



Çankırı Karatekin University
Graduate School of Health Sciences



Master of Science Thesis

**EVALUATION OF THE QUALITY OF LIFE OF MARRIED
PATIENTS WHO UNDERWENT SURGERY FOR BREAST
CANCER IN HOSPITALS IN BAGHDAD, IRAQ**

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BY

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**The Institute of Health Sciences
The Department of Nursing**

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SUPERVISOR

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ACCEPTANCE AND APPROVAL

Ahmed Abdulateef Diwan AL-SAEEDI the graduate student of The Institute of Health Sciences with the student number of 208205280 has successfully presented his thesis entitled “Evaluation of the Quality of Life of Married Patients who Underwent Surgery for Breast Cancer in Hospitals in Baghdad, Iraq” before the jury whose signatures are below. He fulfilled all of the requirements determined by the relevant regulations for the degree of Master of Science:

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ETHICS STATEMENT

The thesis entitled “Evaluation of the Quality of Life of Married Patients who Underwent Surgery for Breast Cancer in Hospitals in Baghdad, Iraq” which was prepared and presented as a thesis, was written by myself and in accordance with the scientific, academic rules and ethical conduct. The idea/hypothesis of my thesis solely belongs to my supervisor and to me. The research pertaining to the thesis was conducted by myself. Therefore, all of the used sentences and interpretations within the work belong to me.

I declare the aforementioned issues to be correct.

Signature

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ABSTRACT

EVALUATION OF THE QUALITY OF LIFE OF MARRIED PATIENTS WHO UNDERWENT SURGERY FOR BREAST CANCER IN HOSPITALS IN BAGHDAD, IRAQ

Ahmed Abdulateef Diwan AL-SAEEDI

Master of Science in Nursing

Advisor: Asst. Prof. Dr. Banu CİHAN ERDOĞAN

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Cancer patients are expected to experience some emotional difficulties, such as stress, anxiety, and depression. In addition, there are some physiological side-effects, such as hair loss, pain, tiredness, nausea, and vomiting; some social side-effects, such as social isolation, loss of role, and function; and, ultimately, a decline in their quality of life. This study was conducted to evaluate the quality of life of married women who underwent surgery for breast cancer. A descriptive cross-sectional study design was adopted to conduct this research. The research was conducted in the Oncology Teaching Hospital and Al-Amal National Hospital for Oncology in the hospitals of the city of Baghdad between March–June of 2022. The sample size of the study is 170 patients. The Patient Information Form and European Organization for Research and Treatment of Cancer QoL Cancer-Specific 3.0 were used for data collection. The data obtained in this study were analyzed with the SPSS 22 package program. Mann-Whitney U test, Kruskal Wallis H Test and Spearman correlation analysis were used in the evaluation of the data. There is a significant association between quality of life of patients' undergoing surgical mastectomy in terms of physical functioning ($p=0.003$), fatigue ($p=0,029$), nausea ($p=0,036$), total symptom scales ($p=0,022$) scores and age groups. There is a significant association between quality of life of patients' undergoing surgical mastectomy in terms of financial functioning score and employment status ($p=0.001$). Additionally, there is a significant association between quality of life of patients in terms of physical functioning ($p=0.003$), fatigue ($p=0,029$), nausea ($p=0,036$), total symptom scales ($p=0,022$) scores and age groups, financial functioning score and employment

status ($p=0.001$), income ($p=0.0001$). Furthermore, a similar association between quality of life of patients in terms of functional score ($p=0.055$), financial function ($p=0.0001$) and surgical treatment. There is a significant association between quality of life of patients in terms of physical function score and time elapsing for surgery ($p=0.045$). The same link exists between quality of life of patients in terms of Global health status/QOL ($p=0.003$), physical functioning ($p=0.001$), role function ($p=0.01$), social function ($p=0.003$), total functional ($p=0.0001$), fatigue ($p=0.0001$), pain ($p=0.002$), insomnia ($p=0.024$) total symptom scales ($p=0.003$) scores and radiotherapy. Womens' quality of life needs more attention by the public health and community health sectors. In addition all the patient must have access to the psychosocial support .

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Keywords: Breast conserving surgery, Breast neoplasms, Mastectomy, Quality of life,

ÖZET

IRAK'IN BAŞKENTİ BAĞDAT'TAKİ HASTANELERDE MEME KANSERİ NEDENİYLE AMELİYAT OLAN EVLİ HASTALARIN YAŞAM KALİTESİNİN DEĞERLENDİRİLMESİ

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Kanser hastaları stres, kaygı ve depresyon gibi bazı duygusal ve saç dökülmesi, ağrı, yorgunluk, mide bulantısı ve kusma gibi bazı fizyolojik; sosyal izolasyon, rol ve işlev kaybı gibi bazı sosyal yan etkiler yaşam kalitelerinde düşmeye neden olmaktadır. Bu çalışma, meme kanseri nedeniyle ameliyat olmuş kadınların yaşam kalitelerini değerlendirmek amacıyla yapılmıştır. Bu araştırmayı yürütmek için tanımlayıcı kesitsel bir çalışma tasarımı benimsenmiştir. Çalışma, Mart-Haziran 2022 tarihleri arasında Bağdat ilindeki hastanelerde Onkoloji Eğitim Hastanesi ve Al-Amal Ulusal Onkoloji Hastanesi'nde yapılmıştır. Çalışmanın örneklem büyüklüğü 170'dir. Veri toplamada, Hasta Bilgi Formu ve Avrupa Kanser Araştırma ve Tedavi Örgütü QoL Kansere Özel 3.0 Anket Ölçeği kullanılmıştır. Bu çalışmada elde edilen veriler SPSS 22 paket programı ile analiz edilmiştir. Verilerin değerlendirilmesinde, Mann-Whitney U testi, Kruskal Wallis H Testi ve Spearman korelasyon analizi kullanılmıştır. Cerrahi mastektomi uygulanan hastaların yaşam kaliteleri ile yaş grupları arasında fiziksel fonksiyon ($p=0,003$), yorgunluk ($p=0,029$), bulantı ($p=0,036$), toplam semptom skalaları ($p=0,022$) açısından anlamlı bir ilişki vardır. Hastaların yaşam kaliteleri ile çalışma durumu arasında finansal işlevsellik puanı açısından anlamlı bir ilişki vardır ($p=0,001$). Hastaların yaşam kaliteleri ile mali durumları arasında fiziksel işlevsellik ($p=0,003$), yorgunluk ($p=0,029$), bulantı ($p=0,036$), toplam semptom skalaları ($p=0,022$) puanları açısından anlamlı bir ilişki vardır. İşlevsellik puanı ve çalışma durumu ($p=0,001$), gelir ($p=0,0001$). Hastaların yaşam kaliteleri ile cerrahi tedavileri arasında fonksiyonel skor ($p=0,055$) ve finansal fonksiyon ($p=0,0001$) açısından anlamlı bir ilişki vardır.

Hastaların fiziksel fonksiyon skoru açısından yaşam kaliteleri ile ameliyat için geçen süre arasında anlamlı bir ilişki vardır ($p=0,045$). Hastaların yaşam kaliteleri ile radyoterapi alma durumları arasında, genel sağlık durumu ($p=0,003$), fiziksel işlevsellik ($p=0,001$), rol işlevi ($p=0,01$), sosyal işlev ($p=0,003$), toplam işlevsellik ($p=0,0001$), yorgunluk ($p=0,0001$), ağrı ($p=0,002$), uykusuzluk ($p=0,024$) toplam semptom ölçeği ($p=0,003$) puanları açısından anlamlı bir ilişki vardır. Kadınların yaşam kalitesi, halk sağlığı ve toplum sağlığı sektörleri tarafından daha fazla dikkat edilmesi ve psikososyal desteğin tüm hastaların ulaşabileceği bir yerde olması gerekir.

2023, 89 sayfa

Anahtar Kelimeler: Mastektomi, Meme koruyucu cerrahi, Meme tümörleri, Yaşam kalitesi

GENİŞLETİLMİŞ ÖZET

IRAK'IN BAŞKENTİ BAĞDAT'TAKİ HASTANELERDE MEME KANSERİ NEDENİYLE AMELİYAT OLAN EVLİ HASTALARIN YAŞAM KALİTESİNİN DEĞERLENDİRİLMESİ

Ahmed Abduleef Diwan AL-SAEEDI
Dr. Öğr. Üyesi Banu CİHAN ERDOĞAN

Haziran 2023

Giriş: Kanser hastaları stres, kaygı ve depresyon gibi bazı duygusal ve saç dökülmesi, ağrı, yorgunluk, mide bulantısı ve kusma gibi bazı fizyolojik; sosyal izolasyon, rol ve işlev kaybı gibi bazı sosyal yan etkiler yaşam kalitelerinde düşmeye neden olmaktadır.

Yöntem: Bu çalışma, meme kanseri nedeniyle ameliyat olmuş evli kadınların yaşam kalitelerini değerlendirmek amacıyla yapılmıştır. Bu araştırmayı yürütmek için tanımlayıcı kesitsel bir çalışma tasarımı benimsenmiştir. Çalışma, Mart-Haziran 2022 tarihleri arasında Bağdat ilindeki hastanelerde Onkoloji Eğitim Hastanesi ve Al-Amal Ulusal Onkoloji Hastanesi'nde yapılmıştır. Çalışmanın örneklem büyüklüğü 170'dir. Veri toplamada, Hasta Bilgi Formu ve Avrupa Kanser Araştırma ve Tedavi Örgütü QoL Kansere Özel 3.0 kullanılmıştır. Hasta Bilgi Formu, ameliyat geçiren evli meme kanseri hastalarının demografik özelliklerini belirlemek amacıyla araştırmacı tarafından geliştirilmiştir ve 12 soru (yaş, çalışma durumu, gelir düzeyi, eğitim durumu, ailede meme kanseri olma durumu, alınan cerrahi tedavi türü, ameliyattan sonra geçen süre, hedefe yönelik tedavi, kemoterapi, hormonoterapi ve radyoterapi alma durumunu) içermektedir. Avrupa Kanser Araştırma ve Tedavi Örgütü QoL Kansere Özel 3.0, dokuz çok maddeli ölçek içerir: beş fonksiyonel ölçek (fiziksel, rol, bilişsel, duygusal ve sosyal fonksiyonlar); üç semptom ölçeği (yorgunluk, ağrı ve bulantı/kusma); Altı tek maddelik ölçek (nefes darlığı, uykusuzluk, iştahsızlık, kabızlık, ishal ve maddi zorluklar) yer almaktadır. Fiziksel performans ölçeğini oluşturan ilk beş bileşen için dört puanlı ölçekler içerir. Ölçek, fiziksel, psikolojik ve sosyal faktörleri içeren değerlendirme için derecelendirilmiş 30 maddeden oluşur, ölçekler yüksek düzeyde sorun gösterir. Tüm ölçekler ve tek tek maddeler için puanlanır ve 0 ila 100 arasında

değişmektedir. Bu çalışmada elde edilen veriler SPSS 22 paket programı ile analiz edilmiştir. Verilerin normal dağılmaması nedeniyle ikili karşılaştırmalarda Mann-Whitney U testi, üç veya daha fazla grup arasındaki karşılaştırmalarda ise Kruskal Wallis H Testi kullanılmıştır. Değişkenler arasındaki ilişkide 0.05 anlamlılık düzeyinde Spearman korelasyon analizi kullanılmıştır. Araştırmanın yürütülebilmesi için araştırmanın yapılacağı kurumlardan kurum izni ve etik onay alınmıştır.

