,44,45] Second, continuous assessment of resilience and mental health should be standardized within oncology settings. This enables clinicians to personalize care based on ongoing patient feedback and adjust coping strategies accordingly.[46] Third, digital health tools such as mobile applications can play a critical role in facilitating resilience training by providing accessible, ongoing support and enabling patients to engage with resilience-building exercises at their own convenience.[47] In addition, training healthcare professionals through educational programs focused on resilience promotion skills can further enhance the effectiveness of psycho-oncology interventions.[45,48] By embedding these multifaceted components into existing psycho-oncology interventions, healthcare providers can strengthen patient resilience, ultimately contributing to improved psychological outcomes and quality of life for breast cancer survivors.

In summary, breast cancer survivors face a wide range of challenges that affect their emotional, cognitive, physical, and mental health, as well as their social and financial well-being. The findings of this study indicate that the expert panels reached a high level of consensus on these key subcomponents, reinforcing their relevance and importance. Based on this consensus, the present study proposes a set of initial components and subcomponents for a resilience module specifically designed for breast cancer survivors.

Study Limitation

Several limitations may affect the generalizability and robustness of the study's findings. One significant limitation is the relatively small sample size of experts involved in this study. A limited number of participants may not fully capture the diversity of perspectives, opinions, and experiences within the field of breast cancer resilience including a broader panel of representatives such as cancer survivors, multidisciplinary healthcare professionals, and community advocates would enhance the comprehensiveness and applicability of the identified resilience components.[44]

Another important limitation is the potential bias in the expert selection process. In particular, the underrepresentation of breast cancer survivors among the expert panel may have limited the depth of insights from the lived experience perspective. Given that survivor input is essential for ensuring the relevance and effectiveness of any resilience intervention, future studies should prioritize balanced representation to better reflect the real-world needs of breast cancer survivors. The absence of survivor voices may skew the recommendations towards the perspectives of healthcare professionals or researchers, thereby limiting the holistic understanding essential for the development of an effective resilience training program.[46]

While the Delphi method is valuable for gathering expert opinions and building consensus, it also has inherent limitations. The Delphi technique relies primarily on the subjective judgments of selected experts. As a result, the depth and quality of the data can vary, since it is shaped by individual experiences, interpretations, and expertise rather than empirical evidence. Consequently, the consensus achieved may not represent an entirely objective or comprehensive viewpoint but may instead reflect the specific biases, perspectives, or knowledge gaps of the expert panel.[49,49]

CONCLUSION

The present study has developed a resilience module for cancer survivors, incorporating credible and evidence-based subcomponents. This tool is particularly valuable, as the breast cancer survivors often lack access to structured resources that address their psychosocial and emotional needs. By proposing this module, the study aims to bridge this critical gap in survivorship care. Furthermore, the resilience module holds relevance not only for individual patients but also for cancer care units, where it can serve as a resource for staff training and development to enhance supportive care practices.

CONFLICT OF INTEREST

The authors disclose that they have no conflicting interests.

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