DOI: 10.4274/forbes.galenos.2022.43265
Forbes J Med 2022;3(2):203-211

Original Article / Orijinal Araştırma

Relationship Between Coping Styles and Functional Quality of Life in Women with Breast Cancer: A Social Media Based Cross-sectional Study

Meme Kanserli Kadınların Başa Çıkma Stilleri ile Fonksiyonel Yaşam Kaliteleri Arasındaki İlişki: Sosyal Medya Tabanlı Kesitsel Bir Çalışma

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Cite as: Zorba Bahçeli P, Karakaş H. Relationship Between Coping Styles and Functional Quality of Life in Women with Breast Cancer: A Social Media Based Cross-sectional Study. Forbes J Med 2022;3(2):203-211

ABSTRACT

Objective: Breast cancer is an important stressor in women's lives, causing them to experience psychosocial problems and negatively affecting their quality of life. Therefore, this study determined the relationship between coping styles and functional quality of life in women with breast cancer.

Methods: The data of this descriptive and cross-sectional study were collected between March and October 2021 with the Personal Information Form, Brief Cope Inventory and Functional Living Index-Cancer via social media. The sample of the study consisted of 132 women with breast cancer, who were actively registered with the Breast Diseases Association and had a social media account.

Results: This study determined that the age, income, having a family member with the same disease, the duration of diagnosis and the status of having a mastectomy affected the coping styles of women with breast cancer. Additionally, it was concluded that the employment and income status of women with breast cancer, having someone to help them in their care, and having another chronic disease affected their functional quality of life. It was found that there was no significant relationship between coping styles and quality of life mean scores.

Conclusion: Women with breast cancer can be supported in developing strategies to cope with their problems and increase their functional quality of life.

Keywords: Breast cancer, woman, coping style, quality of life

Received/Geliş: 21.02.2022
Accepted/Kabul: 04.04.2022

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ABSTRACT

Amaç: Meme kanseri, kadınların yaşamlarında psikososyal sorunlar yaşamalarına neden olan ve yaşam kalitelerini olumsuz yönde etkileyen önemli bir stresördür. Bu nedenle bu çalışmada meme kanserli kadınlarda başa çıkma stilleri ile fonksiyonel yaşam kaliteleri arasındaki ilişkinin belirlenmesi amaçlanmıştır.

Yöntem: Tanımlayıcı ve kesitsel tipte olan bu çalışmanın verileri Kişisel Bilgi Formu, Kısa Başa Çıkma Envanteri ve Fonksiyonel Yaşam İndeksi-Kanser ile Mart-Ekim 2021 tarihleri arasında sosyal medya aracılığıyla toplanmıştır. Araştırmanın örneklemini Meme Hastalıkları Derneği'ne aktif olarak kayıtlı ve sosyal medya hesabı olan 132 meme kanserli kadın oluşturmuştur.

Bulgular: Bu çalışmada kadınların yaş, gelir ve ailede aynı hastalığa sahip birey olma durumlarının, tanı alma sürelerinin ve mastektomi olma durumlarının başa çıkma stillerini etkilediği belirlenmiştir. Bununla birlikte meme kanserli kadınların çalışma ve gelir durumu, bakımında yardımcı olan birey ve başka bir kronik hastalığa sahip olma durumlarının fonksiyonel yaşam kalitelerini de etkilediği sonucuna ulaşılmıştır. Başa çıkma stilleri ile yaşam kalitesi puan ortalamaları arasında anlamlı bir ilişki olmadığı bulunmuştur.

