DOI: 10.35990/mk.v9-ISGH.p1-11

Medika Kartika : Jurnal Kedokteran dan Kesehatan

RESEARCH ARTICLE

THE RELATIONSHIP BETWEEN ANXIETY LEVELS AND COPING IN FAMILIES OF BREAST CANCER PATIENTS

(HUBUNGAN TINGKAT KECEMASAN DENGAN KOPING KELUARGA PASIEN KANKER PAYUDARA)

Ira Ocktavia Siagian, Riki Rizkianudin, Widyadari Prasetya Ningrum

Faculty of Nursing, Immanuel Institute of Health, West Java, Indonesia

Corresponding email: ira.ockta@gmail.com

ABSTRACT

Anxiety is a state of psychological range characterized by the presence of a general sense of discomfort, often the runway point is unclear and unnoticed by the individual. The coping mechanism is an effort to adjust to the stressor by developing the ability of the power source it has. This study aims to see and analyze the extent of the relationship between anxiety levels and coping mechanisms in families of breast cancer patients. The study was carried out in 2025 using a cross-sectional design involving 45 respondents. Anxiety measurements were carried out using the Zung Self Anxiety-Rating Scale, while the coping mechanism was measured by the Brief COPE instrument. The results showed that the majority of respondents experienced mild level anxiety (66.7%) with adaptive mechanisms (55.6%). Statistical analysis using the Chi-Square test showed a significant relationship between anxiety and coping mechanisms (p-value=0.036 < α=0.05). The lower the level of anxiety, the higher the tendency of respondents to use adaptive coping mechanisms in overcoming the anxiety. The adaptive coping mechanism has an important role for the families of breast cancer patients in reducing the pressure of the problems they face. Increasing family knowledge related to anxiety and the development of adaptive coping mechanisms are indispensable.

Keywords: anxiety, breast cancer, coping, family

ABSTRAK

Kecemasan adalah keadaan rentang psikologis ditandai dengan kehadiran rasa tidak nyaman menyeluruh, sering kali titik pacu tidak jelas dan tanpa disadari oleh individu. Mekanisme koping merupakan upaya penyesuaian terhadap stressor dengan mengembangkan kemampuan sumber kekuatan yang dimiliki. Penelitian ini bertujuan melihat dan menganalisa sejauh mana hubungan antara tingkat kecemasan dengan mekanisme koping pada keluarga pasien kanker payudara. Penelitian dilaksanakan pada tahun 2025 dengan menggunakan desain cross-sectional melibatkan 45 responden. Pengukuran kecemasan dilakukan menggunakan Zung Self Anxiety-Rating Scale, sedangkan mekanisme koping diukur dengan instrumen Brief COPE. Hasil penelitian menunjukkan bahwa mayoritas responden mengalami kecemasan level ringan (66,7%) dengan mekanisme yang bersifat adaptif (55,6%). Analisis statistik menggunakan uji

Chi-Square menunjukkan adanya hubungan yang signifikan antara kecemasan dan mekanisme koping (p-value=0,036 < α=0,05). Semakin rendah tingkat kecemasan, semakin tinggi kecenderungan responden menggunakan mekanisme koping yang adaptif dalam mengatasi kecemasan tersebut. Mekanisme Koping adaptif memiliki peranan penting bagi keluarga pasien kanker payudara dalam mengurangi tekanan dari masalah yang dihadapi. Peningkatan pengetahuan keluarga terkait kecemasan dan pengembangan mekanisme koping yang adaptif menjadi hal yang sangat diperlukan.

Kata kunci: kanker payudara, kecemasan, keluarga, koping

INTRODUCTION

Mental health is now a global issue that is receiving increasing attention, especially in vulnerable populations such as individuals with chronic illnesses and their families. Reports that 301 million people worldwide suffer from anxiety disorders, while the prevalence of mental health problems in Indonesia increased from 9.8% (2018) to 16% (2022)[1], In the context of chronic diseases such as cancer, the psychological burden is not only experienced by patients but also family members who face the uncertainty of treatment, financial pressure, and changes in family functioning.[2] Breast cancer, which is the most common malignancy in Indonesian women and is mostly diagnosed at an advanced stage, puts families in a complex emotional state and requires effective coping strategies.[3]

Family coping mechanisms play an important role in managing stressors and maintaining emotional stability.[4] Previous research has shown that adaptive coping strategies such as social support, spirituality, and problem-solving are associated with lower levels of anxiety, while maladaptive coping such as denial and avoidance are associated with increased psychological distress.[5] Based on these findings, this study aims to analyze the relationship between family anxiety levels and coping mechanisms in the families of breast cancer patients at Welas Asih Hospital, West Java. The results of the study are expected to enrich the psychosocial oncology literature and become the basis for the development of psychosocial interventions and more effective educational programs for the families of cancer patients.

