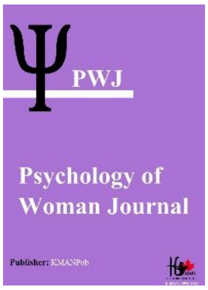
KMAN
PUBLISHING INSTITUTE
Journal Website

Article history:
Received 24 June 2025
Revised 29 September 2025
Accepted 01 October 2025
Initial Published 04 October 2025
Final Publication 01 January 2026

Psychology of Woman Journal

Volume 7, Issue 1, pp 1-8



E-ISSN: 3041-8615

Designing and Validating a Community-Based Palliative Psychological Service Package and Evaluating Its Effectiveness on Pain Perception and Death Anxiety in Patients with Breast Cancer

Mohamad. Sharif Malmir[1], Mohammadreza. Seyrafi[2*], Saeedeh. Zomorodi[3]

[1] Department of Health Psychology, Ki.C., Islamic Azad University, Kish, Iran
[2] Department of Psychology, Ka.C., Islamic Azad University, Karaj, Iran
[3] Department of Psychology, WT.C., Islamic Azad University, Tehran, Iran

*** Corresponding author email address**: mohamadreza.seirafi@iau.ac.ir

Article Info

Article type:
Original Research

How to cite this article:
Sharif Malmir, M., Seyrafi, M., & Zomorodi, S. (2026). Designing and Validating a Community-Based Palliative Psychological Service Package and Evaluating Its Effectiveness on Pain Perception and Death Anxiety in Patients with Breast Cancer. *Psychology of Woman Journal*, *7*(1), 1-8.
http://dx.doi.org/10.61838/kman.pwj.4506

ABSTRACT

Objective: This study aimed to design, validate, and evaluate the effectiveness of a community-based palliative psychological service package on pain perception and death anxiety in patients with breast cancer.

Methods and Materials: In the qualitative phase, data were collected through in-depth interviews with 12 women diagnosed with breast cancer and content analysis of 22 related scientific articles. The designed intervention package was then presented to 15 psychology experts, and its validity was confirmed using survey methods and content analysis. In the quantitative phase, the statistical population included women with breast cancer residing in Khorramabad city, who were purposively selected and then randomly assigned to experimental and control groups (15 participants in each group). The research instruments included the McGill Pain Questionnaire (Melzack, 1975) and the Templer Death Anxiety Scale (Templer, 1970), both of which demonstrated appropriate reliability and validity. Data analysis, conducted using SPSS version 26 with repeated measures ANOVA and Bonferroni post-hoc tests.

Findings: The findings indicated that the intervention package significantly reduced pain perception and death anxiety in the experimental group. The package, which emphasized mindfulness techniques and emotion management training, effectively contributed to the psychological and social empowerment of the patients.

Conclusion: This study highlights the importance of integrating psychological interventions with breast cancer treatments and developing effective community-level palliative care programs.

Keywords: *Pain Perception, Death Anxiety, Breast cancer.*

1. Introduction

Cancer has been a persistent health challenge throughout history, with its incidence rising in recent times due to various factors, including environmental pollution (Hill et al., 2023). It is estimated that nearly half of men and more than one-third of women worldwide may face cancer during their lifetime (Yuan et al., 2023). Among the most significant types of cancer is breast cancer. One in every eight women develops breast cancer in her lifetime (Penberthy et al., 2023). With 2.3 million newly registered cases in 2020, breast cancer was the most common type of cancer (Arefian et al., 2023). It is the leading cause of death among women aged 20 to 50 (Lu et al., 2022). A study conducted in 2018 revealed that more than two million women were diagnosed with breast cancer, and over half of them died in the same year (Ghafoor, 2023). Breast cancer is not only the most prevalent cancer among women but also the leading cause of cancer-related mortality in women in developing countries (Mzurikwao, 2024). In 2020, there were nearly 2.3 million new cases of breast cancer worldwide, along with approximately 685,000 deaths from the disease, showing significant geographic variations across different countries and regions (Ye et al., 2023).

