Original Article

Symptoms Experience and Quality of Life in The Patients With Breast Cancer Receiving The Taxane Class of Drugs

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ABSTRACT

Objective: The aim of this study is to evaluate the symptoms experience and quality of life in patients with breast cancer receiving the taxane class of drugs.

Materials and Methods: This study was performed between November 2015 March 2016 in a chemotherapy unit of a university hospital with 48 patients, who agreed to participate in the study. The Memorial Symptom Rating Score (MSAS), Socio-demographic and Clinical Features Form, European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) and European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-Breast (EORTC QLQ- BR23) measures specific to breast cancer were used to obtain data.

Results: The average age of the patients was 45.65. The majority of patients were treated with the paclitaxel/paclitaxel+trastuzumab treatment protocol (60.42%), and more than half (54.16%) of these patients were on 5 or 6 treatments. The symptoms patients experienced the most commonly included being sensitive, weakness or energy loss and pain. The symptoms they experienced severely were included fatigue and energy loss and being sensitive. The most distressing symptoms were pain, worry, numbness in hands and feet. The overall well-being score of the patients as per the quality of life findings was 46.18±11.66. While the lowest score for the functional scales was in the social function subscale (66.32±15.18), the highest score for the symptom scales was in the pain subscale (42.01±15.37). The lowest score for the EORTC QLQ-BR23 scales was in the sexual life subscale (20.83±20.19); the highest score was in the body appearance subscale (65.8±23.96).

Conclusion: The results of the study are thought to be helpful for the oncology nurses in evaluating the patients in all aspects and in determining priorities for care.

Keywords: Breast cancer, taxane, quality of life, symptom

Introduction

According to World Cancer Agency's 2012 data, breast cancer is the most common cancer and is the most common cause of death (1). According to the 2014 data published by the Public Health Institution, Ministry of Health of the Republic of Turkey, breast cancer is the most common cancer among women in all age groups (24.9%) (2).

One of the basic treatment options in breast cancer is systemic chemotherapy and the taxane group of drugs constitutes the leading chemotherapeutic agents frequently used presently. Five-year recurrence of the disease is reduced by 4-7% and survival time of patients is prolonged by administration of taxane group of drugs in combination or sequentially with anthracycline-based treatments. Paclitaxel (Taxol; Bristol Myers Squibb, New York, ABD) and Dosetaxel (Taxotere; Sanofi,Paris,Fransa) are drugs which are included in this group and successfully administered for the treatment of breast cancer (3, 4). Taxanes induce polymerization (synthesis) of tubulin by binding to oligomeric or polymeric substrates, which are cornerstones of tubulin synthesis in tumor cells. Taxanes increase microtubule formation in the cell in this way. As a result, they act cytotoxically by destroying the tubulin-microtubule balance or by resulting in nonfunctional microtubule synthesis (5, 6).

It is reported in the related literature that the administration of drug has a broad side effect profile alongside its therapeutic effect. These side effects include alopecia, peripheral neuropathy, myelosuppression (especially neutropenia), cardiac transmission impairment, muscle pain, nausea and vomiting, hypersensitivity, dryness of the skin, nail changes, stomatitis and pulmonary damage. These symptoms, which

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may be seen in patients receiving medication in the taxane group, may negatively affect patients' quality of life (7, 8, 9, 10). In Ho and Mackey's paper (11) about protection and management of side effects of docetaxel, gastrointestinal symptoms, febrile neutropenia, nail changes and neuropathy are common symptoms were reported. In their study, Akçay and Gözüm (12) established that side effects, which were experienced by the patients (n=30) mostly after chemotherapy, included weakness-fatigue (100.0%), hair loss (93.3%), nausea-vomiting (86.7%), sudden sweating, vaginal dryness and menstrual irregularity (86.7%), reduction in sexual desire (63.3%) and infection (53.3%). In a study conducted by Dedeli et al. (13) with cancer patients (n=105), the functional status of breast cancer patients (22.8%) was lower as compared to the other cancer types. In the study by Bektaş and Aydemir (14), it was found that the functional life scale scores of patients with lung, breast and colon-rectum cancer were low and functional situations of patients with breast cancer were poor.