MATERIALS AND METHODS

This study used a quantitative method with a cross-sectional design to assess the relationship between anxiety levels and family coping mechanisms of breast cancer patients. The research was carried out at the Cancer Center Unit of Welas Asih Hospital, West Java, in August-September 2025. The subjects of the study were family members who

accompanied breast cancer patients. Sampling was carried out with total sampling, and as many as 45 respondents met the inclusion criteria and participated in the study.

The instruments used include the Zung Self Anxiety Rating Scale (ZSAS) to measure anxiety and the COPE Inventory Brief to assess the coping mechanism. Both Indonesian versions of the instruments have been proven to be valid and reliable, making them suitable for use in the research population. The research procedure begins with the provision of explanations and written consent to the respondents. The questionnaire is distributed in printed form and filled out independently with a duration of about 20–25 minutes. No clinical or laboratory examinations were conducted.

Data were analyzed using descriptive statistics to describe the characteristics of respondents as well **as** the Chi-Square test (χ^2) to test the relationship between variables, with a significance level of $\alpha = 0.05$. This research has received ethical approval from the Health Research Ethics Committee of the Immanuel Health Institute, Bandung, with Number 015/KEPK-IKI/VIII/2025, and all procedures follow the principles of research ethics. An ethics approval letter is attached to the attachment.

RESULTS AND DISCUSSION

1. Respondent Characteristics

Table 1 Characteristics of families of breast cancer patients at Welas Asih Hospital

Characteristic	N	Percentage (%)
Gender		
Man	18	40
Woman	27	60
Age		
18-20 Years	1	2,2
21-30 Years	2	4,4
31-40 Years	12	26,7
41-50 Years	21	46,7
51-60 Years	9	20,0
Work		
Laborer	7	15,6
Private	11	24,4
Self employed	3	6,7
ASN	3	6,7
IRT	21	46,7
Education Level		
SD	6	13,3
Junior High School Equivalent	15	33,3
High School Equivalent	20	44,4
S1	3	6,7

Characteristic	N	Percentage (%)
Gender		
S2	1	2,2
Family Relations		
Child	14	31,1
Husband	13	28,9
Mother	9	20,0
Older sibling	3	6,7
Younger sibling	6	13,3
Patient's Degree of Cancer		
Stage I	6	13,3
Stage II	20	44,4
Stage III	16	35,6
Stage IV	3	6,7
Duration of Treatment		
< 6 Months	23	51,1
6–12 Months	8	17,8
>12 Months	14	31,1
Total	45	100

Families of breast cancer patients at Welas Asih Hospital, West Java Province who are respondents in this study are family members who actively accompany breast cancer patients during treatment for male and female age 18 years and above; Able to communicate verbally and willing to participate by signing a consent form to become a respondent. A total of 45 family members of breast cancer patients participated in this study[6].

Based on the results in Table 1. The results of the data on the characteristics of respondents were mostly gender (60%) female, almost half of them were old (44.4%) in the range of 40 – 50 years, the type of work (46.7%) as a housewife, almost half of the education level (44.4%) was high school, and almost half of the family relationships (31.1%) were children. Almost half of the respondents accompanied breast cancer patients with stage II cancer (44.4%) and half of the patients underwent treatment (51.1%) for less than 6 months.

2. Anxiety Level

Table 2 Distribution of anxiety levels of breast cancer patients at Belas Asih Hospital

Family Anxiety Level	N	Percentage (%)
Mild Anxiety	30	66,7
Moderate Anxiety	15	33,3
Severe Anxiety	0	0,0
Panic	0	0,0
Total	45	100

Based on the table, the results of the study show that the majority of families of breast cancer patients experience mild anxiety (66.7%), while a small percentage experience

moderate anxiety (33.3%). This condition can be explained because most of the patients (Table 1.) are in stage II (44.4%) with a treatment duration of < 6 months (51.1%). This phase is an early adaptation period, during which the family begins to face the reality of a cancer diagnosis, but still holds great hope for the success of the therapy.[7]

At the level of mild anxiety, it still shows that the family is able to make psychological adjustments to the situation they are facing. Families of cancer patients tend to experience anxiety due to the uncertainty of the prognosis, the cost of treatment, and the emotional burden. A low level of anxiety gives the individual room to remain rational in dealing with the situation and choose an effective coping strategy.[8]

Patients with strong family support were better able to control anxiety, while those with less emotional support tended to experience higher anxiety. These results demonstrate the importance of the role of the family in maintaining the patient's psychological stability, while also showing that the family as a companion is also vulnerable to anxiety and uncontrolled anxiety is often a trigger for the use of ineffective coping strategies.[9]

Therefore, even though the results of the study show the dominance of mild anxiety, this still needs to be watched out for because it has the potential to develop into severe anxiety if protective factors such as social support, understanding of illness, and religious beliefs are not maintained.