Patients with breast cancer often face multiple challenges that encompass both physical and psychological aspects (Carreiro et al., 2025; Karimi Mohajeri et al., 2025). A breast cancer diagnosis not only leads to physical discomfort from the disease and its treatments but also imposes significant psychological distress (Abdelhadi, 2023). One of the major physical problems is pain. Research indicates that between 25% and 60% of breast cancer patients experience pain during diagnosis and treatment (Zhang et al., 2024). The most widely accepted definition of pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage (Liongson et al., 2023). However, pain perception is not merely a sensory experience but also involves emotional and cognitive dimensions (Ghobadi, 2024). Pain perception includes patients' attitudes, beliefs, and expectations about pain, cognitive distortions such as catastrophizing, feelings of helplessness, assessment of pain control, interpretations of pain consequences, as well as general cognitive systems and beliefs regarding pain (Vitale et al., 2023). Maladaptive perceptions and thoughts about pain can also contribute to the transition from acute to chronic pain in individuals undergoing breast cancer treatment (Dams et al., 2023). Studies have shown that pain perception can be influenced by factors such as anxiety, psychological distress, and pre-existing beliefs (Drusko et al., 2023; Taheri et al., 2023). Breast cancer is often associated with pain, which may stem from different sources, including the disease itself or treatments such as radiotherapy, chemotherapy, immunotherapy, and surgery (Doan, 2023).

Death anxiety is a significant concern among breast cancer patients, with studies indicating that they often report higher levels of death anxiety compared to patients with other types of cancer (Yang, 2023). This anxiety is linked to fear of recurrence and disease progression among breast cancer patients, highlighting its impact on psychological well-being (Coutts-Bain et al., 2023). Research has shown that death anxiety is closely associated with fears of recurrence and progression in cancer patients, including those with breast cancer (Coutts-Bain et al., 2023).

The management of breast cancer involves a wide range of strategies and interventions aimed at controlling the disease and enhancing patient well-being. The current healthcare landscape reveals a fundamental lack of accessible and effective palliative psychological interventions specifically designed to address the unique needs of community-dwelling breast cancer patients. Community-based palliative care refers to the provision of supportive care services in community settings such as patients' homes, care facilities, or non-hospital environments, supporting the physical, psychological, social, and spiritual well-being of patients and enabling them to receive care in familiar surroundings (Frey & Balmer, 2023).

The goal of this approach is to improve the quality of life for patients and their families by addressing their holistic needs (Braš et al., 2023; Russo, 2023; Weissman, 2024). Palliative care aims to optimize quality of life and reduce psychological suffering for individuals facing serious illnesses (Battista & Sciacca, 2023). Community-based palliative care programs have been shown to reduce hospitalizations, lower end-of-life costs, and improve quality of life in cancer patients (Russo, 2023). Research has also shown that community-based palliative care models can positively impact patients' quality of life and help reduce rates of home deaths (Choi et al., 2018; Murakami et al., 2018). The psychological dimension of palliative care involves addressing mental health concerns that patients may have (O'Malley et al., 2020). In other words, psychological care addresses sources of psychological distress (Mercante, 2024). Early identification and intervention for psychological distress are crucial, as they can influence recovery, treatment adherence, and overall quality of care (Abdelhadi, 2023; Ma, 2024).

Breast cancer remains a leading cause of mortality among women worldwide. While advancements in treatment have improved survival rates, many patients continue to experience significant physical and psychological distress throughout the course of the disease. This distress, including pain and death anxiety, can negatively impact quality of life and treatment adherence. Palliative care, with its focus on comprehensive symptom management and psychosocial support, has emerged as an essential component of integrated cancer care. However, there is a considerable gap in accessible and effective palliative psychological interventions tailored to the unique needs of breast cancer patients, particularly within the Iranian community. The present study seeks to answer the following question: Is a community-based palliative psychological care package valid, and does it effectively impact pain perception and death anxiety in breast cancer patients?

2. Methods and Materials

2.1. Study design and Participant

In this study, aimed at developing a community-based palliative psychological care package and examining its effects on pain perception, death anxiety, and perceived social support among breast cancer patients, an exploratory mixed-method design was used.

In the qualitative phase, data were collected through interviews with specialists and patients, as well as a review of relevant literature. The data were coded and categorized using thematic analysis. Subsequently, conceptual subcategories were developed, questions were designed, and after several rounds of expert feedback and revisions, the final educational package was prepared.

In the quantitative phase, a quasi-experimental pretest-posttest design with a control group and two-month follow-up was implemented. The experimental group received the educational package, while the control group received no intervention. Questionnaires were administered at three stages (pretest, posttest, and follow-up).