In studies conducted in the world and in Turkey, it is seen that the majority of investigations constitute those that are into self-care strength, quality of life and functional status in breast cancer patients as well as self-esteem, psychological reactions and sexuality related research in patients that underwent mastectomy or were diagnosed with breast cancer. In these studies, groups of samples are usually heterogeneous. All the cancer patients and patients receiving any one of radiotherapy, chemotherapy or hormone treatments are included in the sample group (11-14). The studies performed in this field in Turkey is limited. The purpose of this study, which was planned based on these assumptions, is to examine the symptoms associated with treatment and quality of life of patients diagnosed with breast cancer receiving drugs in the taxane group. Patients receiving drugs in the taxane group may experience many physiological and psychological symptoms that affect their daily activities. It is thought that the results of the study will contribute to the oncology nurses determining the patients' care priorities, assessing them in all aspects, and increasing the well-being of the patients.

Materials and Methods

Design and Samples
This descriptive study included relatives of 48 patients that received breast cancer treatment at the Chemotherapy Unit of the University Hospital in Turkey between November, 2015 and March, 2016 and those who agreed to participate were included (as a result of power analysis, it is recommended to perform the study with at least 44 samples with 95% confidence and 5% sensitivity. The theoretical power is 80%).

Sampling inclusion criteria: 18 years of age or older, at least 1 course of chemotherapy containing Taxane, no mental illness or cognitive impairment and volunteering to participate in the research.

Data Collection

Data Collection Tools
The data of the study were collected on the basis of Socio-demographic and Clinical features using the Cancer Quality of Life Questionnaire (EORTC QLQ-C30) of the European Organization for Research and Treatment of, the breast cancer-specific Quality of Life Questionnaire-Breast (EORTC QLQ-BR23) scale of the European Organization for Research and Treatment of Cancer and the Memorial Symptom Assessment Scale.

Socio-demographic and Clinical Features Form: This form contains 2 sections. In the first section, questions are about the sociodemographic characteristics of the patients and in the second section, questions are about the clinical features. This form is comprised of 23 questions including those on age, family type, marital status, working status, family history of breast cancer, treatment protocol, number of cures, chronic diseases etc.

EORTC QLQ- C30 (Version 3.0) Quality of life Scale: It was developed by Aaronson et al. (15). The Turkish validity and reliability study was performed by Güzelant et al. (16). The questionnaire consists of three subheadings and 30 questions including those on general well-being, functional scale (physical function, role function, cognitive function, mental function and social function) and symptom scale (fatigue, pain, nausea and vomiting, dyspnea, constipation, diarrhea, insomnia, loss of appetite and financial difficulty).

EORTC QLQ BR-23 Breast Cancer Module: It is a special quality of life scale for breast cancer patients. Turkish validity and reliability of the scale were determined by Demirci et al. (17). The scale consists of 23 items and there are two subscales: functional scale (body image, sexual life, sexual satisfaction and future expectation (fear of repetition) and symptom scale (side effects, breast symptoms, arm symptoms and hair loss). Cronbach's alpha reliability coefficient of the scale was reported as 0.91. All the scales were converted to the scoring system between 0-100. High scores obtained in the functional scale show a better functional status while high scores obtained in the symptom scale show a low quality of life.

Memorial Symptom Assessment Scale (MSAS): It was developed by Portenoy et al. (18) to assess the prevalence, characteristic features, and generated distress level of the common symptoms of cancer patients in the past week. The validity and reliability study of the Turkish version of MSAS was performed by Yıldırım et al. (19) in 2007. The internal consistency reliabilities of subscales of the MSAS and total MSAS were moderately high, with Cronbach alpha coefficients ranging from 0.71 to 0.84. MSAS has 32 items. 24 symptomatic scales have three sub-dimensions including the frequency, severity, and distress in the past week, and 8 symptoms have two dimensions including severity and stress levels of the patient. In the MSAS, each symptom is recorded as present or absent, and if present, it is rated using a four- or five-point rating scale for frequency, severity, and associated distress during the previous seven days, with higher scores indicating greater frequency, more severity, and higher distress. If a symptom is absent, each dimension is scored as 0 and the score for that symptom is 0. If a symptom is present, the symptom score is an average of its dimensions.

Procedures
Firstly, ethics committee approval for human studies and informed consents were obtained. On the day of data collection, one of the primary researchers of the study met with the patients who were potentially interested in participating in the study at the chemotherapy unit. Those who attended were handed out the informed consent forms and the questionnaires, and those who wished to participate in it completed both forms. It took approximately 15 to 20 minutes to fill out the forms. The questions were tested with a pilot group of ten subjects as a control before being used with the patients. Upon understanding that no corrections were necessary, the forms were applied to all the patients.