Thus, the mild anxiety found in this study can be considered an early "*red-flag*" that needs attention. Mild anxiety is still adaptive, but if not treated with appropriate psychosocial interventions it can transform into pathological anxiety that is more difficult to control.

3. Family Coping Mechanism

Table 3 Distribution of family coping mechanism for breast cancer patients at compassion hospital

Purchase	N	Percentage (%)
Adaptive	25	55,6
Maladaptive	20	44,4
Total	45	100,0

From Table 3. The distribution of family coping mechanisms of breast cancer patients showed that 25 respondents (55.6%) applied adaptive coping strategies, while 20 respondents (44.4%) showed maladaptive coping mechanisms.

Most of the patient families in this study used adaptive coping mechanisms (55.6%), while the rest used maladaptive coping mechanisms. Adaptive mechanisms include information seeking, involvement in spiritual

activities, seeking social support, and problem solving efforts. This strategy shows the family's ability to assess the situation realistically, while actively trying to solve problems.

The results of this study are in line with a study that found a significant relationship between stress levels and coping strategies in breast cancer patients in Karanganyar.[10,11] Patients with low-moderate anxiety were more likely to use problem-focused coping, while patients with severe anxiety were more likely to use passive emotion-focused coping.

The study also confirms that active strategies, such as seeking social support and obtaining relevant information about treatment, are very effective in lowering psychological distress. This is parallel to the patient's family response in this study, where most are still in the mentoring stage < 6 months so the enthusiasm for finding solutions is still relatively high.[12,13].

However, there is still a proportion of respondents who use maladaptive mechanisms, such as avoidance, denial, or excessive surrender. In her dissertation, she revealed that gender affects coping strategies, where women more often use religious-based emotion-focused coping skills.[14] In the context of Indonesian culture, religiosity can be a source of psychological strength, but if it is only in the form of resignation without real action, it falls into the category of maladaptive.[15]

In other words, even though adaptive strategies dominate, the phenomenon of maladaptive coping is still important to pay attention to. Without educational assistance, these passive strategies can worsen the psychological well-being of the family, and ultimately affect the quality of support provided to patients.

4. The Relationship Between Anxiety and Coping Mechanisms

Based on the results of the data in Table 4, the results of the Chi-Square (χ^2) test conducted to test the relationship between the level of anxiety and the coping mechanism obtained *a p-value* = 0.034 (α = 0.05) which shows that there is a significant relationship between the level of anxiety and the coping mechanism of the family of breast cancer patients at the Mercy Hospital. the *expected count* value in each cell is eligible ($\geq$ 5), so that *the Chi-Square* test is valid to use.

Table 4 The relationship between anxiety levels and coping mechanisms

Level Anxiety	Adaptive (n, %)	Maladaptive (n, %)	Total
Light	20 (16,7)	10 (13,3)	30 (30,0)
Keep	5 (8,3)	10 (6,27)	15 (15,0)
Total	25 (100,0)	20 (100,0)	45 (100,0)
p-value		0.034	

The findings of the study also showed that most family members of breast cancer patients experienced mild to moderate anxiety, with more than half using adaptive coping strategies. These results reinforce the framework that the coping response is largely determined by an individual's assessment of the stressor (*cognitive appraisal*).[16] Individuals with low anxiety are better able to think rationally, so they use adaptive strategies more often, while severe anxiety triggers defensive mechanisms such as denial or avoidance.[12]

These findings are in line with previous research that emphasized that family members often experience emotional distress when dealing with chronic illnesses such as cancer, especially due to uncertainty, duration of care, and parenting responsibilities.[10,17]

High stress and anxiety increase the tendency to use maladaptive coping strategies. Similarly, severe stress in breast cancer patients is closely related to passive coping strategies, which actually increases the risk of emotional distress.[18]

The dominance of mild and moderate anxiety levels found in the study is consistent with studies reporting that family caregivers of cancer patients generally exhibit mild anxiety due to exposure to ongoing care-related stress.[19]

Similarly, a study in Zambia found that 60% of caregivers of terminally ill patients showed symptoms of psychological stress but still maintained adaptive coping through religious and social support.[20]