The qualitative statistical population included relevant scientific texts, 15 experts in psychology and health, and women with breast cancer from Khorramabad city, selected purposefully until theoretical saturation was reached (12 participants). In the quantitative part, the population consisted of all women with breast cancer in Khorramabad in 2024. The sample size was determined using G*Power software, resulting in 30 participants (15 in the experimental group and 15 in the control group) selected by convenience sampling and randomly assigned to groups.

Inclusion criteria included informed consent, age between 20–45 years, minimum middle-school education, confirmed breast cancer diagnosis by a specialist, and absence of severe psychological disorders. Exclusion criteria included lack of cooperation, missing more than two sessions, incomplete questionnaire responses, experiencing severe stressful events, and patient death.

During coding, 110 open codes were initially extracted; after eliminating duplicates, 62 codes remained. These were categorized into 11 axial codes and finally into 6 main themes. To validate the intervention package, the prepared protocol was reviewed by 15 psychology experts in several stages, and the expert agreement coefficient was calculated after revisions. Before the main implementation, the final package was piloted with 4 breast cancer patients.

2.2. Measures

McGill Pain Questionnaire (MGPQ): Developed by Melzack (1975), this tool contains 20 sets of descriptive statements designed to measure individuals' perceptions of pain. Scoring ranges from 0 to 1, with "0" assigned if no statement matched the respondent's pain description, and "1" assigned otherwise . Exploratory and confirmatory factor analyses revealed four subscales: sensory perception, affective perception, evaluative perception, and miscellaneous pain types. Kuder-Richardson coefficients were reported as 0.77, 0.91, 0.75, and 0.89, respectively. Dworkin et al. (2009) reported a Cronbach's alpha of 0.95. In their study, the content validity index was 0.61, deemed acceptable. In a study by Taraghi & Masoudi (2019), reliability was calculated using Kuder-Richardson coefficients, with alpha values ranging from 0.79 to 0.85, and content validity reported as 0.87. In the present study, Cronbach's alpha was 0.91.

Templer Death Anxiety Scale (TDAS): Developed by Templer (1970), this 15-item self-report scale assesses the individual's level of death anxiety. Items are scored as follows: "No" = 0, "Somewhat" = 1, and "Yes" = 2. The total score ranges from 0 (no death anxiety) to 30 (very high death anxiety). The cutoff point is set at 15, with scores above 15 indicating high death anxiety and scores below 15 indicating low levels (Asghari Ebrahimabad et al., 2022). Esma et al. (2015) reported a test-retest reliability of 0.83. Validity was supported through correlations with the Manifest Anxiety

Scale (0.27) and the Depression Scale (0.40). In the present study, Cronbach's alpha was 0.89 .

2.3. *Intervention*

The eight-session intervention protocol was structured to provide psychological support and coping strategies for breast cancer patients. In Session 1 (Introduction & Orientation), participants were introduced to the program's goals and rules, informed about the biopsychosocial impact of breast cancer, and mentally prepared for subsequent sessions by listing personal psychosocial challenges and palliative needs. Session 2 (Stress & Social Support) focused on understanding stress and its effect on illness, identifying stressors, and practicing the A-B-C model to analyze thoughts and emotions while encouraging the use of social support networks. Session 3 (Cognitive Restructuring) taught participants to challenge maladaptive cancer-related thoughts by identifying confirming and disconfirming evidence and practicing positive self-talk to reduce psychological burden. Session 4 (Stress Management with Relaxation) introduced progressive muscle relaxation and breathing exercises to manage stress and enhance self-care routines. Session 5 (Anger & Interpersonal Relations) addressed anger recognition and control strategies, including deep breathing and conflict-resolution techniques to improve interpersonal relationships. Session 6 (Quality of Life & Mindfulness) emphasized improving mental, social, and physical well-being through mindfulness, including body-scan meditation, and strengthening social connections. Session 7 (Depression, Anxiety & Distress Tolerance) provided strategies for managing depression and anxiety, including sitting meditation, imagery, and engagement in joyful activities to improve quality of life. Finally, Session 8 (Summary & Continuation) reviewed the acquired skills, reinforced emotional acceptance, self-care, mindfulness, and social support, and guided participants in sustaining psychosocial functioning while recording positive experiences and emotion management successes.

