Original Article

Sociodemographic, Self-Efficacy, and Social Support Factors in Coping among Cancer Patients Undergoing Chemotherapy

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Abstract

Background: Cancer and its treatment, particularly chemotherapy, pose significant psychological challenges for patients. Coping strategies are essential in alleviating stress, and these strategies may be influenced by self-efficacy, perceived social support, and socio-demographic characteristics. Understanding these relationships is crucial for developing effective support interventions in oncology care.

Methodology: This descriptive-analytical cross-sectional study included 157 patients with solid tumors undergoing chemotherapy. The sample size was determined using G Power analysis (effect size $f^2 = 0.15$, $\alpha = 0.05$). Data were collected using a demographic questionnaire, the Self-Efficacy Scale, the Multidimensional Perceived Social Support Scale, and the Ways of Coping Questionnaire. Statistical analyses included t-tests, ANOVA, and multiple regression to evaluate the influence of socio-demographic factors, self-efficacy, and social support on coping strategies.

Results: Women, single individuals, university graduates, and those living in nuclear families demonstrated more effective coping abilities ($p < 0.05$). Women had higher emotionally focused coping ($\beta = 3.484$, 95% CI: 1.184–5.785) and stress-coping scores ($\beta = 4.752$, 95% CI: 1.614–7.889). Single patients scored significantly higher for emotionally focused coping ($\beta = 8.095$, 95% CI: 3.537–12.653) and stress coping ($\beta = 7.467$, 95% CI: 1.251–13.683). Self-efficacy was positively associated with problem-focused coping ($\beta = 0.117$, 95% CI: 0.033–0.202), emotionally focused coping ($\beta = 0.138$, 95% CI: 0.051–0.226), and overall stress-coping ($\beta = 0.256$, 95% CI: 0.136–0.375).

Discussion: The findings indicate that socio-demographic factors, particularly gender and marital status, play an important role in shaping coping strategies among cancer patients. Moreover, higher self-efficacy and greater perceived social support were associated with better stress management and adaptive coping mechanisms. These results emphasize the multidimensional nature of coping in cancer care and underline the need for tailored interventions.

Conclusion: This study demonstrates that self-efficacy, social support, and socio-demographic characteristics significantly affect coping strategies in patients with solid tumors receiving chemotherapy. Strengthening coping mechanisms through targeted interventions may reduce stress and improve psychological adaptation. Nurses play a key role in designing and implementing support programs to enhance coping skills, thereby promoting patient well-being during cancer treatment.

Keywords: Cancer coping strategies, solid tumors, chemotherapy, self-efficacy, perceived social support, socio-demographic factors, psychological adaptation, oncology nursing

Introduction

Cancer is a major global health challenge, compounded by an aging population and rising rates of unhealthy lifestyles, such as poor diet and lack of physical activity (Sung et al., 2021; Geng et al., 2018). In 2020, cancer accounted for approximately 10 million deaths and 19.3 million new diagnoses worldwide, with projections indicating increasing incidence and mortality rates in the coming decades (Sung et al., 2021). In Turkey, cancer has been the leading cause of death since 2020, with rising cancer prevalence. According to GLOBOCAN data, there were 581,686 prevalent cancer cases in Turkey in 2020, with 233,834 new diagnoses

and 126,335 deaths, underscoring the urgent need for effective prevention, early detection, and treatment strategies (Republic of Turkey Ministry of Health, 2017; GLOBOCAN, 2020).

Chemotherapy remains the primary treatment for solid tumors, yet it often comes with significant side effects that add to the physical, emotional, and psychological burden of cancer treatment (Coolbrandt et al., 2018; Sari et al., 2019). Alongside the clinical challenges, cancer patients face additional stressors, including concerns about appearance, fears of recurrence, self-esteem issues, and mortality (Mravec et al., 2020; Eckerling et al., 2021). These challenges are further compounded by feelings of isolation and lack of support, often leading to maladaptive coping strategies, lower self-efficacy, and a decline in quality of life (Boatemaa Benson et al., 2020; Ochoa et al., 2020). As a result, self-efficacy, social support, and coping strategies become essential factors for managing the stress associated with cancer and chemotherapy, influencing both psychological and physical outcomes.