Table 1. Patients' socio-demographic and breast cancer related characteristics (n=48)

Characteristics	n	%
Age		
≤45	25	57.08
>46	23	42.92
Education		
Primary school and lower	15	31.25
Secondary school-high school	20	41.67
University	13	27.08
Material status		
Married	35	72.92
Single	13	27.08
Type of family		
Nuclear family	36	75.00
Extended family	12	25.00
Working status		
Working	15	31.25
Not Working	33	68.75
Income status		
Income lower than the set value	10	20.83
Income equivalent to the set value	30	62.5
Income higher than the set value	8	16.66
Stage of disease		
Stage II	8	16.66
Stage III	24	50.00
Stage IV	16	33.33
Chemotherapy protocol		
Docetaxel/Docetaxel+trastuzumab	11	22.92
Paclitaxel/Paclitaxel+trastuzumab	29	60.42
Paclitaxel+Carboplatin	8	16.67
Number of courses		
5 courses and less	26	54.16
6 courses and more	22	45.84
Previous treatment		
Chemotherapy	43	95.56
Radiotherapy	14	31.11
Surgical treatment	26	57.78
Family history of breast cancer		
Yes	18	37.5
No	30	62.5
Compliance with medication		
Yes	35	72.91
No	13	27.08
Dependency status for activities of daily living		
Independent	24	50,00
Semi-dependent	23	47.92
Dependent	1	2.08

Statistical Analysis

The data obtained from the study were analyzed with the SPSS 20 packet program. In the analysis of the data, number, percentage mean, standard deviation, Ki-Square, Mann Whitney U Test and Kruskal Wallis Test were used. For statistical significance, p<0.05 was considered in the tests.

Ethical Considerations

Written official permissions and approvals to undertake this study were obtained from the related institution. All the patients were informed of the purpose of the study and were explained that participation was voluntary and could withdraw from the study at any time. Also, the participants were assured that their confidentiality would be maintained, individual responses would remain confidential, they would not be disclosed or be used anywhere.

Results

The sociodemographic and clinical characteristics of the patients are shown in Table 1. The main results could be provided under 2 subheadings: Symptoms Experienced by Patients and Patients' Quality of Life Scores.

Symptoms Experienced by Patients

All the patients suffered from pain, fatigue or energy loss, feeling sleepy or drowsy, feeling sad, sensitive, "I don't look like myself" symptoms. In addition, almost all the patients experienced worry (97.9%), difficulty in focusing attention (93.8%), feeling angry (93.8%), difficulty in sleeping (93.8%).

The symptoms that patients experienced "frequently" included fatigue or lack of energy (87.5%), sensitivity (39.6%) and pain (33.3%). The symptoms that patients experienced "sometimes" were dry mouth (89.1%), nausea (87.5%), feeling angry (75.5%) (Table 2) The problems that patients experienced "severely" included the feeling "I don't look like myself" (41.7%), fatigue or lack of energy (35.4%). The symptoms that patients experienced "moderately severe" were mouth dryness (66.7%), nausea (66.7%), being sensitive (66.7%). The symptoms that patients experienced at level of "too much" included being sensitive (4.2%) and the feeling "I don't look like myself" (4.2%).

When the relationship between the symptoms of the patients and their socio-demographic and clinical characteristics was examined, the following were investigated:

Problems with sexual desire or activity, age groups and working conditions; feelings of self-irritation and levels of education. There was a statistically significant relationship between tingling in the hands or feet, hair loss status and number of treatment courses (p<0.05). The majority of the patients who were aged 45 years or younger (76.0%) and were employed (86.7%) had problems with sexual desire and activity. More than half (76.9%) of all the primary and secondary school graduates and high school graduates as well as university graduates felt nervous. The number of courses was 6 times or more and almost all (95.2%) had tingling in their hands or feet.

Patients' Quality of Life Scores

Patients had the highest mean score in cognitive function (84.37±13.05) and the lowest mean score in social function (66.32±15.18) among the functional subscales of the EORTC QLQ-C30 Scale. The mean general well-being score of the patients was 46.18±11.66. Patients had the highest

score on the symptom subscales (42.01±15.37) and the lowest score on diarrhea subscale (3.47±10.29) (Table 3).