2.4. *Data Analysis*

Data analysis was conducted using a mixed-method approach. In the qualitative phase, interview transcripts and relevant literature were examined through thematic analysis to extract open codes, which were refined into axial codes and core categories. Expert reviews and content validity indices (CVR and CVI) were used to validate the developed psychological care package. In the quantitative phase, data from the McGill Pain Questionnaire and Templer Death Anxiety Scale were analyzed with SPSS version 26. Assumptions for repeated measures analysis were checked using Box's M, Mauchly's test of sphericity, and Levene's test. Given equal group sizes, violations were addressed with appropriate corrections (e.g., Greenhouse–Geisser). Repeated measures ANOVA and Bonferroni post hoc tests were then applied to compare pretest, posttest, and follow-up scores between intervention and control groups.

3. Findings and Results

After conducting 15 interviews, theoretical saturation was achieved, and 12 non-repetitive interviews were selected for analysis. Data were examined using grounded theory and Colaizzi's three-step coding process, which resulted in the extraction of 62 open codes, 11 axial codes, and 6 core categories: causal conditions, central phenomena, contextual conditions, intervening factors, strategies, and outcomes. These findings highlighted the multifaceted factors influencing the psychological status of breast cancer patients and the need for comprehensive interventions.

In the next step, the developed intervention package aimed at improving patients' psychological, social, and physical quality of life was validated by 15 experts. Content Validity Ratio (CVR) ranged from 0.60 to 0.73, and Content Validity Index (CVI) ranged from 0.80 to 0.93. The final package was piloted on 4 breast cancer patients, and preliminary results indicated reductions in pain perception and death anxiety, as well as improvements in perceived social support.

Thirty patients (15 intervention, 15 control) participated in the study. Demographic data analysis showed that participants' ages ranged from 33 to 45 years, with no significant differences between groups, indicating demographic homogeneity. Descriptive results suggested the preliminary effectiveness of the intervention package on the target variables, which was further confirmed through inferential statistics.

To assess the assumptions of multivariate analysis of variance (MANOVA), several tests were conducted. The significance level of Box's M Test was below 0.05 (F=2.27, p=0.034), meaning the assumption of covariance matrix homogeneity was not met. However, given equal group sizes, this violation was tolerable. Results of Mauchly's Test of Sphericity were significant (χ^2=5.481, p=0.001), so the conservative Greenhouse-Geisser correction was applied in repeated measures analysis. Levene's Test showed

Homogeneity of variances across groups was confirmed ($p>0.05$ for all variables).

The MANOVA results, controlling for pretest effects, revealed a significant Wilks' Lambda ($\Lambda=0.025$, $F=7.100$, $p<0.01$, $\eta^2=0.975$), indicating significant differences between the intervention and control groups across dependent variables. Partial eta squared showed that approximately 97.5% of the variance in the dependent variables was attributable to the intervention group.

Table 1

Pairwise Comparisons of Pain Perception in Repeated Measures

Source of Variation	Pairwise Comparisons	SS	df	MS	F	p	Effect Size
Factor	Pretest vs. Posttest	4164.8	1	4164.8	5.151	0.001	0.844
	Posttest vs. Follow-up	474.5	1	474.5	9.38	0.001	0.582
Factor × Group	Pretest vs. Posttest	174.2	1	174.2	6.34	0.018	0.185
	Posttest vs. Follow-up	347.5	1	347.5	5.28	0.001	0.505
Error	Pretest vs. Posttest	769.3	28	27.4	—	—	—
	Posttest vs. Follow-up	341.03	28	12.1	—	—	—

The main effect of the factor was significant in the pretest–posttest comparison ($F=5.151$, $p=0.001$). The interaction effect of factor × group was also significant ($F=6.34$, $p=0.018$). Comparisons of descriptive means indicated that scores for the intervention group significantly improved compared to the control group in the posttest, confirming the effectiveness of the community-based palliative psychological package.

Table 2

Bonferroni Post Hoc Test Results

Variable	Time Points	Mean Difference	p
Pain Perception	Pretest – Posttest	2.40*	0.001
	Pretest – Follow-up	2.43*	0.001
	Posttest – Follow-up	0.033	1.000
Death Anxiety	Pretest – Posttest	10.5*	0.001
	Pretest – Follow-up	12.9*	0.001
	Posttest – Follow-up	10.2*	0.001

*Significant at $p<0.01$

Table 2 shows that posttest and follow-up effects were significant at the 0.01 level ($F=9.38$, $p=0.001$). Moreover, the interaction effect of group and time ($F=5.28$, $p=0.001$) was significant, indicating that changes in posttest and follow-up scores differed meaningfully between the intervention and control groups. Based on these results, it can be concluded that community-based palliative psychological services significantly reduced pain perception and death anxiety while increasing perceived social support among women with breast cancer.