The significant association ($p = 0.034$) between anxiety and coping mechanisms observed in this study supports previous findings by dan , who note that adaptive coping strategies—such as information seeking, social support, and spiritual engagement serve as protective factors against anxiety. In contrast, maladaptive strategies such as avoidance and emotional withdrawal exacerbate distress levels.[13,21]

Coping theory states that individuals who effectively utilize internal and external resources exhibit greater psychological resilience when managing stress.[22] The findings of this study reaffirm that adaptive coping plays an important role in modulating anxiety among family caregivers, in line with previous models of stress adaptation in the context of chronic disease.[12]

The study also revealed that most of the respondents were middle-aged adults (36–45 years old) and mostly women. This demographic trend is in line with previous research showing that women often take on caregiver roles and show a higher emotional response to patients' conditions. A similar pattern in which female family members show higher anxiety but are more likely to implement adaptive coping behaviors such

as active problem-solving and religious coping.[17,23]

Although most respondents indicated adaptive coping, the presence of maladaptive strategies among 44.4% of families suggests that psychosocial support and coping education remain important. Interventions such as family counseling, caregiver support groups, and stress management training can help strengthen adaptive responses and reduce anxiety levels in caregivers of chronic disease patients.

This phenomenon is in line with findings that show that gender, social roles, and health literacy limitations have an effect on the selection of coping strategies. For example, housewives who have a double burden and limited access to information tend to choose passive emotional strategies even though their anxiety levels are not high.[24]

In addition, social support also plays an important role. and equally emphasizes that individuals with strong social support are better able to lower anxiety while developing adaptive strategies. In contrast, a lack of support and education increases the risk of being stuck in maladaptive coping even though anxiety is relatively low. The existence of respondents with mild anxiety but maladaptive coping shows the importance of paying attention not only to the level of anxiety, but also the coping strategies used by the family.[25]

Thus, the relationship between anxiety and coping mechanisms is not linear. The level of anxiety is just one factor. Other variables such as gender, health literacy, dual role, socio-economic status, and religious culture also play an important role in influencing the strategy chosen by families.

Practically, these findings confirm the importance of nurses to conduct anxiety screening in families of cancer patients as well as provide psychosocial support such as counseling, health education, and relaxation therapy. The intervention is expected to be able to reduce anxiety so that families can be more optimal in choosing adaptive coping mechanisms.[26]

These findings also contribute to a growing body of evidence emphasizing the integration of family-centered mental health interventions in oncology nursing practice. The study supports the view that addressing psychological well-being among family caregivers is not only beneficial to the family system but can also indirectly improve patient outcomes.

CONCLUSION

Based on research on the relationship between anxiety level and family coping mechanism of breast cancer patients at Welas Asih Hospital, West Java

Province, the following conclusions can be drawn:

1. The level of anxiety of the families of breast cancer patients at the Welas Asih Hospital in West Java Province is mostly mild.
2. The coping mechanism of the families of breast cancer patients at the Welas Asih Hospital in West Java Province is mostly adaptive.
3. There was a significant relationship between the level of anxiety and coping mechanism in the families of breast cancer patients at the Welas Asih Hospital in West Java Province.

ACKNOWLEDGEMENT

The author would like to express his sincere gratitude to the Director and Nursing Staff of the Cancer Center of the Regional General Hospital of Compassion, West Java, Indonesia, for their valuable cooperation during the research process.

Deep appreciation was also expressed to the Faculty of Nursing, Immanuel Health Institute, Bandung, for the ethical guidance and institutional support provided.

Special thanks are given to all family members of breast cancer patients who participated in this study for their willingness, time, and trust in sharing their experiences. Their contribution was invaluable to the completion of this study.

BIBLIOGRAPHY

1. World Health Organization. WHO Traditional Medicine Strategy 2014-2023. 2023;
2. Rahma A, Effendy C, Lismidiati W. Psychological Distress, Uncertainty Intolerance, and Quality of Life of Patients with Cancer and Their Caregivers: A Comparative Study. Indonesian Journal of Cancer. 2025 Jun 30;19(2):247–54.
3. Northouse L, Williams A leila, Given B, McCorkle R. Psychosocial Care for Family Caregivers of Patients With Cancer. Journal of Clinical Oncology. 2012 Apr 10;30(11):1227–34.
4. Ding Z, Fan Y, Zhong G, Zhang X, Li X, Qiao Y, et al. A dyadic analysis of family adaptation among breast cancer patients and their spouses based on the framework of family stress coping theory. Front Public Health. 2024 Nov 25;12.
5. Dionne-Odom JN, Azuero A, Lyons KD, Hull JG, Prescott AT, Tosteson T, et al. Family Caregiver Depressive Symptom and Grief Outcomes From the ENABLE III Randomized

Controlled Trial. J Pain Symptom Manage. 2016 Sep;52(3):378–85.