Relationship between EORTC QLQ-C30 Scale Scores and Socio-demographic and Disease Characteristics: A statistically significant difference was found between the age groups, education level, working status and other chronic illnesses in terms of functional scale score (p <0.05). The physical function score, role function score, and cognitive function score of patients aged 46 and over were significantly lower than those of patients aged 45 years or less in terms of functional scale scores (p<0.05). The scores for physical function and cognitive function of the primary school and secondary school graduates were significantly lower than those of the university graduates. The physical function score and social function score of those who did not work were significantly lower than those of employees. The social function score of married people was significantly lower than the unmarried ones.

There was a statistically significant difference between the symptom subscale scores in terms of age groups, education levels, family history of breast cancer and other chronic diseases (p<0.05). Those who were 45 years or younger had low dyspnea and constipation scores. Those who graduated from university, those who did not have family history of breast cancer, and those who did not have other chronic diseases had a lower symptom score. A statistically significant difference was found between other chronic diseases in terms of pain score (p<0.05). The pain scores of people without other chronic illnesses were significantly lower than those with other chronic illnesses.

Patients had the highest score in the body image dimension (65.8±23.96) and the lowest score in the sexual life aspect (20.83±20.19) of the functional scale subscales of the *EORTC QLQ-BR23 Scale*. Patients had the highest score in the symptom scale subscale (51.39±19.16) and lowest score in the extent of breast symptoms subscale (15.63±10.68) (Table 4).

EORTC QLQ-BR23 Relationship Between the Scale and Socio-demographics and Disease Characteristics
There was a statistically significant relationship between age groups and education levels in terms of body appearance score, between age groups in terms of sexual life score, between education levels and mari-

Table 2. Distribution of symptoms experienced by patients in the past week according to MSAS (n=48)

Symptoms-Living Status	Experienced %	Not experienced %
Difficulty in paying attention	93.75	6.25
Pain	100.0	0.0
Lack of energy	100.0	0.0
Cough	6.25	93.75
Feeling angry	93.75	6.25
Dry mouth	81.25	18.75
Nausea	50	50
Feeling sleepy or dazed	100.0	0.0
Feeling numbness in hands and feet	77.08	22.92
Difficulty in sleeping	93.75	6.25
Feeling distention	4.17	95.83
Difficulty in urinating	4.17	95.83
Vomiting	16.67	83.33
Shortness of breath	10.42	89.58
Diarrhea	12.5	87.5
Feeling sad	100.0	0.0
Sweating	27.08	72.92
Worry	97.92	2.08
Problems with sexual desire or activity	52.08	47.92
Itching	18.75	81.25
Loss of appetite	79.17	20.83
Dizziness	14.58	75.42
Difficulty in swallowing	10.42	89.58
Mouth wounds	22.92	77.08
Being sensitive	100.0	0.0
Change in the taste of food	91.67	8.33
Weight loss	31.25	68.75
Hair loss	47.92	52.08
Constipation	39.58	60.42
Swelling on hands or feet	41.67	58.33
I am not like myself	100.0	0.0
Changes in skin	75	25

Table 3. Patients' QLQ-C30 quality of life scores (n=48)

Functional scale	Mean	SD	Minimum	Maximum
Physical function	66.67	15.13	20	93.33
Role function	67.71	16.73	33.33	100
Emotional function	68.75	12.81	33.33	91.67
Cognitive function	84.37	13.05	66.67	100
Social function	66.32	15.18	33.33	100
General well-being	46.18	11.66	33.33	66.67
Symptom scale	**Mean**	**SD**	**Minimum**	**Maximum**
Fatigue	41.46	16.32	11	66.67
Nausea-vomiting	10.07	12.27	0	33.33
Pain	42.01	15.37	16.67	66.67
Dyspnea	9.03	14.97	0	33.33
Insomnia	30.55	23.65	0	66.67
Loss of appetite	20.83	20.19	0	66.67
Constipation	13.89	16.61	0	33.33
Diarrhea	3.47	10.29	0	33.33
Financial problems	32.64	23.31	0	66.67

Table 4. Patients' QLQ-BR23 quality of life scores (n=48)