4. Discussion and Conclusion

The present study was conducted with the aim of designing and developing a valid community-based palliative psychological care package and examining its effects on pain perception and death anxiety in breast cancer patients. The results indicated that the package was effective in reducing pain perception and death anxiety among breast cancer patients. These findings are consistent with those of previous studies (Ashtiani et al., 2024; Hosseinpour Mohammadabadi & Khoshakhlagh, 2023; Kiarashi et al., 2023; Temnaei-Far & Soleimanian, 2024)

The intervention package can meaningfully reduce patients' perception of pain. This is expected, as psychological interventions, by addressing cognitive and emotional factors in the pain experience, can enhance patients' ability to manage physical symptoms and foster a greater sense of control (Temnaei-Far & Soleimanian, 2024). Secondly, the package's effectiveness in alleviating death anxiety was evident, since the use of meaning-centered strategies and coping skills training helps to reduce fear and mental preoccupation with death and uncertainty about the future (Hosseinpour Mohammadabadi & Khoshakhlagh, 2023). Additional hypotheses may also be considered, such as improved overall psychological and social quality of life, reductions in depression and general anxiety symptoms, and increases in resilience and endurance. All these align with the multidimensional impact of the developed package on the health of women with breast cancer.

The findings can be explained by considering that the community-based palliative psychological care package, as a structured and multidimensional intervention, combines individual-, family-, and community-oriented approaches to improve mental, social, and physical health. Its effectiveness on three key components—pain perception, death anxiety, and perceived social support—is theoretically and empirically defensible and supported by numerous domestic studies.

First, regarding pain perception, the cognitive-behavioral approaches and mindfulness training embedded in the package play an important role in reducing the intensity and distress associated with physical pain. Temnaei-Far et al. (2024) found that psychological interventions designed to empower patients in coping with difficult conditions and accepting illness could modulate subjective pain perception (Temnaei-Far & Soleimanian, 2024), improve coping styles, and raise tolerance thresholds. Psychologically, individuals' responses to physical pain are influenced by cognitive, emotional, and social factors. Previous experiences, personal illness beliefs, lack of coping skills, and social isolation can intensify and prolong pain (Kiarashi et al., 2023). In this study, the package targeted distorted cognitive mechanisms—often consequences of chronic pain and severe illness—through resilience training, self-confidence enhancement, and acceptance of unpleasant emotions. This cognitive restructuring prevents the reinforcement of the "pain–depression" cycle and helps avoid deep helplessness (HassanKhani et al., 2022).

The second layer of effectiveness addressed death anxiety—not only rooted in fear of life's end, but also in uncertainty about the future, separation from loved ones, and loss of meaning. Meaning-centered therapy and emphasis on spiritual and purposeful living, as integrated into this package, were shown by Talayeri et al. (2023) to reduce fear of death and enhance hope (Talayeri & Bavi, 2023). Their work emphasized that discussing death, teaching acceptance, and guiding patients toward meaning-seeking reduce distress and foster relative peace. The current package implements these concepts by providing individual and group dialogue sessions on meaning and life purpose. Findings by Ashtiani et al. (2024) also confirmed that mindfulness and self-care training, combined with supportive psychotherapy, helped patients form stronger mental and physical connections with themselves, enabling them to face illness with less anxiety (Ashtiani et al., 2024). Techniques included in the package empower patients to reframe intrusive thoughts about death and the future and instead experience the present moment with greater calm (Babanajad Derikandeh et al., 2023).