6. Cui P, Yang M, Hu H, Cheng C, Chen X, Shi J, et al. The impact of caregiver burden on quality of life in family caregivers of patients with advanced cancer: a moderated mediation analysis of the role of psychological distress and family resilience. BMC Public Health. 2024 Mar 15;24(1):817.
7. Carver C. You want to measure coping but your protocol is too long: consider the Brief COPE. Int J Behav Med. 1997;4:92–100.
8. Squirt, Fitriyani, Utami. Anxiety and coping strategies among families of cancer patients. Journal of Health and Nursing. 2023;
9. Wulandari WK, Astuti T, Udani G. The Relationship Between Family Support and Self-Efficacy in Preoperative Breast Cancer Patients: Implications for Healthcare Practices. Majalah Kesehatan Indonesia. 2024;5(2):55–62.
10. Carter P, Dorsey L, Acker K, Welch T. Cancer Patient-Caregiver Dyad Reports of Insomnia, Depression, Anxiety, Symptom Management and Healthcare Utilization. Sleep. 2023;46(Supplement_1):A368.
11. Suwarni A. Hubungan Stres Dengan Mekanisme Koping Pada Pasien Ca Mamae. JIKI. 2020;13(2):81–92.
12. Lazarus RS, Folkman S. Stress, Appraisal, and Coping. New York: Springer Publishing Company; 1984.
13. Maryam S. Strategi Coping. J Konseling Andi Matappa. 2017;1(2):101.
14. Sklenarova H, Krümpelmann A, Haun MW, Friederich H, Huber J, Thomas M, et al. When do we need to care about the caregiver? Supportive care needs, anxiety, and depression among informal caregivers of patients with cancer and cancer survivors. Cancer. 2015 May 11;121(9):1513–9.
15. Alfita, Zulpadjri, Naffesa. Perbedaan Coping Stress Ditinjau Dari Jenis Kelamin Pada Penderita Kanker. 2019;
16. Tarigan F, Fitriyani S, Utami RS. Hubungan Tingkat Kecemasan Dengan Mekanisme Koping Pada Pasien Pre Operasi. J Clin Pharm Pharm Sci. 2023;2(2):51–8.
17. Friedman. Keperawatan Keluarga. Yogyakarta: Gosyen Publishing; 2013.
18. Pasaribu J. Hubungan Tingkat Stress dan Ansietas Terhadap Mekanisme Koping Penderita Kanker. J Mutiara Ners. 2020;3(1):28–36.

19. Ding Z, Fan Y, Zhong G, Zhang X, Li X, Qiao Y. A dyadic analysis of family adaptation among breast cancer patients and their spouses. Front Public Health. 2024;12.
20. Mukwato K, Mweemba P, Makukula M, Makoleka M. Stress and Coping Mechanisms Among Breast Cancer Patients and Family Caregivers. Med J Zambia. 2010;37(1):40–5.
21. Fananni MR. Hubungan Antara Strategi Coping Terhadap Psychological Distress Pada Family Caregiver Kanker. In: Prosiding Seminar Nasional UNIMUS. 2021. p. 1600–12.
22. Lambert SD, Girgis A, Lecathelinais C, Stacey F. Walking a mile in their shoes: anxiety and depression among partners and caregivers of cancer survivors at 6 and 12 months post-diagnosis. Supportive Care in Cancer. 2013 Jan 3;21(1):75–85.
23. Wulandari WK, Astuti T, Udani G. The Relationship Between Family Support and Self-Efficacy in Preoperative Breast Cancer Patients. Maj Kesehat Indones. 2024;5(2):55–62.
24. Caruso R, Breitbart W. Mental health care in oncology. Epidemiol Psychiatr Sci. 2020;29.
25. Putri SB, Hamid AYS, Priscilla V. Karakteristik Dan Strategi Koping Dengan Stres Pasien Kanker Payudara Dalam Menjalani Kemoterapi. J Endur. 2017;2(3):303.
26. Zhang Y, Tang R, Wang D, Li X, Bi L, Shi M, et al. Family-centered online positive psychological intervention for breast cancer patients and family caregivers: a single-arm pre-post study of feasibility and preliminary effects. BMC Psychol. 2025 Mar 27;13(1):310.