Functional scale	Mean	SD	Minimum	Maximum
Body appearance	65.8	23.96	16.67	100
Sexual life	20.83	20.19	0	66.67
Sexual satisfaction	30.55	23.65	0	66.67
Future expectation	45.83	20,20	0	100
Symptom scale	**Mean**	**SD**	**Minimum**	**Maximum**
Systemic therapy side effects	27.08	9.09	9.67	47.67
Breast symptoms	15.63	10.68	0.00	33.33
Arm symptoms	22.25	12.35	0.00	55.67
Hair loss	51.39	19.61	33.33	100.00

tal status in terms of side effects score; between education levels in terms of arm symptoms, between education levels in terms of functional scale total score (p<0.05). Those who were 45 years or younger had significantly lower body appearance scores than those who were 46 years or older. Those who graduated from secondary school, high school, and university had a significantly lower body image score than those who graduated from primary school and had lower level of education. Sexual life scores of those who were 45 years old or younger were significantly lower than those who were 46 or older. The side effect scores of university graduates (n=13) were significantly lower than those who graduated from primary school or had lower levels of education (n=15); the side effects scores of single people were significantly lower than those of married individuals. Arm symptom scores of university graduates were significantly lower than those who had graduated from primary school or had lower levels of education. The total score in the functional scale obtained by secondary school graduates, high school graduates and university graduates was significantly lower than those of primary graduates and those with lower levels of education.

Discussion and Conclusion

Paclitaxel and Docetaxel are antineoplastic drugs which are commonly used in breast cancer patients. Patients in the Taxane group diagnosed with breast cancer and treated with these drugs experience many symptoms at different frequency, severity and distress levels. In case of breast-related cancers, which is a type of cancer to which especially women assign meanings such as motherhood and sexuality, these symptoms may cause a decrease in the physical, psychological and social functions of the patients and a change in their quality of life (20, 21).

Symptoms Experienced by Patients
In the American Cancer Society 2015 guideline, fatigue, sexual dysfunction, weight loss, neuropathy, oral health problems, hair loss, change in libido and pain are among the symptoms that may be associated with chemotherapy in breast cancer treatment (22).

In a study by Yeşilbakan et al. (23), which investigated the effects of chemotherapy treatment on symptoms and quality of life of patients, it is seen that patients suffered from loss of appetite (39.8%), fatigue

(39.8%), lack of energy (38.8%) symptoms at a "mild" level. More than half of the patients (51%) had the symptom of hair loss at a "very high" level. When the psychological symptoms experienced by the patients during treatment were evaluated, 45.6% stated that they were "slightly" angry during the treatment, and 35.9% were "somewhat" nervous (23). In the study by Yildirim et al. (19), the majority of the patients evaluated their symptoms of difficulty in paying attention, pain, energy loss, self-irritability, mouth dryness, difficulty in sleeping, anxiety and loss of appetite as "moderate". In the same study, the majority of the patients reported that these symptoms were "a bit more" distressing. Results of our study are in parallel with the literature. Unlike the results of a related study, the symptoms of numbness on the hands or feet were experienced as "moderately severe" and "slightly more distressing" since the sample group is comprised of patients taking taxane-derivative medicine (19).

Cancer-related fatigue is a commonly seen symptom. Pain, anemia, sleep problems, and mood disorders are symptoms that can accompany fatigue (24). Pain, which is another symptom that patients experience most often during and after chemotherapy treatment, may be due to muscle pain, joint pain, gastrointestinal, mucositis, cardiomyopathy, pancreatitis, extravasation and peripheral neuropathy (25). In our study, 100% of patients reported fatigue or lack of energy and 100% of them had pain.

Psychological and social problems such as depression, anxiety, feeling sad, adjustment disorder, anger, hopelessness, deterioration in body image and social isolation can accompany physical problems in women diagnosed with breast cancer and receiving treatment. The frequency, severity and level of distress of these problems are affected by variables such as the patient's personality, attitude towards the disease, support systems and treatment protocol, and thus the patient's adjustment to treatment becomes difficult. Along with ineffective treatment, the meaning that patients ascribe to the disease, fear of recurrence of the disease, future anxiety and treatment-related symptoms increase psychological problems (26). In a study conducted by Özkorumak et al. (27), psychological stress in breast cancer patients was found to be similar in severity during treatment and remission. In our study, the patients were in the middle age group and psychological symptoms were the primary symptoms that patients frequently experienced at severe, distressing levels.