The effectiveness of psychological interventions for patients with severe illness depends on understanding their social and economic contexts. Ardeshirpi et al. (2023) demonstrated that lack of social support and limited resources increases the risk of psychological symptoms and reduces intervention effectiveness (Ardeshirpey et al., 2023). The current package explicitly considered local social and cultural characteristics, acknowledging the key roles of family, friends, and support groups. In developing the package, insights from successful domestic interventions played a decisive role. For example, Ardeshirpi et al. (2023) showed that integrating supportive strategies such as emotional expression, problem-solving skills, and peer groups accelerated improvements in cancer patients' quality of life (Ardeshirpey et al., 2023). Similarly, the present package incorporated these components effectively to activate family participation and ensure patients did not feel isolated. Its phased and flexible structure enabled personalization to each patient's specific needs, addressing individual differences such as levels of death anxiety, pain severity, and perceived social support (HassanKhani et al., 2022). This not only increases satisfaction and effectiveness but also enhances adaptability for diverse cultural and demographic contexts across the country. The theoretical and empirical credibility of the results rests not only on previous domestic research but also on the practical experience of Iranian cancer centers in recent years, which have documented the effectiveness of multidimensional psychological services in improving patients' mental and physical health (Ashtiani et al., 2024; Babanajad Derikandeh et al., 2023).

5. Limitations and Suggestions

The study's limitations include constraints related to sample size and characteristics, qualitative and quantitative methodological limitations, restricted access to specialists and specific patients, and challenges in localization and generalization. The small sample size and focus on women with breast cancer in Khorramabad may reduce representativeness and generalizability. Furthermore, limited long-term follow-up and the influence of confounding variables (e.g., medication, family support) affected causal interpretations. Other limitations included potential response bias, restricted selection of scientific sources, and cultural/social factors that influenced data quality and the package's validity.

Future research should expand sample size and diversity, employ randomized multi-stage methods, engage multidisciplinary teams, design longitudinal studies, and integrate robust statistical and qualitative tools to enhance generalizability and validity. From a practical standpoint, it is recommended that the developed package be incorporated into routine psychological services at cancer centers. Training workshops for treatment teams, activation of support groups, provision of educational and digital content for patients and families, continuation of group therapy and relaxation practices, and integration of cultural and local beliefs into the design and delivery of the package are also advised. These measures will enhance both the effectiveness and acceptability of the intervention.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

References

Abdelhadi, O. (2023). The impact of psychological distress on quality of care and access to mental health services in cancer survivors. *Frontiers in Health Services*, *3*. https://doi.org/10.3389/frhs.2023.1111677

Ardeshirpey, J., Bakhshayesh, A., & Dehghan, M. (2023). Prediction of treatment adherence based on psychological hardiness, tolerance of ambiguity, and perceived social support in patients with lung cancer. *Toloo-e Behdasht*, *22*(2), 59-73. https://doi.org/10.18502/tbj.v22i2.13265

Arefian, M., Asgari-Mobarake, K., Fazilatpour, M., Zanguri, V., & Akrami, M. (2023). Proposing and evaluating a model of depression, stress, resilience and spirituality in relation to pain in women with breast cancer: Investigating the mediating role of mindfulness. *European Journal of Oncology Nursing*, *62*, 102268. https://doi.org/10.1016/j.ejon.2023.102268

Asghari Ebrahimabad, M., Karbalaei, H., Mazloumzadeh, M., Salaiani, F., & Maghsoudi, S. (2022). Structural equation modeling of predicting death anxiety based on COVID-19 anxiety with the mediating role of emotion regulation and meaning in life. *Journal of Mazandaran University of Medical Sciences*, *213*(213), 92-102.

Ashtiani, M. C., Fattahi, N., Balali, D., Alavi, S. H., & Mahmoudzadeh, M. (2024). Effectiveness of schema therapy based on mindfulness on mental pain and experiential avoidance in patients with cardiovascular diseases. *Journal of Assessment and Research in Applied Counseling (JARAC)*, *6*(1).

Babanajad Derikandeh, S., Norouzi, A., & Bagheri, H. (2023). The effect of meaning therapy based on Rumi's ideas on death anxiety and depression in women with breast cancer. *Community Health*, *17*(1), 76-86.

Battista, V., & Sciacca, K. (2023). Professional standards and the role of the advanced practice registered nurse in hospice and palliative care. *Journal of Hospice and Palliative Nursing*, *25*(5), 249-254. https://doi.org/10.1097/NJH.0000000000000968

Braš, M., Đorđević, V., & Kaštelan, S. (2023). Palliative medicine: past - present - future. *Revija Za Socijalnu Politiku*, *29*(3), 413-426. https://doi.org/10.3935/rsp.v29i3.1942