According to Lazarus and Folkman's Transactional Model of Stress and Coping, individuals first appraise a stressor to determine whether it is a "threat", "challenge", or "neutral" (Lazarus & Folkman, 1984). For cancer patients undergoing chemotherapy, the treatment is often perceived as a threat, given the health risks and emotional toll it involves. Following this, secondary appraisal allows patients to assess their available resources and determine whether they feel capable of managing the stressor (Folkman, 2020). Self-efficacy—the belief in one's ability to manage challenges—plays a key role in this process. Individuals with high self-efficacy are more likely to view their challenges as manageable and to adopt effective coping strategies, including problem-solving and maintaining a positive outlook.

Coping strategies are generally categorized into two primary types: problem-focused coping, which involves taking direct action to address the stressor, and emotion-focused coping, which centers on managing the emotional distress associated with the situation (Karugaba et al., 2023; Algorani & Gupta, 2024). Problem-focused coping is particularly relevant during the diagnosis and treatment phases, empowering patients to take control of their health and treatment. On the other hand, emotion-focused coping is often employed when dealing with uncertainties and the emotional toll of the illness, such as fear of recurrence and loss (Piri-Kamrani et al., 2016; Pelekanakis et al., 2022). While emotion-focused coping may be beneficial in the short term, excessive reliance on this strategy can lead to negative outcomes, such as depression and emotional distress (Tian et al., 2021).

Self-efficacy is a critical factor in determining the effectiveness of coping strategies. High self-efficacy enables individuals to appraise stressors positively, facilitating the adoption of problem-solving approaches and better utilization of social support (Hong et al., 2023). Additionally, self-efficacy serves as a mediator in the coping process, helping patients effectively navigate the challenges of chemotherapy. Social support is also pivotal in coping with cancer, with family and social networks providing essential emotional, practical, and informational resources (Geng et al., 2018; Amirshamsi et al., 2022).

Solid tumors constitute a significant portion of cancer diagnoses and treatment approaches and involve unique psychological and physiological challenges. This patient group undergoes prolonged treatment processes, including surgery, chemotherapy, and sometimes radiotherapy, each of which brings distinct psychosocial burdens. Focusing on solid tumors allows for a more detailed examination of coping mechanisms specific to this population, as these mechanisms may differ from those used by individuals coping with hematologic cancers or other illnesses (Sung et al., 2021).

This study aims to investigate the influence of socio-demographic factors, self-efficacy, and social support on coping strategies among cancer patients diagnosed with solid tumors and currently undergoing chemotherapy. Although the high incidence and mortality

rates of solid tumors are well-documented in the literature (Sung et al., 2021; GLOBOCAN, 2020), research examining the role of self-efficacy, social support, and socio-demographic factors in shaping the coping strategies of patients receiving chemotherapy remains limited. This study seeks to address this gap by exploring how these factors affect the coping mechanisms employed by patients in response to stressors associated with cancer treatment. We proposed the following hypotheses:

Hypothesis 1: Coping strategies among cancer patients with solid tumors undergoing chemotherapy differ based on socio-demographic characteristics (such as age, gender, education level, marital status) and disease-related variables (such as cancer type and treatment process).

Hypothesis 2: Self-efficacy and social support significantly influence the adoption of problem-focused and emotion-focused coping strategies among cancer patients with solid tumors undergoing chemotherapy.