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Sonuç: Meme kanserli kadınların sorunlarıyla başa çıkma stratejileri geliştirmeleri ve fonksiyonel yaşam kalitelerini artırmaları desteklenebilir.
Anahtar Kelimeler: Meme kanseri, kadın, başa çıkma stili, yaşam kalitesi

INTRODUCTION

Worldwide, breast cancer ranks first among the cancer types observed in women.[1] With more than 2 million women diagnosed each year, breast cancer has the highest prevalence across the world.[2] According to Globacan[3] (2020) data, breast cancer is reported as the most common cancer type among the women in the world. Breast cancer ranks first in Turkey as well with a rate of 43% among all cancer types seen in women.[4] Breast cancer is an important stressor in women's lives and creates anxiety, depression, fear of cancer recurrence, role changes and concerns about the future.[5,6] The studies report the concerns experienced by women with breast cancer as changing health conditions, changes in family roles, changes in body image and self-esteem related to mastectomy, negative effects on their work status, and the fear of cancer recurrence.[7-9] As a result of these concerns, women with breast cancer experience psychosocial problems and their quality of life is negatively affected.[10,11] During the treatment process, women with breast cancer must cope with different problems and complications.[12,13] The concept of coping has many functional and theoretical definitions and it is a dynamic process consisting of cognitive and behavioral techniques related to reducing the factors that cause psychological distress or stress.[14-16] simultaneously, effective coping styles increase the treatment success and survival rates of patients and constitute one of the basic concepts for quality of life.[17,18] Identifying and teaching strategies to overcome cancer patients' psychosocial problems improves their coping styles and increases their quality of life.[19] Quality of life is a complex and multidimensional concept that expresses a subjective perception of well-being that includes physical, psychological, social and spiritual dimensions and reflects the perceptions of patients about the impact of their diagnosis and treatment on their daily lives.[20] Studies indicate that the physical and psychosocial problems experienced by women with breast cancer due to the disease and treatment process affect their functional status and reduce their quality of life.[21-25] The number of studies in the literature that focusing on examining the relationship between functional quality of life and coping styles of women with breast cancer is rather limited. The studies conducted with women with breast cancer report that those with ineffective coping styles experience more problems with regard to the disease and therefore have a lower quality of life.[26,27] Seib et al.[28] (2018) emphasized that treatment compliance and quality of life is negatively affected in women with breast cancer who have inadequate coping styles.

Teaching and developing effective coping styles regarding the disease and treatment-related problems to women with breast cancer will positively affect their functional quality of life. In line with this, this study determined the relationship between coping styles and functional quality of life in women with breast cancer. The study findings will guide healthcare professionals to better understand how coping styles affect the functional quality of life in women with breast cancer.

METHODS

Study Design and Setting

This descriptive and cross-sectional study was conducted to explore the relationship between coping styles and functional quality of life in women with breast cancer.

After obtaining the ethical committee approval, reliable online questionnaire creation links were reviewed by the researchers. To protect the confidentiality of the data, it was decided to create the questionnaire sent to the sample group via the "surveey.com" URL.

Participants and Sample Size

The universe of this research consisted of all individuals with breast cancer actively registered with the breast disease association in Turkey. There are 200 women with breast cancer who are actively registered with the association. The sample of the study was calculated based on the calculation of a sample size of a known population. Accordingly, the sample size was calculated as 132 women with breast cancer (Z=1.96) at a 95% confidence interval, assuming a 5% margin of error and variability of 0.5.[29]

Eligible participants were (i) women 18 years of age or older diagnosed with breast cancer (ii) women with breast cancer who volunteered to participate in the study and (iii) women with breast cancer who could use social media, smartphones or computers. The exclusion criterion was (i) refusal to voluntary participation in the study.

Ethical Considerations

Permission was obtained from the Non-Interventional Clinical Research Ethics Committee of a university in Turkey to conduct the study (decision no: 2021/187). It was assured that the study complied with the principles of Helsinki Declaration. Face-to-face verbal consent was

obtained from the breast disease association for the research. Additionally, the phone numbers of women with breast cancer were provided to the researchers by the association. First, the women with breast cancer in the sample were contacted by phone and briefed about the study. Later, the participating women with breast cancer read the informed consent text explaining the purpose and rationale of the study is sent via the link containing the online questionnaire. After getting information about the study, they answered "Yes or No" the following question: "Would you like to participate in the study voluntarily? The volunteers filled out the questionnaire form. The participants were informed that they could withdraw from the study at any time without providing any reasons.