Bulgular: Çalışma bulgularına göre, meme kanseri görülme sıklığının en yüksek olduğu yaş grubu 55 yaş ve üzeri (%31,8), kadınların %44,7'si ev hanımı, %52,9'u eşit gelire sahip, %36,5'i lise mezunudur. Çalışma sonucunda %74,1'inin ailesinde meme kanseri öyküsü olmadığı, %69,4'ünün mastektomi olduğu, %40,6'sının ameliyattan sonra 1-6 ay geçtiği, %97,6'sının kemoterapi aldığı, %54,1'inin hormon tedavisi almadığı, %55,3'ünün radyoterapi almadığı, %54,1'inin hedef tedavisi almadığı ve %73,5'inin psikolojik tanı almadığı belirlenmiştir. Fonksiyonel ölçeklere bakıldığında; meme kanserinin hastaların fonksiyonel yaşam kalitesi üzerinde olumsuz etkisi olduğu görülmüştür. Hastaların fiziksel fonksiyon ($p=0,003$), yorgunluk ($p=0,029$), bulantı ($p=0,036$), toplam semptom ölçekleri ($p=0,022$) skorları ile yaş grupları arasında yaşam kalitesi açısından anlamlı bir ilişki vardır. Hastaların yaşam kalitesi ile finansal işlevsellik skoru ve çalışma durumu arasında anlamlı bir ilişki vardır ($p=0,001$). Hastaların fiziksel fonksiyon ($p=0,003$), yorgunluk ($p=0,029$), bulantı ($p=0,036$), toplam semptom skalası ($p=0,022$) skorları ile yaş grupları arasında, finansal fonksiyon skoru ile çalışma durumu ($p=0,001$) ve gelir düzeyi ($p=0,0001$) arasında yaşam kalitesi açısından anlamlı bir ilişki vardır. Hastaların, fonksiyonel skor ($p=0,055$) ve finansal fonksiyon ($p=0,0001$) açısından yaşam kalitesi ile cerrahi tedavi arasında anlamlı bir ilişki vardır. Fiziksel fonksiyon skoru açısından hastaların yaşam kalitesi ile ameliyat için geçen süre arasında anlamlı bir ilişki vardır ($p=0,045$). Global sağlık durumu/QOL ($p=0,003$), fiziksel fonksiyon ($p=0,001$), rol fonksiyonu ($p=0,01$), sosyal fonksiyon ($p=0,003$), toplam fonksiyonel ($p=0,0001$), yorgunluk ($p=0,0001$), ağrı ($p=0,002$), uykusuzluk ($p=0,024$) toplam semptom ölçekleri ($p=0,003$) skorları açısından hastaların yaşam kalitesi ile radyoterapi arasında anlamlı bir ilişki vardır. Hastaların ölçek puanları açısından yaşam kalitesi ile eğitim durumu, ailede meme kanseri öyküsü, hedefe yönelik tedavi alma durumu, psikolojik tanı alma durumları, hormon tedavisi alma durumları

arasında anlamlı bir ilişki yoktur ($p>0.05$). "Fonksiyonel Ölçekler Toplamı" puan ortalaması 53.44'tür. "Toplam Semptom Ölçekleri" puan ortalaması 52.05'tir. "Global sağlık durumu/QOL" puan ortalaması 36.57'dir. Bu bulgular incelendiğinde, "40-44" yaş grubundakilerin "Toplam Semptom Ölçekleri" puanının diğer yaş grubundakilere göre anlamlı derecede düşük olduğu görülmektedir. Çalışmayanların "Finansal Fonksiyon" puanının ev hanımı ve çalışanlara göre anlamlı derecede düşük olduğu görülmektedir. Geliri giderinden fazla olanların "Finansal Fonksiyon" puanının, geliri giderinden az ve geliri giderine eşit olanlara göre anlamlı derecede düşük olduğu görülmektedir. Geliri giderine eşit olanların "Finansal Fonksiyon" puanının, geliri giderinden az olanlara göre anlamlı derecede düşük olduğu görülmektedir. Meme koruyucu cerrahi geçirenlerin "Sosyal İşlevsellik" puanının "Mastektomi" geçirenlere göre anlamlı derecede yüksek olduğu görülmektedir. "Finansal İşlev" puanının, "Mastektomi" olanlarda, "Meme koruyucu cerrahi" olanlara göre anlamlı derecede yüksek olduğu görülmektedir. Ameliyat sonrası geçen süreler bakımıldığında "13 ay ve üzeri" olanların "Fiziksel İşlevsellik" puanı, diğer gruplara göre anlamlı derecede düşüktür. Radyoterapi alan hastaların "Global sağlık durumu/QOL" skoru almayanlara göre anlamlı derecede düşük bulunmuştur. Radyoterapi almayan hastaların "Rol İşlevselliği", "Sosyal İşlevsellik" skoru alanlara göre anlamlı derecede yüksek bulunmuştur. Radyoterapi alan hastaların "Toplam Fonksiyonel Ölçekler" puanının almayanlara göre anlamlı derecede düşük olduğu görülmüştür. Radyoterapi alan hastaların "Yorgunluk", "Ağrı", "Uykusuzluk" ve "Toplam Semptom Skalası" skoru almayanlara göre anlamlı derecede yüksek bulunmuştur.

Sonuç: Kadınların yaşam kalitesinin halk sağlığı ve toplum sağlığı sektörleri tarafından daha fazla dikkate alınması ve psikososyal desteğin tüm hastaların erişimine açık olması gerekmektedir. Hastalara taburculuk sonrası oluşabilecek komplikasyonlar ve bu komplikasyonların hangilerinin gelişmesi durumunda hastaneye başvurmaları gerektiği konusunda gerekli bilgilendirmenin yapılması, operasyon sonrası taburculuk planlanırken hastaların kontrol zamanları konusunda bilgilendirilmesi ve çalışmanın daha geniş bir örneklem grubunda tekrarlanması önerilmektedir.

Anahtar Kelimeler: Mastektomi, Meme koruyucu cerrahi, Meme neoplazmları, Yaşam kalitesi,

PREFACE AND ACKNOWLEDGEMENTS

First, I thank God Almighty, who enabled me to complete this project. Then I would like to thank myself for enduring the pressure, difficulties, and responsibility I was going through during the study phase. The result was positive and sound, and I am proud of myself.

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Name : Ahmed Abdulateef Diwan AL-SAEEDI

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INDEX OF ABBREVIATIONS AND SYMBOLS

WHO	World Health Organization
BC	Breast Cancer
QoL	Quality of Life
HRQOL	Health-related quality of life
APA	American Psychological Association
IARC	International Agency for Research on Cancer
IBR	Immediate Breast Reconstruction
BCS	Breast-conserving procedure
EORTC	European Organisation for Research and Treatment of Cancer
QLQ	Quality of life questionnaire



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1. INTRODUCTION

Breast cancer (BC) is still frowned upon and avoided as much as possible in most Middle Eastern nations, resulting in widespread feelings of shame and a culture of secrecy. Many civilizations in the Middle East refer to cancer as "that disease," and many Middle Eastern women are terrified of having conversations about it. The idea that breast cancer is incurable and that it can be lethal are other causes of concern. Therefore, receiving a diagnosis of breast cancer can be a traumatic experience, and it can expose women in the Middle East to a significant amount of mental anguish, which may harm the quality of life they lead (Haidari et al., 2020).

A person's assessment of their goals, aspirations, interests, and ideas, as well as their level of contentment and pleasure concerning their culture and values, constitutes their quality of life (Üstündag and Zencirci 2015). Quality of life is the result of a patient's physical (movement, physical activities, and the ability to succeed in work and family responsibilities), social (social activities, being beneficial, body image, anxiety, and depression), and psychological (life satisfaction, social support need, and role function) factors that contribute to well-being.

The risk of dying from cancer is currently second to dying from heart disease. Cancer patients can expect to experience emotional difficulties, such as stress, anxiety, and depression. There are some physiological side-effects, such as hair loss, pain, tiredness, nausea, and vomiting, and some social side-effects, such as social isolation, loss of role and function, and, ultimately, a decline in their quality of life (Khazaei et al., 2019).

Patients experience worry due to the harsh nature of oncology treatment, which also leaves them uncertain about treatment outcomes and the potential for adverse consequences. Fear of death and infirmity, in addition to the dissolution of the family, is a common theme among women. In addition, they are frequently accompanied by feelings of rage, hostility, depression, and a loss of one's sense of self-worth. After undergoing surgical treatment for the high levels of trauma and mental anguish caused by the failure of all or part of one's breasts, a "half-body/body

complex" and a loss of self-esteem might develop, particularly concerning one's ability to interact socially (Konieczny et al., 2020).

The literature references the efficacy of quality-of-life assessments in daily clinical practice (Akel et al., 2017; Ahrafizadeh et al., 2017). It was found in a systematic review published in 2011 that data on quality of life impacted decision-making in 30.1% of medical interventions and 63.2% of nonbiomedical treatments. As a result, the treatment plans can be adjusted to accommodate the patient's quality of life, or they can even depend on it (Lemieux et al. 2011).

Another study in America in 2011 found that almost 50% of cancer patients suffer from psychiatric disorders. Also, anxiety and depression are generally considered to be the most essential psychopathological comorbidities. Over one-third of breast cancer patients may experience psychopathological conditions (Knobf 2011).

Anxiety and depression are widely considered the major psychopathological comorbidities, and research indicates that approximately half of cancer patients suffer from some form of psychiatric condition. Breast cancer patients have a greater than one-third chance of experiencing psychopathological disorders. The risk of developing psychological morbidity is increased by the presence of many backgrounds and concurrent circumstances, impacting psychic function and the quality of life. Several studies have found connections between anxiety and particular sociodemographic and psychological variables, such as age at the time of diagnosis, civil status, level of education, history of comorbid conditions, or history of prior treatment for anxiety and/or depression (Elobaid et al., 2016; Lang, David, and Giese-Davis 2015)

Therefore, there would be substantial consequences for social welfare and public health if efforts were made to improve the quality of life of breast cancer survivors in other parts of the world. Quality of life is a complex and multifaceted measurement that considers the influence of the diagnosis, treatment, and progression of the disease on the patient's day-to-day living and rehabilitation (Yan et al., 2016).

In addition to curing cancer and extending the patient's life expectancy, the goals of cancer treatment are to reduce the severity of the patient's symptoms and improve their quality of life. In other words, patients' ability to adapt to the treatment and their desire for it increases when their quality of life improves. Patients with a higher quality of life are more likely to finish therapy with the fewest adverse effects, better manage their symptoms, and triumph over their conditions (Leung et al., 2014).

It is essential to determine the extent to which a cancer diagnosis and the therapy it receives affect a patient's long-term health in light of the rising survival rates following breast cancer treatment. Understanding the survival experience through patient-reported outcomes is becoming an increasingly popular research topic. This is in addition to cancer-related outcomes such as recurrence, mortality, and toxicity as measured by clinicians. Quality of life, an important patient-reported outcome measure, has been shown to have a consistent association with mortality risk and is increasingly regarded as an important endpoint in cancer clinical trials. In these trials, the quality of life is used to inform patient-centered care, clinical decision-making, and decisions regarding health policy or reimbursement (Park et al., 2021; Bodai and Tusso, 2015).

Changes in a breast cancer patient's quality of life may be the result of recent advances in the diagnosis and treatment of the disease, pathological distinctions between breast cancer and other chronic diseases, shifts in self-confidence, the emergence of negative emotions, the encountering of commonplace challenges at work and in interpersonal relationships, and the maturation of anxiety. Other factors that may play a role in these changes include pathological distinctions between breast cancer and other chronic diseases, shifts in self-confidence, and the emergence of negative emotions. Steps must be taken to determine and evaluate the quality of life experienced by breast cancer patients as a consequence of the rise in the life expectancy and long-term survival of breast cancer patients (Aslan and Aktürk 2020). In addition to the necessity of improving their self-perceived levels of both physical and mental health, it is a consequence of the rise in the life expectancy and long-term survival of breast cancer patients (Shafaei et al., 2018).

A breast cancer diagnosis will almost always profoundly impact a patient's life, regardless of the numbers, percentages, and statistics involved. In addition, it has been demonstrated that a mastectomy and the following treatment have a major influence on a woman's functioning, mental health, and well-being. Furthermore, it has been demonstrated that these factors disturb and disrupt the patient's quality of life. As a result of this, the removal of the breast as a kind of treatment in modern times has not only the elimination of cancer as its primary goal but also the extension of life and an increase in the overall quality of that life (Almutairi et al., 2016).

The patient's quality of life is an essential outcome in breast cancer that affects the prognosis of the disease and can be used to manage the patient's condition and treatment, make medical decisions, control their symptoms, and plan for supportive care interventions. In addition, quality of life can be used to predict the patient's likelihood of survival after breast cancer treatment. In addition, one's quality of life can be utilized as a measurement tool to determine how successfully supportive care measures work. According to the World Health Organization (WHO), an individual's perception of her position within the cultural and value system in which she lives is one of the most essential factors in determining her quality of life. According to the WHO, an individual's ideals, expectations, standards, and worries are all related to an individual's quality of life. It is common knowledge that the treatment of diseases will result in an improvement in the patient's quality of life. This quality of life improvement will be a direct reflection of the care that the patient has received (Papadopoulou et al., 2017).

Quality of life refers to a multifaceted concept encompassing multiple facets of functioning, such as psychological, physiological, sexual, and social functioning. Physical functioning concerns an individual's self-evaluation of her physical health and how well it is being maintained (for example, pain, fatigue, and incontinence). The mental functioning domain is the emotional functioning domain, focusing on mood's positive and negative indications as its primary concern. In social functioning, we look at how the disease affects people's ability to fulfill their roles and how much social support they get (Hashemi et al., 2019).