Methodology

Study Design and Participants: This research employed a descriptive-analytical cross-sectional design and was carried out in the Chemotherapy Unit of a Training and Research Hospital located in Turkey's Eastern Black Sea Region. Inclusion criteria consisted of patients who were (1) diagnosed with solid cancer and aware of their diagnosis, (2) aged 18 years or older, (3) undergoing chemotherapy, (4) having received a minimum of one cycle of antineoplastic medication, and (5) willing to participate. Exclusion criteria included (1) protective medicine; (2) patients with mental illnesses or cognitive disorders, or any intellectual impairments prior to their cancer diagnosis; (3) those under 18 years of age; (4) individuals unwilling to participate; and (5) evere organic diseases affecting vital organs such as the heart, brain, or kidneys (6) those with missing data.

Determination of Sample Size: A pilot study was conducted with 15 adult cancer patients, allowing for necessary adjustments. The sample size was calculated using G Power analysis (Yenipinar, 2019). Based on an effect size of f2: 0.15 and α: 0.05, the required sample size was determined to be 107. The final study group consisted of 157 cancer patients diagnosed with solid tumors.

Measures: Data were collected through demographic and disease-related characteristics, the Self-Efficacy Scale, the Multi-Dimensional Social Support Scale, and the Ways of Coping Questionnaire.

Demographic and disease-related characteristics (such as age, gender, marital status, education, lifestyle, employment status, and type of cancer) were gathered using a designed questionnaire comprising 16 questions by researher.

The Self-Efficacy Scale (SES), developed by Sherer and Madduks in 1982, is a Likert-type self-assessment tool designed to evaluate behavioral changes (Sherer et al., 1982). It was adapted into Turkish by Gozum and Aksayan (1999). The scale consists of four dimensions: Initiation Behavior (8 items), Continuing Behavior (7 items), Completing Behavior (5 items), and Struggling with Obstacles (3 items). Responses are rated on a Likert scale from 1 (does not describe me at all) to 5 (describes me very well). Items 2, 4, 5, 6, 7, 10, 11, 12, 14, 16, 17, 18, 20, and 22 are reverse scored. Scores range from a minimum of 23 to a maximum of 115, with higher scores indicating higher self-efficacy (Gozum S, Aksayan, 1999; Sherer et al., 1982). The reliability of the scale was determined to be 0.81 (Sherer et al., 1982) and in the current study, Cronbach's α was 0.72.

The Multi-Dimensional Social Support Scale (MSPSS) was developed by Zimet et al., (1990) to determine the social support factors perceived by individuals (Zimet et al., 1988).. The scale was translated into Turkish by Eker & Arkar (1995). It consists of 12 items grouped into three categories based on the source of support, with each group containing 4 items: family (4 items), friends (4 items), and a special person (4 items). The "special person" dimension refers to someone outside family and friends (e.g., partner, close friend, relative, neighbor, or doctor). Each item is rated on a 7-point scale ranging from "1=definitely no" to "7=definitely yes." The lowest score for each subscale is 4, and the highest is 28. The overall scale score ranges

from 12 to 84 (Eker & Arkar, 1995; Folkman & Lazarus, 1988). The scale and its three subscales demonstrate internal consistency, with Cronbach's α ranging from 0.85 to 0.92 (Zimet et al.,1988). In the current study, the alpha coefficient for the MSPSS was 0.88.

The Ways of Coping Questionnaire (WoCQ) was developed by Folkman and Lazarus in 1988. The Turkish validity and reliability study of the scale was conducted by Sahin and Durak (1995). It comprises 5 sub-dimensions and 30 items, with each item assessed on a 4-point Likert-type scale. The subdimensions include Self-Confident Approach (SCA: 7 items), Optimistic Approach (OA: 5 items), Seeking Social Support Approach (SSSA: 4 items), Helpless Approach (HA: 8 items), and Submissive Approach (SA: 6 items). These five subgroups are consolidated into two main coping styles: "Problem-focused/active (SCA, OA, and SSS)" and "Emotion-focused/passive (HA and SA)." Higher scores indicate a greater use of that coping style. The total score ranges from 30 to 120, with no cutoff value established. The Cronbach's alpha internal consistency coefficients for this scale range from 0.49 to 0.80 (Eker & Arkar, 1995; Sahin & Durak, 1995). In this study, Cronbach's α for the WoCQ was 0.72.