Outcome Measures and Study Instruments

The data of this research were collected by sharing the online survey link created using the URL address "survey.com" with the participating women with breast cancer through the social media (WhatsApp, Instagram, Facebook, etc.) accounts of the association. Data collection was completed between March and October 2021. The Personal Information Form, Brief Cope Inventory (Brief COPE), and Functional Living Index-Cancer (FLIC) were used to collect data.

Personal Information Form

This 15-item form, created by the researchers, consists of questions about the descriptive characteristics (age, marital status, child status, educational status, working status, income status, having dependents and the state of being a helping person in care) the women participating in the research and the characteristics of their diseases (diagnosis time, having a mastectomy, presence of metastases, another chronic disease condition, receiving chemotherapy, receiving radiotherapy, being a member of the family with the same disease).[9,21,24,26]

Brief Cope Inventory

This form was developed by Carver[30] (1997) to assess people's multidimensional responses to stress. The 4-point Likert type inventory consists of 28 items. The total score that can be obtained from the inventory is between 28 and 112. A high score on the scale indicates a high level of coping style in individuals. The validity and reliability study of the scale for Turkey was conducted by Bacanlı et al.[31] (2013) and Cronbach's alpha coefficient was determined to be 0.79. In this study, the Cronbach's alpha coefficient was found to be 0.81.

Functional Living Index-Cancer

The FLIC was developed by Schipper et al.[32] (1984) to assess the functional status of patients. The Turkish validity and reliability study of the scale was conducted by Bektaş and Akdemir[33], and the Cronbach's alpha coefficient was found to be 0.79. The 7-point Likert type scale consists of 22 items. The total score that can be obtained from the scale varies between 22 and 154. A high score on the scale indicates a good quality of life. In this study, the Cronbach's alpha coefficient was found to be 0.74.

Statistical Analysis

The collected data were transferred to IBM Statistical Packages for the Social Sciences Statistics 25 programs. During analyses, descriptive statistics (mean, standard deviation, median, minimum, maximum) were used for continuous variables, and numbers (n) and percentage (%) were used for categorical variables. Shapiro-Wilk test, histogram and Q-Q graph were used as normality tests. T-test, one-way ANOVA, Mann-Whitney U, and Kruskal-Wallis tests were used in independent groups for data analysis. Pearson correlation analysis was conducted for correlating continuous variables. All statistics were evaluated at the $p<0.05$ significance level.

RESULTS

The mean age of participants was found to be 46.13±7.89 according to the descriptive characteristics of the women with breast cancer participating in the study. It was determined that 79.5% of the participants were married, 84.1% had children. 53.8% had a university or a higher degree, 86.4% were employed and 53.8% had income equal to their expenditures. It was found that 75.0% of the women had dependents and 34.1% of them had no one to help them in their care (Table 1).

According to the findings, 44.7% of the participating women were diagnosed with the disease in the last 1-12 months, 18.2% had metastases, 45.5% had another chronic disease, 89.4% received chemotherapy, 50.8% received radiotherapy, 59.1% had mastectomy and 25.0% had individuals in their families with the same disease (Table 2).