The current model for treatment in the medical field is known as the holistic approach. This model considers not only the treatment of the body but also the treatment of the psyche, and the goal of therapy is to improve both the length of life and the quality of life. An investigation of a person's quality of life can be used to evaluate their mental health, emotional state, and ability to adapt to new health problems. In light of worrying statistics and a considerable rise in the number of women diagnosed with breast cancer, it is becoming increasingly vital to know about the factors that influence the quality of life of women diagnosed with this malignancy (Tomich and Helgeson 2004). Their in-depth expertise and analysis can be used to devise strategies to provide patients with the highest level of comfort possible while ill. The outcomes of these tests may also be utilized in selecting appropriate treatment and rehabilitation strategies for patients. Incorporating quality-of-life evaluation into all aspects of medical care has been shown to benefit the relationship between the patient and the physician and the efficiency of the treatment. The findings of this research are incredibly significant because modern oncology is focused on increasing the likelihood of a cure or long-term survival while also considering a high quality of life for patients (Ahmed et al., 2017).

Because so few studies consider the connection between a patient's quality of life and the socio-demographic aspects that influence them, the treatment process has very little room for individualization. At the moment, evaluating a patient's quality of life is considered one of the endpoints of clinical trials. Research of this kind should be carried out on an ongoing basis because of the consistent advances made in medical technology and the regularly shifting conceptualizations of the psychological processes that influence one's quality of life (Ahrafizadeh et al., 2017).

According to the findings of many recent studies, factors such as a person's age when they were diagnosed with cancer, their level of education, income, marital status, the amount of time that has passed since their cancer diagnosis, mastectomy, and chemotherapy are all associated with the quality of life measure of breast cancer survivors. In recent years, it has come to be recognized that the availability of social support is a key determinant in the quality of life of cancer survivors regardless of

their type of cancer. Most of these investigations were carried out in western nations (Akel et al., 2017).

1.1 Importance of the study

Studies on the quality of life of cancer patients in Iraq are neglected, especially compared to the research conducted in Western nations. Very few studies have been published that cover the quality of life among breast cancer patients in the Gulf region. Since this is one of the early studies that will be conducted to evaluate the quality of life of breast cancer patients, it is safe to say that the current study will be among the first of its kind (Daher et al. 2017).

Even while mastectomy is a crucial part of the treatment for breast cancer in many patients, it frequently results in severe morbidity on multiple fronts, including the physical, the psychological, and the sexual. The decision to have breast reconstruction following a mastectomy is an important one that contributes to patients' overall treatment and survivorship experiences. It is commonly known that breast reconstruction following mastectomy can improve a patient's overall quality of life, as well as their body image and their level of anxiety around the possibility of cancer returning (Jagsi, 2016).

The removal of the nipple and areola complex following a mastectomy, on the other hand, can have its own set of emotionally and socially devastating effects. In recent years, performing a total skin- and nipple-sparing mastectomy has grown in popularity as a treatment option for early breast cancer and a preventative measure in high-risk individuals. Previous research has demonstrated that nipple-sparing mastectomy has an adequate level of oncologic efficacy, as well as an acceptable rate of surgical complications and that it produces enhanced aesthetic benefits (Bailey et al., 2017).

Currently, the most common types of surgical treatment for breast cancer are the mastectomy and the breast-conserving procedure (BCS). In patients with lower-stage malignancies, BCS was developed as an alternative to mastectomy since it is less

invasive than mastectomy and has the potential to produce superior cosmetic results while maintaining the same level of health advantages as mastectomy. Much research has been done to examine the survival outcomes of the two different surgical methods and the effects on psychological health, like depression. The quality of life of breast cancer patients following surgery is becoming an increasingly relevant consideration due to improvements in survival rates for patients diagnosed with the disease over the last several decades (Ng et al., 2019).

Most breast cancer patients diagnosed at an early stage are candidates for breast conservation rather than mastectomy, according to the results of randomized clinical trials. Despite this, a sizeable portion of patients still opt to have their breasts removed via mastectomy. This choice is made in some instances due to the patient's desire, while in other instances it is prompted by medical conditions preventing breast conservation. According to several research findings, the number of women undergoing unilateral and bilateral mastectomies is on the rise in the United States. Although it appears to be driven by patient choice, the cause for the increase in mastectomy use is unknown; nonetheless, some have claimed that improved cosmetic outcomes with modern breast reconstruction techniques may contribute to this trend. Therefore, the long-term quality of life (QOL) and cosmetic outcomes following various treatments can be critical consideration for patients when choosing a local therapeutic option for the treatment of breast cancer (Jagsi, 2016).

A prophylactic mastectomy is a major elective surgery that is irreversible and may result in complications from the surgical removal of both breasts and/or any subsequent reconstructive surgeries, a permanent change in a woman's outward appearance, and possibly changes in her quality of life. This is because a prophylactic mastectomy is an irreversible surgery that removes both breasts simultaneously. Therefore, even while a bilateral preventative mastectomy could seem appealing for lowering the likelihood of developing breast cancer, the choice to go through with the surgery might have substantial repercussions and needs to be carefully considered before being made. Chemoprevention and/or regular breast exams are two alternatives that may be considered for high-risk patients as alternative treatment choices (Razdan et al., 2016).

Quality of life is "a multidimensional construct that incorporates perceptions of both good and negative aspects of dimensions such as physical, emotional, social, and cognitive functions," according to the American Psychological Association (APA) definition. In addition, it encompasses the unfavorable elements of somatic discomfort and other symptoms brought on by an illness or its treatment. In contemporary oncology, it is regarded as one of the primary factors determining whether a treatment is successful (Albertain et al., 2018).

According to previous studies, incorporating an evaluation of a patient's quality of life into clinical practice may potentially enhance both the standard of medical care that patients get and their health. As a result, evaluating this phenomenon is now just as crucial as determining whether or not a patient will survive treatment. Over the past few decades, researchers and people in decision-making positions have shown a growing interest in assessing the quality of life and the characteristics linked with it in patients diagnosed with breast cancer (Albertain et al., 2018).

Numerous research works have concluded that people who have had a mastectomy have a poor quality of life (QOL). The researchers have also found characteristics connected to a patient's quality of life, such as marital status, income, age, and educational status. Previous research in China investigated the links between quality of life and symptoms, as well as social support and coping mechanisms. However, no study has been done on how personal optimism and assessment relate to a woman's quality of life after being diagnosed with breast cancer (Zou et al., 2014).

When cancer is identified in a patient and while treatment for the disease is being administered or has been administered, the patient's quality of life is an essential concern. Oncologic medical therapies may lead to gains in quality of life. However, there is also a possibility that patients will have a wide variety of adverse effects, which may result in substantial health-related complaints. Similarly, once cancer has been treated, people may experience varying degrees of improvement in their quality of life, depending on the physical and psychological sequelae. In addition, research has shown that cancer patients with a higher quality of life tend to have a higher survival rate (Gangane et al., 2017).

Nursing professionals are in a position to assess patients overall because of the close relationship between themselves and their patients. This is because nursing professionals pay attention not only to their patients' physiological or clinical needs but also to their psychological and social needs. A study has shown that nurses carry out therapies have a positive effect on patients' sleeplessness, dyspnea, and anxiety regarding their finances (Al-Natour et al., 2017).

Therefore, determining the factors that influence a person's quality of life may shed light on how breast cancer patients living situations might be improved and how their chances of survival can be increased. Patients with breast cancer can use their quality of life to guide their condition and treatment decisions, cope with their symptoms, and organize their supportive care in advance, all of which contribute to a better prognosis. Further, improvements in quality of life can be utilized as an indicator of the success of interventions implemented as part of supportive care. According to the World Health Organization (WHO), a person's quality of life is determined by how satisfied they are with their place in the social and moral order of the society in which they reside. The World Health Organization argues that each person's ideals, expectations, standards, and worries contribute to their unique quality of life. It is generally agreed upon that when diseases are treated, patients' quality of life improves, and this improvement is a reflection of the care they've received (Papadopoulou et al., 2017).

When a woman is diagnosed with breast cancer, her medication and surgery may cause side effects that can directly affect her quality of life, whether at work or home. A woman goes through a difficult time being diagnosed with breast cancer and undergoing treatment. During this time, she may experience some negative emotions, including fear of the disease spreading to other parts of the body, apprehension about the future, anxiety, depression, anger, frustration, pain, an altered self-image, fear of losing her femininity, and altered self-confidence (Haddou Rahou et al., 2016).

Changes in quality of life, treatment side effects, and psychological problems, such as fear, should all be evaluated as women with breast cancer undergo therapy. In addition, it's essential to watch out for treatment-related complications. Few studies

have examined how much cancer patients' confidence level impacts their quality of life (Tachi et al., 2015).

The individual's functional health state, their level of pain, self-attribution and self-perception, and the quality of their interactions with their surrounding environment all play a role in determining their quality of life. Both the fact that breast cancer is the most common form of cancer in females and the fact that the removal of a breast can have a significant impact on a patient's sense of whom they contribute to the increasing significance of breast cancer in quality-of-life research (Acil & Cavdar, 2014).

In recent years, the quality of life has come to be regarded as a primary endpoint measure for determining the quality of management and care provided in oncology medicine. Patients' perceptions of the impact of a breast cancer diagnosis and treatment on their day-to-day lives are reflected in their quality of life, which is a subjective evaluation of a person's physical, psychological, and social well-being. A higher quality of life is linked to longer survival rates for cancer patients diagnosed with various cancers, according to the findings of a large number of research studies. Therefore, identifying variables for quality-of-life measurement could provide insights into managing and caring for patients who have had a mastectomy (Oliveira et al., 2014).

Breast cancer is common in Bahrain and other Gulf Cooperation Council countries (Alsayyad and Hamadeh, 2002). Women under 40 have a higher incidence of breast cancer than women in Western countries (Chiedozi et al. 1., 2003). Women living in Arab countries face cultural taboos about breast cancer. Some families think that their daughters cannot marry if the diagnosis of breast cancer is stopped (Abu-Naser, 2007). In Arab countries, the life expectancy of breast cancer patients, the younger age at diagnosis, and the cultural norms and values make information on the quality of life in this region unique.

1.2 Objectives of the study

This study aims to evaluate the quality of life of married patients who underwent surgery for breast cancer in hospitals in Baghdad, Iraq.

1.3 Literature review

1.3.1 Quality of life: An overview

A personal feeling of well-being that encompasses a multidimensional perspective and, as a rule, comprises physical, psychological, social, and spiritual dimensions or domains is “the quality of life.” Evaluating a patient's quality of life after therapy for breast cancer has been an increasingly important aspect of clinical practice and research in recent decades. This aspect also plays a vital role in determining the efficacy of various treatments. Longer survival times have been achieved for breast cancer patients due to improved early detection methods, more knowledge of the disease, and increased use of cutting-edge procedures and technology in treatment. This issue of prolonged life has now become an essential topic in breast cancer care, and it warrants attention and inquiry into the consequences of breast cancer diagnosis and treatment on a person's quality of life over the long term (Almutairi et al., 2016).

The World Health Organization (WHO) defines the quality of life as an individual's view of their position in life concerning their objectives, aspirations, standards, and concerns within the framework of the culture and value systems in which they live. It is a wide-ranging concept affected complexly by the individual's physical health, psychological condition, personal beliefs, social interactions, and relationship to significant aspects of their environment. It is important to note that all of these factors are interconnected. Because it reflects the patient's perceptions of the impact of the cancer diagnosis and treatment on their day-to-day life, quality of life is now seen as a primary endpoint measure for quality of management and care in oncology practice, this is because the quality of life is a measure that reflects the patient's experience (Gangane et al., 2017).

Patients diagnosed with breast cancer may undergo surgical treatment and adjuvant therapies such as chemotherapy, radiation therapy, and hormone therapy. In recent years, quality of life has been utilized to evaluate the impacts of malignancies in addition to traditional biological indicators. This is a relatively recent development. A person's social, psychological, and physical functioning all contribute to their quality of life (Zou et al., 2014).

A handful of research has been conducted on quality of life in the Indian context. Some elements that have been discovered to influence patient QOL include patient education, spousal support, employment status, financial stability, disease stage, and others. It was found that certain aspects of a woman's quality of life, such as her levels of physical, social, and psychological well-being, are equivalent to those of women who do not have the disease. In the beginning stages of the disease, women with breast cancer, particularly younger women, frequently significantly impair their physical functioning, mental health, and overall well-being. Because of the significant variation in the quality of life, it is vital to identify the characteristics that make women susceptible to unfavorable outcomes and low quality of life (Sanchety & Dhasmana, 2017).