Data Analysis: Data analysis was performed using SPSS Statistics 25. Differences between groups were examined using independent samples t-test and One-Way ANOVA. Frequency distribution was utilized for categorical variables, while descriptive statistics were used for numerical variables. Scale reliability was assessed using Cronbach's alpha coefficient, with values of 0.60 and above considered reliable (Taber et al., 2018). The effects of sociodemographic characteristics, self-efficacy, and social support on coping strategies were analyzed through multiple regression analysis.

Ethical considerations: The required institutional permits and approval from the Recep Tayyip Erdogan University Ethics Committee (Decision Number 14/165) were obtained before conducting the study. Written informed consent was obtained from the participants.

Results

Half of the sample consisted of women (50.3%). The mean (SD) age of participants was 56.40(12.75) years (Table 1). The mean duration of cancer diagnosis of the participants was 4.37(±5.8) years. Most of the participants (93.4%) used their medication regularly, and (95.2%) stated that they benefited from chemotherapy. The most common form of cancer was breast cancer (35.6%) (Figure 1). The most common treatment that patients have received in the past is surgical treatment (Figure 2).

While women use both the self-confident approach and the helpless approach compared to men, the self-confident approach was used more frequently. Women, singles, university graduates, and nuclear family members used better ways of coping with stress ($p<0.05$) (Table 2).

Table 1: Demographics and Disease-Related Characteristics of Cancer Patients

		n	%
Age	(Mean±ss) (Min-Max)	56.40±12.75	18-85
Gender	Male	78	49.7
	Female	79	50.3
Marital Status	Married	131	83.4
	Single	10	6.4
	Other	16	10.2
Residence	City	107	68.2
	Rural	50	31.8
Education	Primary	29	18.5
	Secondary / high school	71	45.2
	University	57	36.3
Family	Nuclear	103	65.6
	Large	39	24.8
	Living alone	15	9.6
Cancer stage	Stage 1	8	5.9
	Stage 2	18	13.3
	Stage 3	30	22.2
	Stage 4	79	58.5
Regular medication use		142	93.4
Diagnosis time (years)(Mean±SD) (Min-Max)		4.37±5.84	1-40
Time after diagnosis (month) (Mean±SD) (Min-Max)		18.36±23.	6-132
Currently health status	Very Good	28	17.8
	Good	68	43.3
	Medium	39	24.8
	Poor	19	12.1
	Very Bad	3	1.9