When the relationship between the symptoms of patients and socio-demographics and disease characteristics was examined, it was seen that 76% of patients aged 45 years or younger had problems with sexual desire and activity. The entire sample group is comprised of female patients and chemotherapy treatment can affect ovaries and hormonal balance. However, due to the changes in body image and treatment-related changes, and as a natural consequence of being young, patients may experience sexual dysfunction.

Patients in the high school and lower level of education groups are thought to have less information about treatment-related symptoms, low healthcare screening behavior, inadequate access to the social support system, and the incidence of psychological symptoms of ineffective coping. Similar studies also showed that educated people experience fewer symptoms (28, 29).

In patients receiving docetaxel and paclitaxel, peripheral neuropathy is a common, painful, and sometimes nonreversible side effect. For this reason, patients are not able to perform daily activities and their qual-

ity of life is decreased. In addition, dose may be reduced, treatment may be delayed or may not be completed due to peripheral neuropathy (7). In a study by Reyes et al. (30) carried out with breast cancer patients who were administered paclitaxel (n=240), it was asserted that peripheral neuropathy developed in 64% of patients and 27% were treated for neuropathic pain. In our study, symptoms of numbness in the hands and feet were reported as being frequent (32.4%), moderately severe (48.6%), and slightly more distressing (18.9%). Moreover, 95.2% of patients who received chemotherapy 6 times or more experienced symptoms of numbness in hands and feet.

Patients' Quality of Life Scores
In the study by Açıl (2013), when the total average score of EORTC QLQ scale of patients were examined, it was seen that the role function was 78.83±24.94, social function was 72.83±31.31, physical function was 69.87±24.63, cognitive function was 67.67±27.20 and emotional function was 65.00±27.78. When the symptom scores of the patients were examined, it was observed that the lowest score was diarrhea (14.67±22.38) while the highest scores were obtained for insomnia (40.00±36.08), fatigue (39.89±28.56) and pain (36.50±32.28). In the same study, the general well-being score was 57.25±25.89 (31). The results of the study are similar with those of our study. As a different finding, the general well-being score was found to be at 46.18±11.66. This result can be interpreted as follows: since the study was administered during the course of a CT treatment and patients were consequentially in a period where they had to cope with acute symptoms, the general well-being point scores were lower.

In our study, a significant relationship between age and functional scale magnitudes was found. Parallel to the increase in age, there is a decrease in the functional status of the patients. It is accepted as a natural process that physical, cognitive and social functions decrease with the advancing age. Besides, patients' treatments, adaptation processes, social support they receive can change their functional status. Unlike our study, Kızılcı (32) found that age did not affect the quality of life of the patients.

In the studies of Kızılcı (32) and Gürel (33), it was determined that there was a relationship between the educational status of the patients and their quality of life. Patients' quality of life scores also increase in parallel with the increase in the level of education. In our study, when EORTC QLQ C30 quality of life scale was compared with the educational status of patients, university graduates were found to have better functional scale scores and lower symptom scale magnitudes. In a study conducted by Sarışen (34) on quality of life, it was found that physical functioning scores of primary-secondary school graduates were significantly lower. When QLQ BR23 quality of life scores were examined, university graduates were found to have lower body appearance, arm symptoms, and side effects scores. These results, which are similar to the literature, suggest that the increase in the level of education contributes to the patient's access to information, the level of awareness and the development of effective coping methods.

In a study in which Gürel (33) investigated the quality of life in hematology and oncology patients who underwent chemotherapy, there was no significant relationship between the quality of life and working status of the patients. Unlike this study, when the results of Sert's (35) study is examined, it was determined that as the educational level of the patients increased, the quality of life scores also increased in working women. In our study, those not working were found to have

significantly lower scores of physical functioning and social functioning than working women. This finding can be interpreted as follows: in the treatment process, the patients who work have fewer financial concerns than those who do not work, their attention is focused on the other side and they interact with other individuals and thus they use coping methods effectively and their state of well-being is increased.

In our study, the social function score of married people was found to be significantly lower than the single patients (p<0.05). Compared with the related literature, most of the studies emphasize that marital status has positive effects on the perceived level of social support, shared emotional burden, early detection of cancer, treatment and survival. Additionally, support for medical assistance by partners in the management of worry-related symptoms associated with cancer is reported to result in less distress, anxiety and depression (36.37). Hasfield et al. (37) also reported that family and friends' support helped to create a strategy to cope with the intensity of side effects. Similar to our study, Aizer et al. (36) investigated the relationship between marital status and survival in cancer and found that unmarried cancer patients were at high risk for cancer-related metastases and deaths compared to married individuals.