In addition, similar to other Arab women, women in Bahrain are subject to the cultural taboos surrounding breast cancer. When a mother is diagnosed with breast cancer, some families fear their daughters will be unable to find a spouse because of the stigma associated with the disease. There has been an overall increase in the survival rate of breast cancer patients, the average age at diagnosis has decreased, and this region has its own distinct set of cultural norms and values. All of these factors suggest that the information on the quality of life in this region may be unique and, as a result, essential to both patients and the medical professionals who treat them. On the other hand, there is a paucity of information available (Jassim & Whitford, 2013).

The immediate impacts of treatment and the long-term factors affecting both quality and quantity of survival are now significant areas of attention in breast cancer care. There has been a shift in the emphasis of breast cancer cares away from looking at

the immediate effects of treatment on patients' quality of life. The morbidity rate throughout the treatment and rehabilitation process is the focus of much effort. If I may use India as an example, there are specific differences. Most breast cancers are still discovered at an advanced stage since no effective screening programs exist. Therefore, extending the lives of breast cancer patients continues to be a primary focus (Haddou Rahou et al., 2016).

Researchers in the West have found multiple factors that affect women with breast cancer and their quality of life. Clinical and psychological characteristics of breast cancer survivors include disease stage, pain, stress, depression and anxiety, social relationships, variations in self-confidence, self-efficacy, and the development of harmful sentiments. In contrast, socio-demographic factors include age, marital status, economic problems, and the experience of daily difficulties at work. Age, marital status, financial troubles, and daily challenges at work are all examples of such socio-demographic factors. It was also shown that the treatment procedures impacted the individual's quality of life (Moradi et al., 2017).

Less than one-third of breast cancer patients in the Middle East had a decent quality of life, according to a recent review and meta-analysis that evaluated the quality of life of patients with breast cancer in the region. However, there are very few research works on the factors connected with the quality of life of breast cancer patients in countries in the Middle East. The findings of studies conducted in western nations cannot be generalized to breast cancer patients living in countries in the Middle East because of the region's unique culture and way of life. The expected disparity may be caused by several factors, including socioeconomic challenges, limited access to health care, a lack of supportive care, late diagnosis of breast cancer, the patient's self-perception of the disease, social constraints, and other religious or cultural restrictions. When medical experts in the Middle East can identify the elements connected with the quality of life, they will be better able to devise effective health interventions and specialized techniques to increase the quality of life in breast cancer patients (Nikmanesh et al., 2017).

In industrialized countries, patients diagnosed with breast cancer, regardless of the stage of their disease, have a five-year survival rate of 73%, whereas, in underdeveloped countries, this number is only 53%. Survival rates after a mastectomy are comparable to those with breast cancer. The percentage of breast cancer patients who survive the disease is rising. However, this has both positive and negative effects on the individuals in terms of their physical, psychological, and social well-being, and the problems that the patients continue to experience become the single most crucial factor in determining the degree to which their quality of life is diminished (Pehlivan et al., 2016).

1.3.2 Breast cancer: Concept and detection

In addition to being one of the most prevalent forms of cancer affecting females, breast cancer is a major global public health issue. It is reported to be the second most significant cause of mortality from cancer, and it ranks first among the top ten most prevalent cancers in women in Turkey. Recent developments in the diagnosis and treatment of breast cancer have made early identification and prolonged survival possible. This raises the question of how patients might maintain a high quality of life despite having longer life expectancies due to these advancements (Safa et al., 2014).

It is projected that there were 1.67 million new cases of breast cancer detected in women worldwide in 2012. The incidence rate of breast cancer has steadily climbed throughout the last three decades in most countries. The age-standardized incidence rate of breast cancer in China grew from 6.4 per 100,000 in 1980 to 31.93 per 100,000 in 2011. This represents a fivefold increase over the previous rate. Patients diagnosed with breast cancer have, on average, a more favorable prognosis and a longer surviving time after receiving a cancer diagnosis than women diagnosed with other types of cancer. During 2007–2012, it is projected that more than 697 thousand people in China survived breast cancer (Yan et al., 2016).

Cancer is consistently ranked among the top 10 causes of death throughout the entire planet. Also, the rate at which new cases of the identified disease among patients is

accelerating. According to the statistics, the number of people in China diagnosed with cancer for the first time is more significant than 1.6 million per year, and the number of people who pass away from cancer is more potent than 1.2 million (Wang et al., 2019). In the United States, women are more likely to be diagnosed with breast cancer than any other type. Each year, more than 250,000 new cases of breast cancer are discovered. The five-year survival rate for breast cancer patients has been steadily climbing over the past few decades due to developments in early detection techniques and treatment options (Park et al., 2021).

Cancer is a disease that can strike people of any age, gender, or socioeconomic status. There are several forms of cancer, each categorized according to the kind of cell the disease destroys. Tumors are masses of tissue that occur when cancer cells grow out of control and produce lumps or masses. In addition to leukemia, a type of cancer that interferes with the normal operation of the blood, cancer can manifest itself in various locations across the human body, including the colon, liver, lungs, and breasts (Shandiz et al., 2017).

It is generally agreed that breast cancer is the most common type seen in female cancer patients. It is a problem for women of all socioeconomic levels in both developed and developing nations, and it affects women worldwide. According to research conducted by Cancer Research UK, there are 6.3 million new cases of breast cancer diagnosed annually around the globe. It is estimated that there were 232,670 instances of breast cancer in women in the United States and 2360 occurrences in men. A total of 40,000 fatalities were associated with breast cancer among females and 430 deaths among men. In the meantime, according to the age-standardized incidence rate (ASIR) per 100,000 people in Arab nations like Egypt, it was discovered that breast cancer accounts for 15.4% of all instances of cancer in both sexes and represents 32% of all cases of cancer in females. This was the finding (Weaver et al., 2012).

Because infectious diseases are becoming less common and people are living longer, low-income nations are seeing an increase in the number of people living with cancer, bringing new challenges. In the United States, around one in eight women

(12%) may develop breast cancer at some point in their lifetime. According to the findings, breast cancer is detected between the ages of 47.1 and 48.8 among women who reside in low-income and developing nations. This is a decade earlier than the age of diagnosis seen in women who live in developed countries (Shisler et al., 2018).

If one excludes skin malignancies, the incidence of breast cancer in women accounts for 23% of all newly diagnosed cancers. In the Arab world, breast cancer has been identified as the most prevalent form of the disease in females. Increased survival rates also result from recent developments in many diagnostic and therapeutic techniques. As a result, dealing with breast cancer as a chronic condition is becoming more widespread (Jassim & Whitford, 2013).

As part of a screening program, mammography has been shown in randomized, prospective trials to reduce the risk of dying from breast cancer by 20–35 percent, particularly among women older than 50. On the other hand, many believe this to be an artifact and suggest that screened populations are significantly enriched for indolent breast tumors with a low risk of disease progression or mortality. In addition, screening can produce false-positive results, which can result in further examinations and biopsies, which can potentially cause harm on multiple fronts, including the physical, the emotional, and the financial (Euhus et al., 2019).

According to the findings of one study, among 1,000 women in the United States who are 50 years old and are screened once a year for ten years, 0.3 to 3.2 will avoid dying from breast cancer, 3 to 14 will be treated for breast cancer that never posed a risk to their health, and 490 to 670 women will have at least one false alarm that will prompt a call back for additional imaging or biopsies. Mammography screening should be performed every two years for women aged 50 to 74, as the United States Preventive Services Task Force recommended in 2009. These guidelines have been given their blessing by the American College of Obstetricians and Gynecologists (Winters et al., 2018).

However, the method by which an arbitrary age beyond which screening is unnecessary is not evident. Guidelines have been issued by both the National Comprehensive Cancer Network and the American College of Radiology, although neither organization suggests a cutoff age beyond which screening should be ceased. Screening mammography has been shown to reduce the mortality rate from breast cancer, and it is most effective in women with a life expectancy of 5 to 10 years (Miller et al., 2014).

The guidelines put forth by the American Cancer Society recommend that screenings be maintained until there are estimated to be less than ten years left to live. Mammography screening can have both beneficial and harmful effects. When compared with younger women, there is evidence that breast cancer therapy is associated with higher and more permanent impairments in older women's physical and mental health. When developing screening guidelines for an aged population, it is necessary to understand the relative magnitudes of potential benefits and risks (Marmot et al., 2013).

When breast cancer is detected, tests and examinations are performed to ascertain the disease's stage and guide further therapy. Breast cancers diagnosed at an early stage typically respond better to initial treatment. Even if a breast tumor is discovered at an early stage, the patient may still need to undergo a series of diagnostic procedures, surgery, radiation therapy, and systemic drugs, any of which could hurt the patient's quality of life. Recent decades have seen great strides in screening technology, leading to an uptick in the detection of breast cancer at its earliest stages. Particularly in an aging society, many of these tumors may never seriously risk a person's life or health (Euhus et al., 2019).

Surgeons and oncologists who treat breast cancer in the Arab world tend to believe that the disease typically manifests at an earlier age and in a more advanced stage at the time of presentation. This perception is especially prevalent in Bahrain and other Gulf Cooperation Council nations, where women under 40 account for a greater proportion of the total number of breast cancer diagnoses than their Western counterparts (Jassim & Whitford, 2013).

Pain, difficulty breathing, nausea, baldness, impotence, and side effects are symptoms of the disease and the treatment itself. Many different elements can positively or negatively affect one's quality of life. The quality of life of cancer patients can be significantly diminished due to symptoms such as fatigue, anxiety, fear for the future and the family, inability to satisfy basic needs, and changes in body image (Üstündag and Zencirci 2015). Social support, economic security, and faith in one's healing ability all contribute to an improved quality of life.

Surgical removal of the tumor, radiation therapy, chemotherapy, hormone therapy, targeted therapy, and other forms of treatment are only some of the options available for breast cancer patients. Pain, sleeplessness, nausea, loss of appetite, exhaustion, and hair loss are some of the physiological adverse effects that can be caused by chemotherapy treatment. During the process of undergoing chemotherapy, cancer patients may experience a variety of psychological stresses, such as feelings of melancholy, depression, helplessness, anxiety, and worry. The length of time that chemotherapy is administered, the frequency of relapses, and the stage of cancer are all factors connected with the severity of the side effects caused by chemotherapy in terms of both physiological and psychological states (Wang et al., 2019).

It is projected that there were 1.67 million new cases of breast cancer detected in women worldwide in 2012. During the past three decades, there has been a general upward trend in breast cancer incidence rates worldwide, even in low- and middle-income nations. In most cancer registries, the age-adjusted incidence rates of breast cancer have been on an upward trend, and this trend has also been observed in India. It is anticipated that the annual number of new cases of breast cancer in India will rise from its current level of 153,297 cases to 235,490 cases in the year 2026. Even though the number of women diagnosed with breast cancer is on the rise, the average length of time patients with breast cancer live is significantly longer compared to patients with other types of disease. The patients' quality of life has become more of a focus due to the increased likelihood of surviving (Teo et al., 2016).

Measuring a patient's quality of life and determining the worldwide impact of an illness or medical treatment are standard practices in modern medicine. These

measurements are based on the patient's point of view. When discussing health care, quality of life refers to the psychosocial, emotional, and physical effects of therapy as seen through the eyes of the patient. The diagnosis and treatment of breast cancer can profoundly impact a patient's physical health, mental well-being, social relationships, and financial situation. Breast cancer is potentially fatal (El Fakir et al., 2016). Considering the increasing emphasis on patient-centered approaches within health care systems, breast cancer survivors are vitally important (Gangane et al., 2017).

The most recent statistics suggest that there are 1,700,000 new cases of breast cancer diagnosed each year. Breast cancer accounts for approximately one-quarter of all oncological diagnoses made in females. Over the past quarter of a century, there has been a global increase of about thirty percent in the incidence rates in both developed and developing countries (Konieczny et al., 2020).

1.3.3 The patients' quality of life after undergoing breast cancer surgery

Cancer is a significant threat to public health and can afflict people of all ages, genders, socioeconomic backgrounds, and life stages, including those young, middle-aged, or elderly. However, most fatalities occur in developing nations, despite most cases being diagnosed in wealthy countries (El Fakir et al., 2016).