Carreiro, J. P., Cardoso, S., Teques, P., Teques, A. P., & Ribeiro, J. L. P. (2025). Satisfaction With Social Support and Quality of Life Among Portuguese Patients With Breast Cancer: Mediating Effects of Coping Styles—Cross-Sectional Study. *Healthcare*, *13*(3), 297. https://doi.org/10.3390/healthcare13030297

Choi, S., Kim, S., Shin, S., Ryu, J., Baik, J., Kim, J., & Kim, N. (2018). Evaluation of outcomes of the Busan community-based palliative care project in Korea. *Asian Nursing Research*, *12*(4), 286-292. https://doi.org/10.1016/j.anr.2018.11.001

Coutts-Bain, D., Sharpe, L., & Russell, H. (2023). Death anxiety predicts fear of cancer recurrence and progression in ovarian cancer patients over and above other cognitive factors. *Journal of Behavioral Medicine*, *46*(6), 1023-1031. https://doi.org/10.1007/s10865-023-00422-w

Dams, L., Gucht, E., Haenen, V., Devoogdt, N., Smeets, A., Bernar, K., & Groef, A. (2023). Effectiveness of pain neuroscience education on somatosensory functioning after surgery for breast cancer: a double-blinded randomized controlled trial. *The Anatomical Record*, *307*(2), 248-272. https://doi.org/10.1002/ar.25127

Doan, L. (2023). Pain associated with breast cancer: etiologies and therapies. *Frontiers in Pain Research*, *4*. https://doi.org/10.3389/fpain.2023.1182488

Drusko, A., Baumeister, D., Christensen, M., Kold, S., Fisher, V., Treede, R., & Tesarz, J. (2023). A novel computational approach to pain perception modelling within a Bayesian framework using quantitative sensory testing. *Scientific Reports*, *13*(1). https://doi.org/10.1038/s41598-023-29758-8

Frey, R., & Balmer, D. (2023). The challenges for health professionals delivering palliative care in the community during the COVID-19 pandemic: an integrative review. *Palliative & Supportive Care*, 1-13. https://doi.org/10.1017/S1478951523000275

Ghafoor, D. D. (2023). Correlation between oxidative stress markers and cytokines in different stages of breast cancer. *Cytokine*, *161*, 156082. https://doi.org/10.1016/j.cyto.2022.156082

Ghobadi, A. (2024). The effect of virtual reality on reducing patients' anxiety and pain during dental implant surgery. *BMC Oral Health*, *24*(1). https://doi.org/10.1186/s12903-024-03904-8

HassanKhani, H., Dehghan-Nejad, J., Rahmani, A., Ghafourifard, M., & Valizadeh, F. (2022). Enhancing home-based palliative care programs for cancer patients: An action research study. *Hayat*, *28*(4), 388-404.

Hill, W., Lim, E., Weeden, C., Lee, C., Augustine, M., Chen, K., & Swanton, C. (2023). Lung adenocarcinoma promotion by air pollutants. *Nature*, *616*(7955), 159-167.

Hosseinpour Mohammadabadi, R., & Khoshakhlagh, H. (2023). Effectiveness of mindfulness-based cognitive therapy on sense of coherence, emotional processing, death anxiety, and body image of breast cancer patients. *Sadra Medical Sciences Journal*, *12*(1), 12-24.

Karimi Mohajeri, Z., Karbalaee Harfteh, F., Khalatbari, J., & Fardin, M. (2025). The effectiveness of integrating schema therapy and acceptance and commitment therapy on subjective well-being and body image concerns in women with breast cancer. *Journal of Psychological Sciences*, *24*(145), 197-220. https://psychologicalscience.ir/browse.php?a_id=2564&sid=1&slc_lang=en

Kiarashi, Z., Emadian, S. A., & Fakhri, M. K. (2023). The effectiveness of meaning therapy on fear of recurrence and death anxiety in women with breast cancer. *Cancer Care Journal*, *2*(1), 3-10.