In the sample group, the physical function score and the social function score of unemployed patients were found to be significantly lower than those who were employed and the score of the financial problems was found to be high. It is believed that social interaction within the work life, fulfillment of roles and active physical and/or mental functions outside a sedentary lifestyle contribute positively to the management of the treatment period. It is assumed that the working patients will have less financial problems with expenses such as transportation, examination and treatment.

In our study, the symptom score of those who had no family history of breast cancer and other chronic illnesses was determined to be low. Even though the patients with a family history of diagnosed breast cancer were thought to have effective symptom control and management because they had experienced similar processes, the symptom scores of these patients were high. It is thought that this is due to psychological distress of the patient caused by the presence of more than one individuals diagnosed with breast cancer and/or the loss. The absence of other chronic illnesses is also important for the development of symptoms that may be experienced as a secondary cause and for the symptoms associated with CT to have no effect on frequency, severity and distress.

In the study by Açıl (31), which was performed using the EORTC QLQ BR23 quality of life scale, the body image size was 69.75±32.90, the predicted size was 55.67±34.83, the sexual life dimension was 14.33±19.82, and the sexual satisfaction dimension was 28.33±29.77. When the patients' scores from the symptom subscales were examined, the CT side effects were 34.99±24.42, breast symptoms 27.92±22.86, arm symptoms 28.11±24.39 and hair loss 71.90±37.34. In our study, the size of the future expectant size was 45.83±20.20, the dimension of sexual life was 20.83±20.19, the side effects of CT were 27.08±9.09, and hair loss was 51.39±19.61.

Findings related to the QLQ-BR23 quality of life scale showed that body image and sexual life scores decreased in those aged 45 years and younger. This is thought to be due to the anxiety created by the complex and chronic nature of cancer and the high expectations from future that young people have. A study conducted in Turkey has shown

that the sexual satisfaction of patients over age 41 is more adversely affected than the group below the age of 41 (38). According to the scores of side effects of those who graduated from university, the score of arm symptom was found to be significantly lower than those of secondary school and high school graduates. This result suggests that patients with high educational status are more effective in achieving wisdom and medical help in relation to symptom management.

In our study, the body image score of secondary school-high school graduates and university graduates were significantly lower than those of elementary school graduates and below. Here, the implications of the importance that patients ascribe to their breast, their socio-cultural characteristics, their work and circle of friends and other people's thoughts about them can affect the perception of the body image. Problems with body image in breast cancer patients are seen at a rate of 40% -67% (39). Variations such as hair loss, lymphedema, weight loss and sexual dysfunction affect the body image negatively. This rate is especially high in younger patients (40, 41).

The body image, sexual life, sexual satisfaction, future expectancy subscale scores decrease and chemotherapy side effect subscale score increases as the total score of MSAS increases. Body image, sexual life and sexual satisfaction are closely-related items. The change in the patient's body image and self-esteem can directly affect the sexual life. Especially, loss of breast, which is an organ to which sexuality is ascribed, is in question. Frequently, high severity and distressing life style symptoms of MSAS in patients affects these variables negatively.

There are some limitations to this study. The first one is that the number of samples is small, and the second one is that the study was performed in one center. It is thought that this work will contribute to the future work. Larger samples and multicenter repetition are important for generalizability.

As a result, it was determined that patients diagnosed with breast cancer taking taxane group of medicines experienced symptoms of pain, fatigue or energy loss, mouth dryness, numbness in hands and feet, difficulty in sleeping, feeling sick, feeling angry, and feeling "I am not like myself" frequently, severely and at a distressing level. The quality of life subscale scores of the patients were found to be affected by independent variables such as age, educational status, working status and marital status. The mean sexual satisfaction and sexual pleasure scores of the patients were found to be low. In the light of these results, it is suggested that interdisciplinary team members should obtain detailed health stories from the patients, develop a patient-specific education program in terms of the symptoms to develop, and monitor the patient at certain periods in terms of the frequency, severity and distress of the symptoms.

By identifying the symptoms and quality of life of the patients, an oncology nurse will be able to plan effective nursing interventions in line with the care needs of the patient. Thus, providing symptom control and management will contribute to increasing the quality of care of the patient.

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