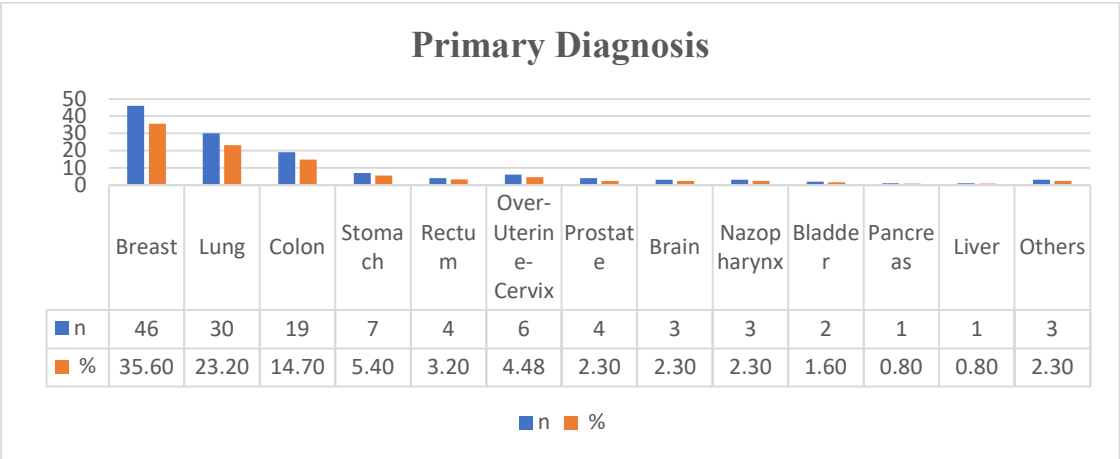
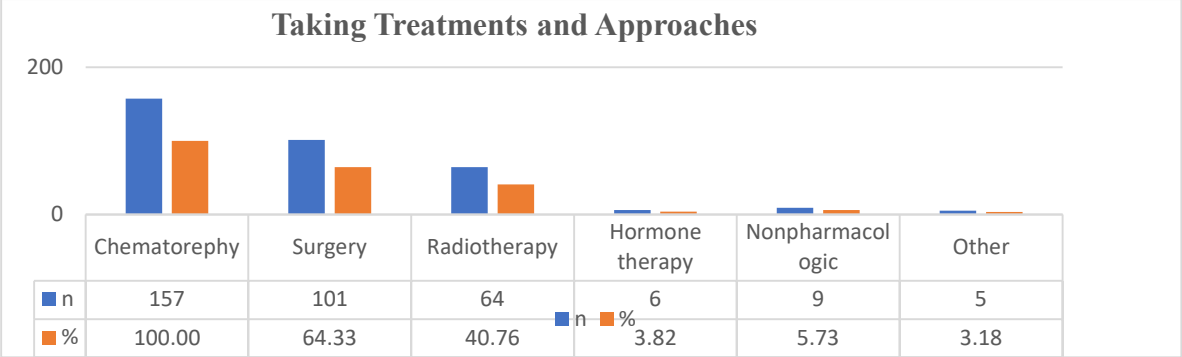


Figure 1. Primary Diagnosis of the Participants



** Multiple options are marked*

Figure 2: The Participants' Taking Treatments and Approaches

Table 2: Differences of Demographic and Disease-Related Variables by Ways of Coping Strategies

	Coping Strategies					
	Problem Focused Lifestyle (Active coping)			Emotional Focused Lifestyle (Avoidant coping)		
Sociodemography	SCA	OA	SSSA	HA	SA	WoCS
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Gender						
Male	23.12±3.65	16.21±2.58	11.46±2.24	21.60±5.34	14.60±3.30	86.99±9.70
Female	24.35±3.53	16.67±3.12	11.01±2.95	23.68±4.76	15.62±3.74	91.34±10.40
t/p	-2.164/0.032*	-1.019/0.310	1.075/0.284	-2.577/0.011*	-1.806/0.073	-2.712/0.007*
Marital status						
Maried	23.89±3.43	16.50±2.85	11.26±2.70	22.57±5.14	15.14±3.44b	89.35±10.45
Single	24.30±4.14	15.40±2.37	10.80±1.93	26.40±2.84a	18.10±3.03a	95.00±8.45a
Other	22.19±4.68	16.63±3.28	11.31±2.39	20.94±5.45b	13.06±3.60b	84.13±7.51b
F/p	1.704/0.185	0.716/0.490	0.149/0.862	3.672/0.028*	6.641/0.002*	3.690/0.027*
Education						
Primary	22.76±4.55b	16.45±3.53	11.17±2.98	20.66±6.16b	14.14±3.11	85.17±10.05b
Secondary/high school	23.35±3.53	16.10±2.76	11.18±2.54	22.69±4.46	14.92±3.43	88.24±10.35
University	24.72±3.02a	16.86±2.59	11.33±2.58	23.61±5.20a	15.86±3.82	92.39±9.44a
F/p	3.663/0.028*	1.119/0.329	0.062/0.940	3.269/0.041*	2.504/0.085	5.602/0.004*
Family						
Nuclear family	24.29±3.18a	16.61±2.78	10.98±2.50	23.24±4.92a	15.67±3.36a	90.80±9.60a
Extended family	22.59±4.49b	16.15±3.07	11.67±2.94	20.87±5.80b	14.31±3.83	85.59±11.71b
Living alone	22.93±3.43	16.00±2.98	11.87±2.47	23.20±4.04	13.40±3.38b	87.40±8.44
F/p	3.637/0.029*	0.554/0.576	1.457/0.236	3.179/0.044*	4.168/0.017*	4.040/0.019*
Currently health status						
Very good/good	24.17±3.38	16.47±2.81	11.10±2.46	23.67±4.81a	15.48±3.57	90.89±9.89a
Medium	23.51±3.87	16.69±2.84	11.87±2.80	20.97±5.43b	14.46±3.18	87.51±11.12
Poor/very bad	22.27±3.99	15.86±3.20	10.68±2.88	21.18±5.19	14.68±4.03	84.68±8.75b
F/p	2.590/0.078	0.599/0.551	1.777/0.173	5.081/0.007*	1.331/0.267	4.110/0.018*