An examination of the change in the Brief COPE mean scores of women with breast cancer in relation to their descriptive characteristics pointed to a statistically significant difference between age and income status and the level of coping styles ($p<0.05$). It was determined that the coping styles of the women in the 18-49 age group were significantly higher than the coping styles of women 50 years and older ($p<0.05$). The difference between the income status and the level of coping styles was found to be more distinct between the group who had a higher income than their expenses and the group who had a lower income than their expenses. The participating women with higher incomes had higher levels of coping styles ($p<0.05$). No statistically significant difference was found between Brief COPE mean scores and the participating women's marital

Table 1. Distributions of descriptive characteristics of women with breast cancer (n=132)		
Descriptive characteristics	**n**	**%**
Age (X±SD) 46.13±7.89		
Marital status		
Single	27	20.5
Married	105	79.5
Child status		
Yes	111	84.1
No	21	15.9
Educational level		
Primary school	26	19.7
Secondary school	35	26.5
University and above	71	53.8
Employment status		
Working	114	86.4
Not working	18	13.6
Income status		
Income < expense	39	29.5
Income = expense	71	53.8
Income > expense	22	16.7
Having dependents		
Yes	99	75.0
No	33	25.0
The state of being a helping person in care		
Yes	87	65.9
No	45	34.1
X: Mean, SD: Standard deviation		

Table 2. Distribution of disease characteristics of women with breast cancer (n=132)		
Variables	**n**	**%**
Diagnosis time		
1-12 month	59	44.7
2-5 year	58	43.9
6 year and above	15	11.4
Having a mastectomy		
Yes	78	59.1
No	54	40.9
Presence of metastases		
Yes	24	18.2
No	108	81.8
Another chronic disease condition		
Yes	60	45.5
No	72	54.5
Receiving chemotherapy		
Yes	118	89.4
No	14	10.6
Receiving radiotherapy		
Yes	67	50.8
No	65	49.2
Being a member of the family with the same disease		
Yes	33	25.0
No	99	75.0

status, having children, educational status, employment status, having dependents and having people to help in their care (p>0.05) (Table 3).

A statistically significant difference was identified between the median FLIC score and the participating women's working status, income status, and having someone to help in their care (p<0.05). However, there was no statistically significant difference between age, marital status, having children, education level and having dependents (p>0.05) (Table 3).

Examination of the difference between the Brief COPE mean scores of the women according to the disease characteristics pointed to a statistically significant difference between having others in the family with the same disease, the duration of diagnosis, the status of having a mastectomy, and coping styles (p<0.05).

The result of the post hoc analysis showed that the coping styles of those with a diagnosis period of 1-12 months were significantly higher than those with a diagnosis period of 6 years or older (p<0.05). Additionally, it was found that the coping styles of women who had a family member with the same disease were higher than those without a family member diagnosed with the same disease, and this difference was also significant (p<0.05). No significant difference was found between having another chronic disease, metastasis, chemotherapy and radiotherapy status of women with breast cancer and their brief COPE mean scores (p>0.05) (Table 4).

A statistically significant difference was identified between having another chronic disease and the median FLIC score (p<0.05). However, there was no significant difference between the duration of diagnosis, mastectomy and metastasis, having a family member with the same disease, receiving chemotherapy and radiotherapy, and median FLIC scores (p>0.05) (Table 4).

The mean of Brief COPE score of the women with breast cancer was found to be 78.31±10.27 and the mean FLIC score was 95.21±7.45. No significant relationship was found between the Brief COPE and FLIC mean scores of the

Table 3. Difference of Brief COPE and FLIC mean/median scores according to descriptive characteristics of women with breast cancer

Variables	Brief COPE				FLIC			
Age	**X**	**SD**	**Test**	**p**	**Median**	**Min-Max**	**Test**	**p**
18-49	79.80	10.26	2.457	**0.015**	94.0	74-114	1876.5	0.857
50 year and above	75.20	9.68			96.0	78-128		
Marital status								
Single	78.29	10.98	-0.008	0.994	97.0	78-114	1363.0	0.758
Married	78.31	10.13			95.0	74-128		
Child status								
Yes	78.76	11.78	0.219	0.827	95.0	83-107	1069.0	0.548
No	78.22	10.017			95.0	74-128		
Educational level								
Primary school	77.00	10.35	0.417	0.660	91.0	83-114	3.339	0.188
Secondary school	79.42	9.50			94.0	86-107		
University and above	78.23	10.67			96.0	74-128		
Employment status								
Working	78.71	10.20	1.127	0.262	94.0	74-128	686.5	**0.024**
Not working	75.77	10.63			99.0	77-107		
Income status*								
Income < expense (a)	75.89	9.43	3.504	**0.033**	91.0	74-114	7.826	**0.020**
Income = expense (b)	78.18	10.68			95.0	77-128		
Income > expense (c)	83.00	9.08		c>a	99.5	84-107	c>a	
Having dependents								
Yes	78.03	9.95	-0.542	0.589	95.0	74-128	1536.5	0.610
No	79.15	11.29			95.5	83-114		
The state of being a helping person in care								
Yes	77.79	9.42	-0.804	0.403	96.0	74-128	1437.5	**0.012**
No	79.31	11.77			94.0	83-104		