Patients who have cancer often turn to alternative treatments to improve their overall quality of life. Cancer and chemotherapy can reduce the quality of life, making it even more important to seek additional treatment. Patients with lower quality of life tend to seek more alternative therapies (Albabbain et al., 2018). A culture's religion, beliefs, and rituals can interact with one another, and times of crisis tend to boost religious practices. Reduced anxiety is one of the many benefits of engaging in religious and spiritual traditions, encouraging overall health and well-being, hope, and life satisfaction. The socio-cultural and economic characteristics of individuals are connected to religion, which is a factor that can be used to overcome the disease (Üstündag and Zencirci 2015). Conducting additional research on the factors that influence the quality of life of cancer patients would enable oncology nurses to develop improved personal care techniques that would allow them to more

effectively assist cancer patients more (Bafandeh Zendeh, Hemmati Maslakpak, and Jasemi 2022).

The side effects of chemotherapy and the necessity of having a mastectomy harm cancer patients' overall quality of life. Chemotherapy is a common form of treatment for breast cancer patients, and one of its goals is to reduce the risk of cancer returning or spreading to other parts of the body. According to the findings of several separate studies, patients who undergo chemotherapy have a lower quality of life when compared to patients who do not. This is because the physiological and psychological pressures are increased during chemotherapy treatment (Wang et al., 2019).

Self-care is a non-pharmacological treatment that provides educational programs to patients to improve their physiological and psychological states. The goal of this process is to help patients feel better overall. According to Orem's self-care theory, self-care is a self-regulated function determined by an individual's capacity to carry out acts of caregiving. Self-care is a strategy that can be used to enhance one's health and quality of life by coping with stressful events that occur in everyday life. The ability of patients with chronic diseases to cooperate in their treatment can be improved by participating in an educational program that teaches them about the disease and various self-care methods. It has been found that patients undergoing chemotherapy for colon cancer who participate in a self-care education program have a significantly lower risk of experiencing nausea and emesis, and their quality of life is improved considerably as a result (Kroenke et al., 2013).

Only a handful of studies have been conducted in India that have concentrated on the socio-demographic factors that influence the quality of life of women who have had a mastectomy. According to the findings of these investigations, occupation was the most critical factor. For instance, it was found that working women had a much better overall health status, a component of quality of life, compared to homemakers. This was because working women were more likely to have access to healthcare. In a recent study that looked at characteristics linked with quality of life in female breast cancer patients in India, age, literacy, marital status, and socioeconomic position

were significant drivers of quality of life. On the other hand, none of the Indian studies were conducted in a predominantly rural environment. Furthermore, self-efficacy and clinical stage, possibly drivers of quality of life, were not investigated in Indian breast cancer patients (Gangane et al., 2017).

Aside from that, one's level of self-confidence is an essential part of one's mental health and has the potential to make a considerable contribution to the quality of life of mastectomy patients. Self-confidence may be defined as an individual's attitude toward herself and her personal and subjective self-assessment. This attitude plays a role in forming either excellent or negative beliefs towards the individual's existence. Alterations in the patient's physical appearance as a result of therapy, restrictions in physical functioning and everyday activities, restricted functioning in former jobs, the stigma associated with the disease, and an inability to accept it can all contribute to a patient's loss of self-confidence (Shafaei et al., 2018).

1.3.4 Previous studies

Previous research has revealed that women who have had a mastectomy as part of their cancer treatment may report reduced physical and emotional functioning after the procedure. Several demographic and clinical factors could harm the quality of life of survivors. For instance, breast cancer survivors who also have comorbid illnesses, such as heart failure, arthritis, diabetes, or lymphedema, have worse physical and emotional health results than those who do not have these conditions. Women who have undergone breast reconstruction due to breast cancer are more likely to report improved mental quality of life, reduced stress, and lower anxiety levels when compared to women who have not. On the other hand, women who have undergone breast reconstruction are more likely to experience physical discomfort. To identify women at the highest risk of death, it is necessary to have a more in-depth understanding of the underlying issues associated with a low quality of life. This can help inform the creation of tailored supporting interventions (Park et al., 2021).

Determinants of quality of life in Asian populations are receiving increasing research attention. Research on survivors' quality of life after breast cancer has been

conducted primarily in developed Western countries up until this point. Results from quality-of-life studies conducted on Caucasian patients with breast cancer may not be applicable to Asian patients with breast cancer due to cultural and ingrained traditions such as traditional medicine usage. This may restrict the generalizability of such results. Tolerance for drugs can vary significantly from one community to another; the Japanese population has a lower tolerance for paclitaxel than the American population (Ho et al., 2018).

China's breast cancer survival rate is on the rise while the country's death rate is dropping. Forecasts indicate that this population will grow even more rapidly in the future. Partners of people with breast cancer are also negatively impacted by the disease. Compared to other family carers, there are particular difficulties for spouses of breast cancer patients because of their commitment and responsibility within the marital partnership. Sexual adjustments, domestic duties, and concerns about their children's futures are just a few difficulties they face (Yeung et al., 2019).

For example, researchers from the Rochester School of Medicine in the United States looked at the lives and confidence of 21 women who had undergone mastectomy within the preceding 30 months. The participants were randomly assigned to either a 12-session exercise training program or a 12-session psychological support therapy program. At the 6- and 12-week follow-ups, those who had received physical training instead of psychological counseling reported significantly increased quality of life and confidence (Shafaei et al., 2018).

In the Netherlands, researchers looked at the effects of social support and positive and negative self-confidence over time in a sample of 475 persons with a recent cancer diagnosis and a control group of 255 healthy people. Researchers found a weak to moderate correlation between high self-confidence levels and high social support, but they found no significant differences between cancer patients and controls (Pinheiro et al., 2017).

Women receiving conservative treatment for breast cancer in Brazil were the subjects of a prospective study that examined factors such as quality of life and confidence.

Twelve months after breast restoration surgery, the women in the research reported greater quality of life and self-confidence. The current research was conducted to show how the quality of life during breast cancer treatment affects women's sense of self-worth. The researchers opted to conduct this study because of the prevalence of breast cancer in females, the paucity of previous research on the topic, and the significance of improving patients' quality of life alongside increasing their longevity and long-term survival (Shafaei et al., 2018).

It was shown that husbands of women who had undergone a mastectomy were unwilling to see the scars of their wives; in addition, the changes in their wives' looks (such as the loss of breasts or alopecia) significantly affected their desire to have sexual relations with their spouses. Some husbands choose not to think about sex because they believe it is unethical for them to pursue sexual activity with their suffering spouses. On the other hand, when weighed against the importance of the wives' physical well-being, husbands' concerns over their sexual health were frequently relegated to a lesser priority. They were not openly discussed within the relationship. Even though these men believe that their wives' health is of the utmost priority, they nevertheless feel the need to address their sexuality and intimacy-related concerns while they are on the journey of providing care for their wives with breast cancer (Yeung et al., 2019).

According to several studies, the experience of providing care for a spouse with breast cancer is strikingly comparable for both the husband and the other spouse. The sexual well-being of breast cancer survivors' husbands has also been documented to deteriorate, according to survivors. They may lean on members of their own family to help them deal with the demands of caregiving, but they do not actively seek support from other sources (e.g., friends or colleagues). They had a hard time articulating their feelings and the issues that were on their minds regarding the disease. However, the focus of these studies was essentially descriptive, and theoretical frameworks were not used to investigate the psychosocial factors linked to spouses' happiness levels (Harrison et al., 2017).

Breast cancer is the most common cancer in women in Morocco (33.4%), and more than 60% of cases are diagnosed at stage III or IV when they are discovered. Measuring a patient's quality of life and determining the worldwide impact of an illness or medical treatment are standard practices in modern medicine. These measurements are based on the patient's point of view. When discussing health care, quality of life refers to the psychosocial, emotional, and physical effects of therapy as seen through the eyes of the patient. The diagnosis and treatment of breast cancer can profoundly impact a patient's physical health, mental well-being, social relationships, and financial situation. Breast cancer is potentially fatal (El Fakir et al., 2016).

According to the findings of specific studies conducted in the West, men of breast cancer survivors face various difficulties after learning that their spouses have been diagnosed with the disease. In addition to a lower sense of physical and mental well-being, it was typical for husbands of breast cancer survivors to experience sexual interruptions and problems sustaining intimacy with their wives. Notable also is the adjustment made by husbands to concerns of sexuality and intimacy following their spouses' diagnosis of breast cancer (Yeung et al., 2019).

However, the most recent official statistics in Jordan show that breast cancer is the most common type among women and accounts for 36.7% of all cancer cases. Breast cancer is the most common malignancy in women among all six GCC countries. There are high-incidence areas in Kuwait, Bahrain, and Qatar, while there are low-incidence areas in the UAE, Saudi Arabia, and Oman. In 2008, the age-adjusted incidence rate of breast cancer in Saudi Arabia was 22.4 per 100,000 women, and the death rate was 10.4 per 100,000 women, according to data supplied by the International Agency for Research on Cancer (IARC). The data for this country was used to generate these estimates. The frequency of instances of breast cancer has increased dramatically, especially among younger age groups, according to the King Faisal Specialist Hospital and Research Centre registry in 2011. This pattern was shown most clearly in female participants (Almutairi et al., 2016).

With a prevalence rate of thirty percent, breast cancer is the most common form of cancer among Tunisian women. The substantial advancements that have been made

in breast cancer diagnosis and therapy have contributed significantly to an increase in the overall survival rate of patients. These days, breast cancer is rapidly approaching the status of a chronic disease that may be managed with long-term treatment. Patient's quality of life is becoming an increasingly essential factor, and there is growing interest in determining how to measure it. Despite this, there have only been a limited number of studies that have prospectively studied the quality of life of breast cancer patients using standardized and validated tools (Daldoul et al., 2018).

Cancer of the breast is another significant health concern for women in Poland. Since the beginning of the 1980s, the number of new cases of breast cancer identified in Poland each year has increased to around 20,000. This represents more than twice the disease's prevalence over the past three decades. When a woman is diagnosed with breast cancer, she is almost always required to undergo extensive and protracted therapy. In most cases, it involves surgical procedures, chemotherapy, and radiotherapy, and it can create side effects that are either temporary or permanent, such as discomfort, fibrosis of the tissues, or restrictions on one's ability to engage in physical activity (Konieczny et al., 2020).



2. MATERIAL METHODS

2.1 Aim and study design

This study evaluated the quality of life of married women who underwent surgery for breast cancer. This study was a descriptive cross-sectional study.

2.1.1 Study site

The research was conducted at the Oncology Teaching Hospital and Al-Amal National Hospital for Oncology in the hospitals of Baghdad between March–June of 2022.

2.2 Setting of the study

After obtaining approvals to collect samples from the directors of Teaching Oncology Hospital and Al-Amal Hospital, the questionnaire was presented to married patients aged between 40 and 60. They were informed that participation in the questionnaire was voluntary and that any unclear question could be directed to the researcher.

In addition, the nursing staff helped me and provided assistance and facilities when collecting samples.

The total number of breast cancer patients in the hospitals of Baghdad city, namely, the Tumor Teaching Hospital and Al-Amal National Hospital for Oncology, reached 300, and the sample size was 170. As a result of the power analysis, it was found that the power was 0.991 when the effect size, P , and sample size were 3.0, 0.05, and 170.