Liongson, F., Bhalodi, R., McCarthy, C., Menghani, S., & Siddiqui, A. (2023). Outpatient management of chronic pain. https://www.intechopen.com/chapters/85188

Lu, C., Shi, W., Hu, W., Zhao, Y., Zhao, X., Dong, F., & Liu, C. (2022). Endoplasmic reticulum stress promotes breast cancer cells to release exosomes circ_0001142 and induces M2 polarization of macrophages to regulate tumor progression. *Pharmacological Research*, *177*, 106098. https://doi.org/10.1016/j.phrs.2022.106098

Ma, F. (2024). The relationship between psychological distress and the nursing humanistic care demands in postoperative cancer inpatients: a cross-sectional study. *BMC Nursing*, *23*(1). https://link.springer.com/article/10.1186/s12912-024-01704-7

Mercante, A. (2024). Virtual reality intervention as support to paediatric palliative care providers: a pilot study. *Acta Paediatrica*, *113*(4), 833-834. https://doi.org/10.1111/apa.17099

Murakami, N., Tanabe, K., Morita, T., Fujikawa, Y., Koseki, S., Kajiura, S., & Hayashi, R. (2018). Impact of a six-year project to enhance the awareness of community-based palliative care on the place of death. *Journal of Palliative Medicine*, *21*(10), 1494-1498. https://doi.org/10.1089/jpm.2017.0696

Mzurikwao, D. (2024). Profiling of breast cancer prevalence and its diagnosis using varied imaging techniques in Tanzania. *[Journal Title Not Provided]*. https://doi.org/10.21203/rs.3.rs-3873411/v1

O'Malley, K., Blakley, L., Ramos, K., Torrence, N., & Sager, Z. (2020). Mental healthcare and palliative care: barriers. *BMJ Supportive & Palliative Care*, *11*(2), 138-144. https://doi.org/10.1136/bmjspcare-2019-001986

Penberthy, J. K., Stewart, A. L., Centeno, C. F., & Penberthy, D. R. (2023). Psychological Aspects of Breast Cancer. *Psychiatric Clinics*. https://doi.org/10.1016/j.psc.2023.04.010

Russo, P. (2023). The importance of being early. *Annals of Advanced Biomedical Sciences*, *6*(1). https://medwinpublisher.org/index.php/AABSc/article/view/1988

Taheri, A., Parvizifard, A., Reisi, S., Jafari, M., Mohammadian, Y., Heshmati, K., & Ghasemi, M. (2023). Associations between the perception of dental pain and pain anxiety, mental pain, and dental anxiety in Iranian sample. *The International Journal of Psychiatry in Medicine*, *59*(1), 34-49. https://doi.org/10.1177/00912174231180855

Talayeri, A., & Bavi, S. (2023). Comparing the effectiveness of mindfulness-based stress reduction therapy and emotional schema therapy on perceived stress and distress tolerance in women with psoriasis undergoing drug therapy in Ahvaz. *Journal of Psychiatric Nursing*, *11*(5), 40-52.

Temnaei-Far, M., & Soleimanian, Z. (2024). The mediating role of resilience and self-efficacy in the relationship between perceived social support and psychological distress in patients with breast cancer. *Feyz Journal of Kashan University of Medical Sciences*, *28*(1), 76-85.

Vitale, M., Gallo, S., Pascadopoli, M., Alcozer, R., Ciuffreda, C., & Scribante, A. (2023). Local anesthesia with sleeperone s4 computerized device vs traditional syringe and perceived pain in pediatric patients: a randomized clinical trial. *Journal of Clinical Pediatric Dentistry*. https://iris.unipv.it/handle/11571/1498395

Weissman, G. (2024). Use of machine learning to optimize referral for early palliative care: are prognostic predictions enough? *Journal of Clinical Oncology*, *42*(14), 1603-1606. https://doi.org/10.1200/JCO.24.00024

Yang, K. (2023). Subjective well-being among chinese breast cancer patients: the unique contributions of death anxiety, self-esteem, and social support. *Journal of Health Psychology*, *29*(3), 213-224. https://doi.org/10.1177/13591053231195391

Ye, F., Dewanjee, S., Li, Y., Jha, N. K., Chen, Z. S., Kumar, A., & Tang, H. (2023). Advancements in clinical aspects of targeted therapy and immunotherapy in breast cancer. *Molecular Cancer*, *22*(1), 105. https://doi.org/10.1186/s12943-023-01805-y

Yuan, W., Xie, Z., Dong, P., & Yang, Y. (2023). Linking perceived social support to self-esteem and social integration among adolescents with visual impairment: a cross-lagged study. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.1054857

Zhang, M., Gong, S. G., & Xie, R. (2024). Application of enhanced recovery after surgery in perioperative nursing care of elderly patients with hip and knee arthroplasty: A systematic review and meta-analysis. *Medicine*, *103*(9), e37240. https://doi.org/10.1097/MD.0000000000037240