*Bonferroni.

Brief COPE: Brief Cope Inventory, FLIC: Functional Living Index-Cancer, X: Mean, SD: Standard deviation, Min-Max: Minimum-maximum

women with breast cancer who participated in this study (p>0.05) (Table 5).

DISCUSSION

A systematic review in the literature emphasized the importance of evaluating women's physical and psychological health due to the increasing incidence of breast cancer.[34] The fact that women with breast cancer must cope with the problems they experience during the treatment and disease process may negatively affect their quality of life.[35] Therefore, this study was conducted to determine the relationship between coping styles and functional quality of life in women with breast cancer.

This study concluded that women who are young, who have a high income, who have a family member diagnosed with the same disease, who are recently diagnosed and who received mastectomy have high-level coping styles. Additionally, it was found that women who are working, who have a high income, who has another chronic disease and who have someone to support them in their care has a high and functional quality of life.

It is reported in the literature that compared to those at younger ages, women with breast cancer at an advanced age think that they are approaching the end of their lives, and therefore develop less effective coping strategies.[36,37] Some studies state that young women with recently diagnosed breast cancer may perceive the disease as a challenge and may be willing to use proactive coping strategies in this direction.[35,38] The results of this study support the findings in the literature. It has been reported that most of the women with breast cancer are married, working and have high educational status.[39-41] It is concluded that taking an active

Table 4. Difference of Brief COPE and FLIC mean/median scores according to disease characteristics of women with breast cancer								
Variables	**Brief COPE**				**FLIC**			
Diagnosis time*	**X**	**SD**	**Test**	**p**	**Median**	**Min-Max**	**Test**	**p**
1-12 month (a)	80.74	10.89	3.867	**0.023**	96.0	74-107	2.371	0.306
2-5 year (b)	77.06	8.95			94.5	78-128		
6 year and above (c)	73.53	10.60		a>c	91.0	83-109		
Having a mastectomy								
Yes	76.03	9.31	-3.157	**0.002**	96.0	74-114	1978.0	0.553
No	81.59	10.77			94.0	86-128		
Presence of metastases								
Yes	74.95	9.49	-1.782	0.077	91.0	83-109	964.0	0.051
No	79.05	10.32			95.0	74-128		
Another chronic disease condition								
Yes	79.15	9.57	0.856	0.393	93.0	78-128	1574.5	**0.007**
No	77.61	10.83			98.0	74-114		
Receiving chemotherapy								
Yes	78.36	10.17	0.174	0.862	94.5	74-128	734.5	0.498
No	77.85	11.48			96.0	89-102		
Receiving radiotherapy								
Yes	77.19	9.42	-1.271	0.206	94.0	77-109	2027.5	0.494
No	79.46	11.02			96.0	74-128		
Being a member of the family with the same disease								
Yes	81.45	11.28	2.055	**0.042**	94.0	84-128	1429.5	0.283
No	77.26	9.74			95.0	74-114		

*Bonferroni.