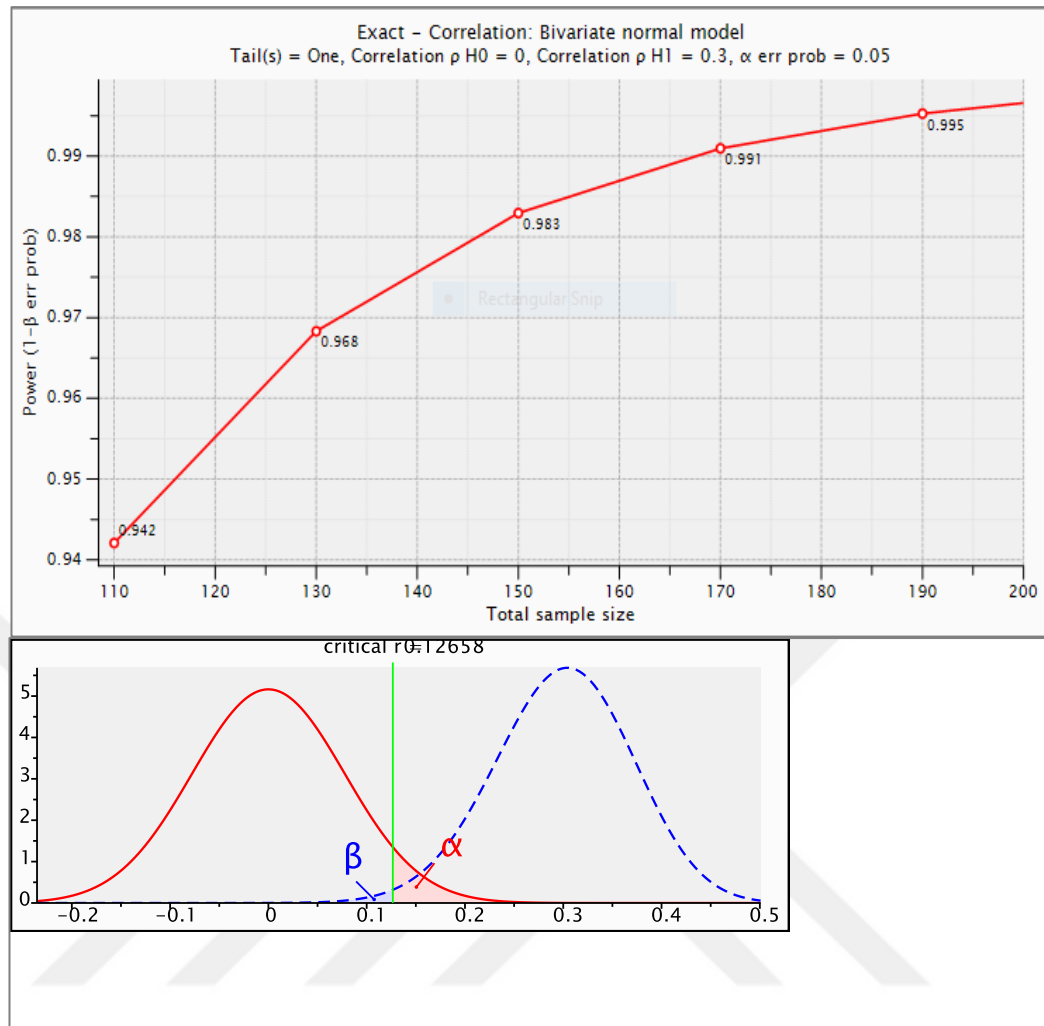


Figure 2.1 G – power analysis of the sample size

2.3 Sampling criteria

Inclusion criteria:

- Married women patients who underwent surgery removed for breast cancer.
- Age from 40 to 60 years old. (According to the WHO, these ages are the most likely to be diagnosed with breast cancer (WHO, 2021)).
- At least six months have passed since the operation.
- Volunteer to participate in the research
- His mother tongue should be Arabic.

Exclusion criteria:

- Those with a diagnosis of mental disorder
- Those who refused to participate in the study
- Those staying in the intensive care unit.
- Unconscious patients.

2.4 Data collection tools

Data collection tools: Patient Information Form and European Organization for Research and Treatment of Cancer QoL Cancer-Specific 3.0 (EORTC QLQ-C30) Questionnaire Scale.

2.4.1 Patient information form

The form contains 12 questions to examine the quality of life of married breast cancer patients undergoing surgery according to demographic data: Age, Employment Status, Income, educational status, uneducated, the family has breast cancer, any surgical treatment is taken, Time elapsing from surgery, Time elapsing from surgery, hormonotherapy and radiotherapy, targeted therapy (Raoof et al. 2015; Sarica, 2021) (APPENDIX 1).

2.4.2 European Organization for Research and Treatment of Cancer QoL Cancer-Specific 30 scale

Approval has been obtained for using the EORTC QLQ-C30 Scale (APPENDIX 3).

This tool is used chiefly for assessing QoL in cancer (Aaronson et al., 1993) and is adapted to Arabic (Jassim and AlAnsari, 2020). The EORTC QLQ-C30 includes nine multi-item scales: five functional scales (physical, role, cognition, emotional, and social functions); Three symptom scales (fatigue, pain, and nausea/vomiting); The World Health Status quality of life scale. Six one-item scales are also included

(dyspnea, insomnia, loss of appetite, constipation, diarrhea, and financial difficulties). It contains four-point scales for the first five components of the physical performance scale. The QLQ-C30 consists of 30 items rated for assessment, including physical, psychological, and social factors, scales showing significant problems. Scores for all scales and individual items range from 0 to 100 (Appendix 1). According to the study of Jassim and AlAnsari, (2020), the reliability of the EORTC QLQ-C30 determined by Cronbach's alpha coefficient result (0.927) reflected a higher internal consistency. This study used the reliability of the questionnaire to assess the accuracy of the questionnaire. The reliability of the questionnaire was determined by (Cronbach's alpha) for internal consistency reliability. The Cronbach's alpha for the scale was 0.904.

2.5 Search variables

The independent variables are age, employment status, income, and educational status. The family has breast cancer, any type of surgical treatment taken, time elapsing from surgery, hormone, and radiotherapy, and targeted therapy.

The dependent variable is the quality of life of married patients who underwent surgery for breast cancer.

2.6 Data analysis

The data obtained in this study were analyzed with the SPSS 22 package program. Due to the non-normal distribution of the data, in comparisons between pairs, the Mann-Whitney U test and Kruskal Wallis H Test were used for comparisons between three or more groups. A descriptive statistical method was used while evaluating the study data. Spearman correlation analysis was used in the relationship between the variables at 0.05 as a significance level, and it was stated that there was a significant difference/relation in the case of $p < 0.05$ and no significant difference/relation in the case of $p > 0.05$.

Ethics Committee Approval: Ethical approval and institutional approval were obtained from the universities where the research will be conducted to carry out the research. Ethics Committee Permission was obtained from Çankiri Karatekin University Ethics Committee (21/04/2022-25) (Appendix 3). Institution permission was obtained from the Medical City Department (6/14/2022-2) (Appendix 5).



3. RESULTS

The findings obtained from the research are given below.

Table 3.1 Distribution of demographic characteristics of patients with breast cancer and patient's health information about breast cancer (n: 170)

Demographic Characteristics and Patient's Health Information About Breast Cancer	n	%
Age		
40-44	37	21,8
45-49	46	27,1
50-54	33	19,4
55+	54	31,8
Employment Status		
Housewife	76	44,7
Employment	71	41,8
Un employment	23	13,5
Income		
Lower than expenditures	68	40,0
Equal expenditures	90	52,9
Higher than expenditures	12	7,1
Educational status		
Uneducated	11	6,5
Elementary school graduate	40	23,5
High school graduate	62	36,5
University graduate	57	33,5
Family history of breast cancer (Mother, aunt, etc.)		
Yes	44	25,9
No	126	74,1
Surgical treatment		
Mastectomy	118	69,4
Breast-conserving surgery	52	30,6
The time elapsing from surgery		
1-6 months	69	40,6
7-12 months	53	31,2
13 months and longer	48	28,2
Chemotherapy treatment status		
Yes	166	97,6
No	4	2,4
Hormone therapy status		
Yes	78	45,9
No	92	54,1
Radiotherapy status		
Yes	76	44,7
No	94	55,3
Receiving targeted treatment status		
Yes	78	45,9
No	92	54,1
Receiving a psychological diagnosis status		
Yes	45	26,5
No	125	73,5
Total	170	100,0

Table 3.1 shows the distribution of demographic characteristics of patients with breast cancer and patients' health information about breast cancer. 31.8% of the patients participating in the study were 55 years and older, and 27.1% were between the ages of 45-49. 44.7% of the patients were homemakers. Also, 52.9% had income equal to their expenses, and 36.5% were high school graduates. In addition, 74.1% had no family history of breast cancer, and 69.4% had mastectomy surgery. Furthermore, 40.6% had 1-6 months after surgery and 97.6% received chemotherapy, and 45.9% received hormone therapy. Additionally, 44.7% received radiotherapy, 54%. It was determined that 1% of them received targeted treatment, and 73.5% did not have a psychological diagnosis (Table 3.1).

Table 3.2 Correlation between age and quality of life for patients with breast cancer (n=170)

Scales	Age					
	(Mean ± SD)					
	1=40-44(n=37)	2=45-49(n=46)	3=50-54(n=33)	4=55+(n=54)	p*	H
Global health status/QOL	37,16±25,05	34,24±19,18	38,64±22,71	36,88±19,80	0,948	0,36
Functional Scales						
Physical Function	69,91±18,43	56,81±26,69	51,52±20,97	57,78±27,47	0,003	11,698
Dual comparison	3<1					
	3<2					
	3<4					
Role Function	56,76±26,49	48,91±26,39	57,07±29,47	50,00±30,54	0,384	1,916
Cognitive Function	68,47±29,34	59,78±30,55	59,60±32,01	63,27±29,92	0,343	2,137
Emotional Function	50,68±28,49	37,14±27,09	45,45±25,78	46,91±26,12	0,095	4,714
Social Function	46,85±35,75	47,46±30,83	49,49±32,14	50,00±29,50	0,839	0,352
Total Functional Scales	59,76±18,50	49,66±21,86	51,45±21,95	53,54±23,57	0,13	4,078
Symptom Scales						
Fatigue	51,35±23,77	67,63±22,33	61,28±27,38	58,64±27,85	0,029	9,033
Dual comparison	1<2					
	1<3					
	1<4					
Nausea	42,34±30,33	58,33±29,34	55,05±30,19	45,68±29,53	0,036	8,569
Dual comparison	1<2					
	1<3					
	4<2					
	4<3					
Pain	56,76±28,45	64,13±24,59	52,53±29,50	56,79±28,32	0,335	3,39
Dyspnea	26,12±25,01	35,51±33,26	31,31±26,27	42,59±35,12	0,142	5,441
Insomnia	56,76±31,30	69,57±29,67	64,65±34,30	72,22±31,56	0,112	5,991
Appetite loss	48,65±32,01	60,15±34,87	58,59±33,37	61,11±32,21	0,301	3,66
Constipation	18,92±24,27	36,96±39,89	40,40±36,09	28,39±34,51	0,064	7,259
Diarrhea	34,23±28,85	45,65±32,48	34,34±32,79	36,42±36,21	0,291	3,738
Financial Function	48,65±34,78	56,52±38,41	55,56±34,02	48,77±34,09	0,58	1,966
Total Symptom Scales	45,04±16,82	57,86±18,30	52,60±18,86	51,57±20,25	0,022	9,632
Dual comparison	1<2					
	1<3					
	1<4					

Mean: Mean, SD: Standard Deviation, *Kruskal Wallis H Test.

When the relationship between age groups and Functional Scales is examined, there is no significant difference between age groups in terms of “Global health status/QOL,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning,” “Social Functioning” and “Total Functional Scales” scores ($p>0.05$). There is a significant difference between the age groups regarding the “Physical Functioning” score ($p=0.003$). The "Physical Functioning" score in the age group of "50-54" is seen to be significantly lower than those in the age group of "40-44", "45-49" and "55+" (Table 3.2).

When the relationship between age groups and Symptom Scales is examined, there is a significant difference in the “Fatigue” score ($p=0.029$). The "Fatigue" score in the age group of "40-44" is seen to be significantly lower than those in the age group of "45-49", "50-54" and "55+". There is a significant difference between the age groups regarding the “Nausea” score ($p=0.036$). The "Nausea" score of those in the age group of "40-44" and "55+" is seen to be significantly lower than those in the age group of "45-49", "50-54". There is no significant difference between age groups in terms of “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” “Diarrhea,” and “Financial Function” scores. ($p>0.05$). There is a significant difference between the age groups regarding the “Total Symptom Scales” score ($p=0.022$). The score of "Total Symptom Scales" of those in the age group of "40-44" is seen to be significantly lower than those in the age group of "45-49", "50-54" and "55+" (Table 3.2).