F: One-way ANOVA test. t: Independent sample t test a.b: shows differences between groups (a=highest mean). *:p<0.05 WoCS: Ways of Coping Scale: Problem-Focused/Active coping [SCA: Self-Confident Approaches. OA: Optimistic Approach. SSSA: Seeking Social Support Approach] and Emotion-Focueds/Avoidant coping:[HA: Helpless Approach. SA: Submissive Approach]

Table 3: The effect of sociodemographic characteristics, social support, self efficacy on the coping strategies

	Problem Focus Style Active Coping				Emotional Focus Style Emotion-focused coping				WoSC			
			95% CI				95% CI				95% CI	
	B	p	Lower Bound	Upper Bound	β	p	Lower Bound	Upper Bound	β	p	Lower Bound	Upper Bound
Women/men	1.267	0.262	-0.956	3.491	3.484	0.003	1.184	5.785	4.752	0.003	1.614	7.889
Single/maried	-0.628	0.779	-5.032	3.777	8.095	0.001	3.537	12.653	7.467	0.019	1.251	13.683
Divorced/maried	-0.495	0.790	-4.153	3.164	-1.437	0.454	-5.223	2.348	-1.932	0.461	-7.094	3.231
MSSS	0.041	0.245	-0.029	0.112	-0.025	0.501	-0.097	0.048	0.017	0.740	-0.082	0.116
SES	0.117	0.007	0.033	0.202	0.138	0.002	0.051	0.226	0.256	0.000	0.136	0.375
	(F=2.168. p=0.061. R^2=0.067)				(F=6.565. p=0.000. R^2=0.179)				(F=6.865. p=0.000. R^2=0.185)			

WoCS: Ways of Coping Scale MSSS: Multidimensional Social Support Scale SES: Self Efficacy Scale
*p<0.005

Discussion

This study highlights the complex relationship between socio-demographic factors, social support, and self-efficacy in shaping coping strategies in Turkish cancer patients with solid tumors undergoing chemotherapy. Findings suggest that women, singles, and those with higher levels of education are more likely to adopt effective coping mechanisms, especially emotion-focused strategies, reflecting the psychological challenges of cancer treatment. The prominence of family support in alleviating emotional distress underscores the cultural importance of family ties in coping with illness. In addition, self-efficacy emerges as a key determinant of adaptive coping, facilitating both problem-focused and emotion-focused strategies.

Consistent with prior studies, socio-demographic factors, including gender, education, and marital status, influence coping strategies. Women, university graduates, and single individuals demonstrate more effective stress-coping mechanisms, with emotion-focused coping strategies being more commonly used (Geng et al., 2018; Zhou et al., 2023). This study further reveals that individuals with higher education, those living with nuclear families, and those reporting good or very good health employ more effective coping strategies. These findings align with research suggesting that individuals with higher levels of education are better equipped to employ both problem-focused and emotion-focused strategies (Geng et al., 2018). Gender differences are particularly notable, with women being more likely to use problem-focused (1.2 times) and emotion-focused (3.4 times) coping strategies. This is consistent with a systematic review of gender differences in colorectal cancer patients, which found that women tend to experience more psychological distress but also employ more adaptive coping mechanisms than men (Zhou et al., 2023).