Brief COPE: Brief Cope Inventory, FLIC: Functional Living Index-Cancer, X: Mean, SD: Standard deviation, Min-Max: Minimum-maximum

role in working life, especially during their diseases, will make the women with breast cancer feel good; in addition, feeling the support of family members and especially their spouses can encourage them to develop positive coping strategies despite psychosocial and physical problems; and as a result, their quality of life will be positively affected.[37,40,42] A study conducted with women with breast cancer undergoing treatment found that women's quality of life was related to their monthly income, the status of having a surgical operation, the treatment method applied, and social support.[43] The women who underwent surgery and received social support were found to experience less stress during the treatment process, they were psychologically resilient and their hopes of overcoming cancer increased.[44,45] Uncertainty regarding the disease is one of the psychological stress factors in women with breast cancer.[46] The uncertainty experienced by women with breast cancer regarding the disease and treatment process causes them to think negatively and use inadequate coping strategies.[40,41] Interacting with individuals with the same disease helps women with breast cancer relax emotionally and develop positive coping strategies.

Table 5. Correlation between Brief COPE and FLIC score of women with breast cancer		
Variables	**Brief COPE**	
	r	**p**
FLIC*	-0.009	0.917

*Pearson correlation analysis.

Brief COPE: Brief Cope Inventory, FLIC: Functional Living Index-Cancer

Parallel with the results of this study, a study determined that the functional quality of life of working women was higher than that of non-working women.[47] Zhang et al.[48] (2017), on the other hand, found that women with breast cancer who received high incomes had high social support and quality of life. It has been reported that having high income levels will facilitate the access of women with breast cancer to medical treatment, increase their opportunities to participate in social activities and

increase their quality of life.[24,49] The fact that women with breast cancer have another chronic disease increases their physiological and psychosocial problems, reduces their compliance with treatment and may prolong the treatment process.[34,35] Having another chronic disease may negatively affect women's coping levels and functional quality of life. Therefore, frequent evaluation of coping styles and functional quality of life is recommended for women with breast cancer who have another chronic disease.

It was found that more than half of the women with breast cancer in this study had slightly higher Brief COPE and FLIC mean scores, but there was no significant relationship between the Brief COPE and FLIC mean scores. The literature reports the existence of a significant difference between coping styles and functional quality of life in women with breast cancer.[38-40] However, some studies have stated that the coping styles and quality of life of young women with breast cancer who are working and have social support is high and there is no significant difference between coping styles and functional quality of life.[35,37,38,40] This study also identified no significant relationships between coping styles and functional quality of life since the sample included young, working women in the early diagnostic process with social support.

Study Limitations

The limitation of the study is that different disease stages and treatment methods of women affected women's coping styles and functional quality of life differently.

CONCLUSION

The research results highlight the importance of evaluating coping styles and functional quality of life in women with breast cancer. This study determined that the age, income, having a family member with the same disease, the duration of diagnosis and the status of having a mastectomy affected the coping styles of women with breast cancer. Additionally, it was concluded that the employment and income status of women with breast cancer, having someone to help them in their care, and having another chronic disease affected their functional quality of life. Nurses, who are an important part of the professional healthcare team, can accurately evaluate the coping styles and functional quality of life in women with breast cancer and can provide counseling and training to women about the problems that may arise during the diagnosis and treatment processes. Women with breast cancer can be supported to develop strategies to cope with their problems and increase their functional quality of life.

Acknowledgments

The authors thank all women with breast cancer who participated in this study.

Ethics

Ethics Committee Approval: The study was approved by the Non-Interventional Clinical Research Ethics Committee of İzmir Bakırçay University in Turkey to conduct the study (decision no: 2021/187), and it was ensured that the study complied with the principles of Helsinki Declaration.

Informed Consent: The data of this study were collected via social media using an online survey.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: P.Z.B., Design: P.Z.B., Data Collection or Processing: H.K., Analysis or Interpretation: P.Z.B., H.K., Literature Search: P.Z.B., H.K., Writing: P.Z.B., H.K.,

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

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