Table 3.3 Correlation between employment status and quality of life for patients with breast cancer (n=170)

Scales	Employment Status				
	(Mean ± SD)				
	1=Housewife (n=76)	2=Employment (n=71)	3=Un employment (n=23)	p*	H
Global health status/QOL	35,42±22,16	38,38±20,58	34,78±21,27	0,581	1,085
Functional Scales					
Physical Function	60,26±24,43	57,84±25,91	57,97±24,24	0,884	0,246
Role Function	54,39±31,19	50,47±25,82	52,90±26,90	0,68	0,77
Cognitive Function	61,62±31,74	64,32±30,25	61,59±26,32	0,843	0,343
Emotional Function	46,60±26,08	44,25±28,40	40,58±26,75	0,639	0,895
Social Function	50,00±32,43	50,00±32,97	39,13±22,25	0,398	1,843
Total Functional Scales	54,65±22,34	53,05±22,29	50,63±19,59	0,81	0,422
Symptom Scales					
Fatigue	58,04±25,12	61,35±26,35	62,32±27,78	0,645	0,876
Nausea	53,51±29,35	47,42±30,69	47,83±30,90	0,474	1,492
Pain	55,48±28,47	60,33±26,63	58,70±28,81	0,673	0,792
Dyspnea	39,47±32,07	30,05±29,90	34,78±32,53	0,188	3,341
Insomnia	67,98±32,86	63,85±32,73	71,02±25,24	0,623	0,947
Appetite loss	60,53±32,07	54,46±34,84	57,97±32,13	0,554	1,18
Constipation	37,28±36,09	24,88±34,14	28,99±32,26	0,065	5,471
Diarrhea	35,09±33,51	39,44±31,53	43,48±36,84	0,495	1,407
Financial Function	59,21±31,55	52,58±37,23	27,54±31,23	0,001	13,791
Dual comparison	3<1				
	3<2				
Total Symptom Scales	53,21±19,17	51,14±19,02	51,06±19,88	0,824	0,387

Mean: Mean, SD: Standard Deviation, *Kruskal Wallis H Test.

When the relationship between working status and Functional Scales is examined, there is no significant difference between the active statuses in terms of “Global health status/QOL,” “Physical Functioning,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning,” “Social Functioning” and “Total Functional Scales” scores ($p>0.05$) (Table 3.3).

When the relationship between working status and Functional Scales is examined, there is no significant difference in the scores of “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” and “Diarrhea” among working conditions. ($p>0.05$). Yet, there is a significant difference between employment status and the “Financial Function” score ($p=0.001$). The “Financial

Function" score of those not working is significantly lower than those of housewives and employees. There is no significant difference in terms of the score of "Total Symptom Scales" between working conditions ($p>0.05$) (Table 3.3).

Table 3.4 The correlation between income and quality of life for patients with breast cancer (n=170)

Scales	Income				
	(Mean ± SD)				
	1=Lower than Expenditures (n=68)	2=Equal Expenditures (n=90)	3=Higher than Expenditures (n=12)	p*	H
Global health status/QOL	32,84±19,47	38,33±22,38	44,44±21,12	0,075	5,187
Functional Scales					
Physical Function	57,16±25,48	61,56±24,82	49,44±20,59	0,207	3,154
Role Function	52,94±30,06	52,04±26,77	54,17±32,66	0,955	0,092
Cognitive Function	60,54±29,49	64,44±31,23	62,50±29,41	0,65	0,86
Emotional Function	44,98±26,75	44,07±27,86	49,31±24,48	0,776	0,507
Social Function	44,36±33,53	51,67±30,50	48,61±27,02	0,286	2,501
Total Functional Scales	52,09±22,43	54,69±21,70	51,67±21,42	0,669	0,803
Symptom Scales					
Fatigue	61,11±24,92	58,64±25,86	63,89±32,87	0,731	0,628
Nausea	53,19±31,84	47,41±28,91	54,17±31,08	0,417	1,748
Pain	60,54±27,30	55,74±26,81	59,72±36,55	0,485	1,449
Dyspnea	33,33±29,93	35,18±32,14	41,67±35,18	0,729	0,632
Insomnia	73,04±28,94	62,59±33,83	61,11±27,83	0,11	4,407
Appetite loss	63,73±33,94	53,70±31,88	52,78±36,12	0,123	4,184
Constipation	29,41±36,21	32,22±34,78	30,56±33,21	0,764	0,539
Diarrhea	33,82±32,32	40,74±32,68	41,67±40,51	0,414	1,766
Financial Function	66,18±32,83	43,70±34,13	36,11±33,21	0,0001	18,89
Dual comparison	3<1		2<1		
	3<2				
Total Symptom Scales	54,64±18,53	50,03±19,21	52,56±21,52	0,441	1,639

Mean: Mean, SD: Standard Deviation, *Kruskal Wallis H Test.

When the relationship between income status and Functional Scales is examined, there is no significant difference between income status in terms of "Global health status/QOL," "Physical Functioning," "Role Functioning," "Cognitive Functioning," "Emotional Functioning," "Social Functioning" and "Total Functional Scales" scores ($p>0.05$) (Table 3.4).

When the relationship between income status and Symptom Scales is examined, there is no significant difference between income statuses in terms of “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” and “Diarrhea” scores ($p>0.05$). There is a significant difference between income levels regarding the “Financial Function” score ($p=0.0001$). The “Financial Function” score of those whose income is higher than their expenses is significantly lower than those whose income is less and whose pay is equal to their costs. The “Financial Function” score of those whose income is similar to their expenses is significantly lower than those whose income is less than their expenses. There is no significant difference between income levels in terms of the “Total Symptom Scales” score ($p>0.05$) (Table 3.4).

Table 3.5 The correlation between educational status and quality of life for patients with breast cancer (n=170)

Scales	Educational status					
	(Mean $\pm$ SD)					
	Uneducated (n=11)	Elementary School graduate (n=40)	High School Graduate (n=62)	University Graduate (n=57)	p*	H
Global health status/QOL	31,82 $\pm$ 13,34	35,21 $\pm$ 20,63	37,37 $\pm$ 25,77	37,57 $\pm$ 17,69	0,773	1,117
Functional Scales						
Physical Function	64,24 $\pm$ 29,25	65,33 $\pm$ 21,78	55,05 $\pm$ 25,58	57,66 $\pm$ 24,99	0,203	4,601
Role Function	50,00 $\pm$ 31,62	60,42 $\pm$ 29,40	48,92 $\pm$ 28,93	51,46 $\pm$ 26,03	0,214	4,481
Cognitive Function	69,70 $\pm$ 20,84	62,92 $\pm$ 32,35	58,87 $\pm$ 33,16	65,50 $\pm$ 27,07	0,732	1,29
Emotional Function	40,15 $\pm$ 26,83	47,50 $\pm$ 24,40	42,47 $\pm$ 29,56	46,34 $\pm$ 26,45	0,82	0,923
Social Function	42,42 $\pm$ 21,55	57,50 $\pm$ 31,34	43,55 $\pm$ 32,27	48,83 $\pm$ 31,79	0,147	5,365
Total Functional Scales	53,74 $\pm$ 20,12	58,56 $\pm$ 20,07	49,86 $\pm$ 24,84	53,68 $\pm$ 19,69	0,305	3,621
Symptom Scales						
Fatigue	54,54 $\pm$ 21,92	56,67 $\pm$ 23,71	62,19 $\pm$ 25,25	61,01 $\pm$ 28,88	0,6	1,867
Nausea	68,18 $\pm$ 17,41	48,75 $\pm$ 29,09	51,34 $\pm$ 30,82	46,49 $\pm$ 31,61	0,179	4,9
Pain	62,12 $\pm$ 22,47	53,33 $\pm$ 29,77	60,75 $\pm$ 26,84	57,31 $\pm$ 28,17	0,677	1,523
Dyspnea	45,46 $\pm$ 34,23	39,17 $\pm$ 36,11	34,41 $\pm$ 27,64	30,41 $\pm$ 31,04	0,395	2,978
Insomnia	84,85 $\pm$ 22,92	63,33 $\pm$ 32,73	70,97 $\pm$ 29,87	60,82 $\pm$ 33,41	0,073	6,965
Appetite loss	72,73 $\pm$ 32,72	53,33 $\pm$ 33,59	58,06 $\pm$ 33,02	57,31 $\pm$ 33,19	0,369	3,152
Constipation	36,36 $\pm$ 27,71	28,33 $\pm$ 36,63	37,10 $\pm$ 37,26	25,15 $\pm$ 32,29	0,205	4,578
Diarrhea	24,24 $\pm$ 33,64	43,33 $\pm$ 33,08	34,95 $\pm$ 33,84	40,35 $\pm$ 31,96	0,219	4,43
Financial Function	60,61 $\pm$ 20,10	61,67 $\pm$ 35,85	50,00 $\pm$ 38,53	46,20 $\pm$ 32,58	0,142	5,448
Total Symptom Scales	57,58 $\pm$ 12,99	51,03 $\pm$ 20,58	53,56 $\pm$ 18,83	50,07 $\pm$ 19,46	0,539	2,162

Mean: Mean, SD: Standard Deviation, *Kruskal Wallis H Test.

When the relationship between educational status and Functional Scales is examined, there is no significant difference between the education statuses in terms of “Global health status/QOL,” “Physical Functioning,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning,” “Social Functioning” and “Total Functional Scales” scores ($p > 0.05$) (Table 3.5).

When the relationship between educational status and Symptom Scales is examined, there is a significant difference in the scores of “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” “Diarrhea,” “Financial Function” and “Total Symptom Scales” among education levels. No difference is observed ($p > 0.05$) (Table 3.5).

Table 3.6 The correlation between family history of breast cancer and quality of life for patients with breast cancer (n=170)

Scales	Family history of breast cancer			
	(Mean $\pm$ SD)			
	Yes(n=44)	No(n=126)	p*	U
Global health status/QOL	36,55 $\pm$ 21,51	36,57 $\pm$ 21,32	0,613	2631,5
Functional Scales				
Physical Function	54,39 $\pm$ 24,69	60,53 $\pm$ 24,90	0,157	2376
Role Function	56,44 $\pm$ 29,03	51,19 $\pm$ 28,14	0,353	2515,5
Cognitive Function	58,33 $\pm$ 32,65	64,29 $\pm$ 29,42	0,312	2492,5
Emotional Function	45,83 $\pm$ 27,99	44,44 $\pm$ 26,85	0,756	2685
Social Function	45,08 $\pm$ 35,69	49,74 $\pm$ 30,04	0,357	2517
Total Functional Scales	51,67 $\pm$ 24,19	54,06 $\pm$ 21,09	0,536	2598
Symptom Scales				
Fatigue	58,59 $\pm$ 25,40	60,49 $\pm$ 26,17	0,748	2682,5
Nausea	52,65 $\pm$ 30,06	49,34 $\pm$ 30,36	0,429	2553
Pain	53,41 $\pm$ 29,11	59,52 $\pm$ 27,12	0,132	2355,5
Dyspnea	34,09 $\pm$ 30,06	35,18 $\pm$ 31,92	0,936	2750,5
Insomnia	69,70 $\pm$ 34,34	65,61 $\pm$ 30,97	0,335	2515
Appetite loss	61,36 $\pm$ 31,29	56,35 $\pm$ 33,85	0,42	2554,5
Constipation	35,61 $\pm$ 38,98	29,36 $\pm$ 33,63	0,459	2577
Diarrhea	34,85 $\pm$ 32,91	39,15 $\pm$ 33,22	0,455	2571
Financial Function	59,09 $\pm$ 35,12	49,74 $\pm$ 35,21	0,125	2355
Total Symptom Scales	52,51 $\pm$ 19,96	51,89 $\pm$ 18,89	0,835	2713,5

Mean: Mean, SD: Standard Deviation, *Mann Whitney U Test.

When the relationship between having a family history of breast cancer and Functional Scales is examined, there is a significant difference between having a

family history of breast cancer in terms of “Global health status/QOL,” “Physical Functioning,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning,” “Social Functioning” and “Total Functional Scales” scores. Not seen ($p>0.05$) (Table 3.6).

When the relationship between having a family history of breast cancer and Symptom Scales is examined, the family history of breast cancer includes “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” “Diarrhea,” “Financial Function” and “Total Symptom Scales” There is no significant difference in terms of scores ($p>0.05$) (Table 3.6).

Table 3.7 The correlation between surgical treatment and quality of life for patients with breast cancer (n=170)

Scales	Surgical treatment			
	(Mean $\pm$ SD)			
	Mastectomy (n=118)	Breast-conserving surgery (n=52)	p*	U
Global health status/QOL	33,33 $\pm$ 20,12	43,91 $\pm$ 22,33	0,003	2196,5
Functional Scales				
Physical Function	56,95 $\pm$ 24,89	63,46 $\pm$ 24,61	0,12	2609,5
Role Function	50,99 $\pm$ 27,59	56,09 $\pm$ 30,07	0,316	2776,5
Cognitive Function	61,30 $\pm$ 27,47	66,03 $\pm$ 36,00	0,128	2625
Emotional Function	43,36 $\pm$ 27,51	48,08 $\pm$ 26,02	0,264	2739,5
Social Function	44,77 $\pm$ 30,64	57,05 $\pm$ 32,23	0,002	2388,5
Total Functional Scales	51,49 $\pm$ 21,23	57,86 $\pm$ 22,90	0,055	2500,5
Symptom Scales				
Fatigue	61,39 $\pm$ 25,90	56,84 $\pm$ 25,91	0,268	2743
Nausea	50,42 $\pm$ 27,60	49,68 $\pm$ 35,77	0,862	3017,5
Pain	60,03 $\pm$ 26,88	53,21 $\pm$ 29,16	0,158	2657
Dyspnea	35,88 $\pm$ 31,17	32,69 $\pm$ 31,99	0,496	2876,5
Insomnia	68,08 $\pm$ 31,85	63,46 $\pm$ 31,84	0,33	2794,5
Appetite loss	56,50 $\pm$ 33,05	60,26 $\pm$ 33,68	0,501	2877
Constipation	31,07 $\pm$ 35,87	30,77 $\pm$ 33,56	0,894	3031
Diarrhea	36,72 $\pm$ 32,44	41,03 $\pm$ 34,69	0,491	2873
Financial Function	59,32 $\pm$ 33,23	35,90 $\pm$ 34,83	0,0001	1935
Total Symptom Scales	53,28 $\pm$ 17,96	49,26 $\pm$ 21,44	0,177	2669,5

Mean: Mean, SD: Standard Deviation, *Mann Whitney U Test.