Additionally, single individuals rely more on emotion-focused strategies (8 times) and cancer-related stress-coping mechanisms (7.4 times) compared to married individuals. This finding suggests a need for targeted training to promote problem-solving coping strategies among single patients.

A systematic review of 37 studies evaluating gender differences in coping among colorectal cancer patients found that women experience more psychological distress yet employ more positive coping strategies than men (Zhou et al., 2023). Some studies, however, report no significant gender differences (Katz et al., 2000), indicating a nuanced interaction between gender and coping mechanisms. Recognizing gender-specific coping patterns is critical for medical staff to provide personalized support and communication interventions.

In a mixed-method analysis evaluating education, cancer stage, social support, and coping strategies on the quality of life of

breast cancer patients, findings from 150 studies revealed that education and social support significantly influenced coping strategies (Perry et al., 2020). Higher education levels were associated with a greater ability to use both problem-focused and emotion-focused coping strategies. Consistent with these findings, this study shows that women, university graduates, and individuals in good health exhibit better stress-coping abilities, reinforcing the role of education and social support in enhancing coping effectiveness.

Although problem-focused strategies are crucial, emotion-focused coping is often employed in situations perceived as insurmountable (Carver et al., 1989). Özdemir and Arslan (2018) observed that emotion-focused coping was ineffective among women with breast cancer, suggesting that coping mechanisms evolve post-diagnosis, as indicated by longitudinal studies (Geng et al., 2018).

The study underscores the critical role of self-efficacy in influencing coping strategies. Self-efficacy is positively associated with both problem-focused and emotion-focused strategies, supporting Bandura's Self-Efficacy Theory, which suggests that individuals with high self-efficacy are more likely to engage in health-promoting behaviors (Bandura, 1977). As self-efficacy increases, patients are more likely to manage their stress proactively, engage in health-related behaviors, and utilize available social support. This finding is consistent with Lazarus and Folkman's Transactional Model of Stress and Coping, which posits that individuals' perceptions of their ability to manage stressors significantly affect the coping strategies they employ (Folkman & Lazarus, 1988).

Family support, particularly from the nuclear family, plays a crucial role in the coping success of cancer patients. Patients living with nuclear families exhibit better emotional coping than those living alone or with extended families. This reflects the cultural significance of family support in Turkey during health crises. However, multidimensional social support did not significantly influence coping strategies in the regression analysis, likely because patients relied more on family support than on broader social support networks. The study highlights the central role of nuclear family support in coping with cancer-related issues and suggests that future interventions should focus on strengthening family-based support systems.

While both emotion-focused and problem-focused coping strategies have been shown to be effective in managing cancer-related stress, the study found that emotion-focused coping was more frequently utilized among patients experiencing high levels of emotional distress. These findings are supported by prior research, which suggests that individuals in more distressing situations are more likely to rely on emotion-focused strategies (Coolbrandt et al., 2018). However, problem-focused coping strategies have been linked to better health outcomes in patients who feel empowered to take an active role in managing their treatment. Therefore, interventions that increase self-efficacy and social support while encouraging problem-solving skills may contribute to more effective coping strategies and better overall outcomes for cancer patients.

The findings align with established coping and self-efficacy theories. Lazarus and Folkman's Transactional Model of Stress and Coping suggests that individuals' stress assessments determine whether they use problem-focused or emotion-focused strategies (Folkman & Lazarus, 1988). In this study, higher self-efficacy correlates with effective problem-focused behaviors, such as proactive communication with healthcare staff. This supports Bandura's Self-Efficacy Theory, which posits that individuals with strong self-belief engage more readily in health-promoting behaviors. Higher education and strong social support enhance cognitive and emotional resources necessary for effective primary and secondary stress appraisals (Schwarzer & Knoll, 2007).

Cultural differences also shape the effectiveness of social support, as norms, beliefs, and family structures influence how support is given and received. In

individualistic societies (e.g., Western cultures), patients may rely on independent decision-making, whereas in communal societies (e.g., Eastern cultures), family plays a more central role in care. A study by Tang et al. (2009) found that Chinese cancer patients depended more on family and community support, whereas American patients sought professional services. Similarly, Aydın et al. (2017) noted that Turkish cancer patients tend to limit emotional sharing with family, potentially reducing their reliance on social support and increasing feelings of isolation.

While participants demonstrated strong self-confidence and coping skills, they also reported above-average levels of helplessness and submissive coping strategies. Helplessness, an emotion-focused technique, can hinder active stress management and diminish motivation (Schover et al., 1995). Conversely, self-confidence and optimism are positively associated with hope and motivation. A systematic review of 52 studies identified optimism and coping as key predictors of positive health outcomes in cancer patients (Pinquart & Duberstein, 2007). Research on breast cancer patients undergoing chemotherapy further supports a negative relationship between symptom distress, symptom management, and self-efficacy (Beckjord et al., 2007). High self-efficacy facilitates coping behaviors, enabling patients to navigate challenges more effectively.

This study reinforces the well-documented relationship between self-efficacy and coping strategies. While self-efficacy influences both problem- and emotion-focused strategies, challenges remain in overcoming stressors. Optimism sustains high self-efficacy, whereas helplessness can weaken it, highlighting the profound impact of physical, mental, and psychological challenges on coping mechanisms.

The literature presents conflicting perspectives on the interplay of social support, coping mechanisms, and self-efficacy. Some studies emphasize problem-focused strategies as essential for effective cancer management, while others suggest that developing emotional coping skills enhances well-being (Geng et al., 2018; Coolbrandt et al., 2018; Özdemir & Arslan, 2018).

Limitations and future direction : This study has several limitations that should be considered when interpreting the results. Firstly, the cross-sectional design of the study limits the ability to infer causality between socio-demographic factors, social support, self-efficacy, and coping strategies. Longitudinal studies would be valuable for examining how coping strategies evolve over time and their impact on long-term outcomes. Secondly, the psychological and emotional states of patients during chemotherapy, such as fatigue, may have influenced their responses. Efforts were made to minimize this potential bias by ensuring that sufficient time was allocated for participants to complete the questionnaires and by providing necessary explanations. Lastly, the sample was limited to adult patients receiving chemotherapy on an outpatient basis and did not include patients who were hospitalized or those receiving alternative forms of cancer treatment. Future studies should aim to include a more diverse sample to increase the generalizability of the findings. Despite these limitations, the study used validated measurement tools and provides valuable insights into the coping strategies of cancer patients in a region of Turkey, specifically the Eastern Black Sea region.

Conclusions: The findings of this study underscore the complexity of coping strategies among cancer patients, emphasizing the need for personalized interventions that account for individual differences in socio-demographic factors, self-efficacy, and social support. Women, singles, and individuals with higher education levels tend to employ more effective coping strategies, particularly emotion-focused approaches. The role of self-efficacy in facilitating both problem-focused and emotion-focused coping is crucial, as it helps patients to better manage the stressors associated with cancer treatment. Especially nuclear family support plays a significant role in reducing emotional distress and enhancing coping abilities.

In conclusion, personalized support programs that target specific demographic characteristics, such as gender, marital status, and education, could greatly enhance coping strategies for cancer patients. Strengthening self-efficacy and fostering family-based social support are essential components of these interventions. Future research should adopt longitudinal designs to further explore the dynamics of coping strategies over time and investigate how they contribute to long-term psychological and physical well-being. A comprehensive approach that integrates individual resilience with strong social support systems will likely lead to improved coping Outcomes For Cancer Patients Undergoing Chemotherapy.

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