When the relationship between surgical treatment types and Functional Scales is examined, there is no significant difference between surgical treatment types in terms

of “Physical Functioning,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning” and “Total Functional Scale” scores ($p>0.05$). There is a significant difference between surgical treatment types regarding the "Global health status/QOL" score. ($p=0.003$). The "Global health status/QOL" score in those with "breast-conserving surgery" is seen to be significantly higher than those with "Mastectomy." There is a significant difference in the “Social Functioning” score among surgical treatment types. ($p=0.002$). The “Social Functioning” score in those with “breast-conserving surgery” is seen to be significantly higher than those with “Mastectomy” (Table 3.7).

When the relationship between surgical treatment types and Symptom Scales is examined, there is no significant difference between surgical treatment types in terms of “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” “Diarrhea” and “Total Symptom Scales” scores ($p>0.05$). There is a significant difference between surgical treatment types regarding the “Financial Function” score. ($p=0.0001$). The “Financial Function” score is seen to be significantly higher in those whose answer is “Mastectomy” than those whose answer is “Breast-conserving surgery” (Table 3.7).

Table 3.8 The correlation between time elapsing from surgery and quality of life for patients with breast cancer (n=170)

Scales	The time elapsing from surgery				
	(Mean ± SD)				
	1=1-6 months (n=69)	2=7-12 months (n=53)	3=13 months and longer (n=48)	p*	H
Global health status/QOL	38,04±23,37	34,91±18,78	36,28±21,16	0,955	0,093
Functional Scales					
Physical Function	61,64±26,36	62,01±23,56	51,67±23,20	0,045	6,221
Dual comparison	3<1				
	3<2				
Role Function	52,66±30,33	52,83±22,82	52,08±31,44	0,975	0,051
Cognitive Function	64,01±32,29	61,01±31,34	62,85±26,46	0,749	0,579
Emotional Function	43,60±32,22	45,75±23,72	45,49±22,54	0,893	0,226
Social Function	51,45±37,13	44,03±25,96	49,31±28,34	0,531	1,266
Total Functional Scales	54,59±25,08	53,92±18,86	51,25±20,29	0,42	1,736
Symptom Scales					
Fatigue	62,48±26,34	56,60±24,29	60,19±27,11	0,512	1,338
Nausea	47,83±31,69	50,31±30,04	53,47±28,55	0,586	1,068
Pain	58,45±29,65	56,60±21,77	58,68±30,94	0,861	0,299
Dyspnea	33,82±31,05	35,85±29,13	35,42±34,66	0,854	0,315
Insomnia	64,73±33,28	62,89±31,12	73,61±29,94	0,178	3,454
Appetite loss	56,04±35,93	59,75±30,91	57,64±32,06	0,883	0,249
Constipation	30,92±37,63	32,70±33,65	29,17±33,42	0,771	0,521
Diarrhea	43,00±31,88	38,36±34,22	30,56±32,86	0,098	4,652
Financial Function	56,52±33,48	43,40±38,45	55,56±33,22	0,108	4,444
Total Symptom Scales	52,69±19,87	50,51±17,92	52,83±19,59	0,857	0,309

Mean: Mean, SD: Standard Deviation, *Kruskal Wallis H Test.

When the relationship between the time after surgery groups and the Functional Scales were examined, there was no significant difference in the scores of “Global health status/QOL,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning,” “Social Functioning” and “Total Functional Scales” between the time groups after surgery ($p>0.05$). There is a significant difference in the “Physical Functioning” score between the groups during the duration of the surgery. ($p=0.045$). The "Physical Functioning" score of those with the duration group of "13 months and longer" is significantly lower than those with the duration group of "1-6 months" and "7-12 months" (Table 3.8).

When the relationship between the duration of the surgery and the Symptom Scales is examined, this relationship is in terms of scores of “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” “Diarrhea,” “Financial Function” and “Total Symptom Scales” among the groups of time after surgery. There is no significant difference ($p>0.05$) (Table 3.8).

Table 3.9 The correlation between chemotherapy treatment status and quality of life for patients with breast cancer (n=170)

Scales	Chemotherapy treatment status (Mean $\pm$ SD)	
	Yes (n=166)	No (n=4)
Global health status/QOL	36,35 $\pm$ 21,50	45,84 $\pm$ 8,33
Functional Scales		
Physical Function	58,07 $\pm$ 24,53	95,00 $\pm$ 10,00
Role Function	52,71 $\pm$ 28,50	45,83 $\pm$ 25,00
Cognitive Function	62,15 $\pm$ 30,34	87,50 $\pm$ 15,96
Emotional Function	44,33 $\pm$ 27,14	64,59 $\pm$ 15,77
Social Function	47,49 $\pm$ 31,12	91,67 $\pm$ 16,67
Total Functional Scales	52,83 $\pm$ 21,76	78,89 $\pm$ 6,91
Symptom Scales		
Fatigue	60,11 $\pm$ 25,90	55,56 $\pm$ 30,09
Nausea	51,10 $\pm$ 29,82	12,50 $\pm$ 25,00
Pain	58,13 $\pm$ 27,63	50,00 $\pm$ 33,34
Dyspnea	34,74 $\pm$ 31,22	41,67 $\pm$ 41,94
Insomnia	66,47 $\pm$ 32,10	75,00 $\pm$ 16,67
Appetite loss	57,43 $\pm$ 33,36	66,67 $\pm$ 27,22
Constipation	31,12 $\pm$ 35,42	25,00 $\pm$ 16,67
Diarrhea	37,95 $\pm$ 33,42	41,67 $\pm$ 16,67
Financial Function	52,81 $\pm$ 35,42	25,00 $\pm$ 16,67
Total Symptom Scales	52,25 $\pm$ 19,12	43,59 $\pm$ 19,86

Mean: Mean, SD: Standard Deviation, *Analysis cannot be performed due to insufficient data.

Since 166 of the patients received chemotherapy treatment and only four did not, a correlation could not be made between the two groups due to insufficient data (Table 3.9).

Table 3.10 The correlation between hormone therapy status and quality of life for patients with breast cancer (n=170)

Scales	Hormone therapy status			
	(Mean $\pm$ SD)			
	Yes (n=78)	No (n=92)	p*	U
Global health status/QOL	34,83 $\pm$ 20,88	38,04 $\pm$ 21,69	0,3	3260
Functional Scales				
Physical Function	56,67 $\pm$ 24,28	60,87 $\pm$ 25,41	0,305	3261
Role Function	51,71 $\pm$ 26,54	53,26 $\pm$ 29,98	0,791	3504,5
Cognitive Function	62,61 $\pm$ 29,32	62,86 $\pm$ 31,26	0,863	3533,5
Emotional Function	45,51 $\pm$ 24,46	44,20 $\pm$ 29,23	0,747	3485,5
Social Function	44,02 $\pm$ 29,42	52,35 $\pm$ 32,93	0,118	3095
Total Functional Scales	52,14 $\pm$ 20,04	54,54 $\pm$ 23,39	0,47	3357
Symptom Scales				
Fatigue	61,68 $\pm$ 25,30	58,58 $\pm$ 26,46	0,612	3427
Nausea	50,21 $\pm$ 29,61	50,18 $\pm$ 30,91	0,933	3561,5
Pain	60,68 $\pm$ 27,65	55,62 $\pm$ 27,66	0,304	3265
Dyspnea	37,61 $\pm$ 33,70	32,61 $\pm$ 29,23	0,387	3325
Insomnia	67,52 $\pm$ 31,31	65,94 $\pm$ 32,40	0,769	3499
Appetite loss	57,69 $\pm$ 32,97	57,61 $\pm$ 33,55	0,918	3556,5
Constipation	36,32 $\pm$ 37,68	26,45 $\pm$ 32,23	0,105	3103
Diarrhea	34,19 $\pm$ 32,67	41,30 $\pm$ 33,29	0,156	3154
Financial Function	55,98 $\pm$ 35,43	48,91 $\pm$ 35,10	0,163	3157
Total Symptom Scales	53,55 $\pm$ 19,88	50,78 $\pm$ 18,46	0,497	3371

Mean: Mean, SD: Standard Deviation, *Mann Whitney U Test.

When the relationship between hormonal treatment status and Functional Scales is examined, there is no significant difference in the scores of "Global health status/QOL," "Physical Functioning," "Role Functioning," "Cognitive Functioning," "Emotional Functioning," "Social Functioning" and "Total Functional Scales" between the status of receiving hormone therapy ($p>0.05$) (Table 3.10).

The relationship between hormone therapy status and Symptom Scales is tested. This is in terms of the scores of "Fatigue," "Nausea," "Pain," "Dyspnea," "Insomnia," "Appetite loss," "Constipation," "Diarrhea," "Financial Function," and "Total Symptom Scales" among the cases of receiving hormone therapy. Also, no significant difference is observed ($p>0.05$) (Table 3.10).

Table 3.11 The correlation between radiotherapy status and quality of life for patients with breast cancer (n=170)

Scales	Radiotherapy status			
	(Mean $\pm$ SD)			
	Yes (n=76)	No (n=94)	p*	U
Global health status/QOL	31,36 $\pm$ 19,24	40,78 $\pm$ 22,08	0,003	2628
Functional Scales				
Physical Function	50,79 $\pm$ 23,35	65,53 $\pm$ 24,30	0,0001	2275,5
Role Function	44,74 $\pm$ 24,98	58,87 $\pm$ 29,50	0,001	2562
Cognitive Function	59,43 $\pm$ 25,72	65,43 $\pm$ 33,44	0,069	3000
Emotional Function	44,19 $\pm$ 24,68	45,30 $\pm$ 28,99	0,603	3407
Social Function	40,79 $\pm$ 28,60	54,79 $\pm$ 32,57	0,003	2640
Total Functional Scales	48,04 $\pm$ 18,83	57,80 $\pm$ 23,27	0,0001	2444
Symptom Scales				
Fatigue	67,40 $\pm$ 25,16	54,02 $\pm$ 25,07	0,0001	2436
Nausea	52,41 $\pm$ 30,64	48,40 $\pm$ 29,94	0,326	3263
Pain	65,13 $\pm$ 24,22	52,13 $\pm$ 29,05	0,002	2581,5
Dyspnea	39,04 $\pm$ 30,98	31,56 $\pm$ 31,44	0,086	3051,5
Insomnia	73,25 $\pm$ 27,77	61,35 $\pm$ 33,97	0,024	2889,5
Appetite loss	62,28 $\pm$ 31,43	53,90 $\pm$ 34,26	0,1	3069
Constipation	32,46 $\pm$ 34,42	29,79 $\pm$ 35,74	0,509	3375
Diarrhea	37,28 $\pm$ 32,19	38,65 $\pm$ 33,97	0,828	3505,5
Financial Function	53,95 $\pm$ 31,26	50,71 $\pm$ 38,41	0,59	3406
Total Symptom Scales	56,58 $\pm$ 17,27	48,39 $\pm$ 19,83	0,003	2641

Mean: Mean, SD: Standard Deviation, *Mann Whitney U Test.

When the relationship between the status of patients receiving radiotherapy and Functional Scales is examined, no significant difference between the status of patients receiving radiotherapy is found in terms of “Cognitive Functioning,” “Emotional Functioning,” and scores ($p>0.05$). There is a significant difference between the radiotherapy status of the patients in terms of the “Global health status/QOL” score ($p=0.003$). The “Global health status/QOL” score of the patients who received radiotherapy is found to be significantly lower than those who did not. There is a significant difference between the patient's receiving radiotherapy regarding the “Physical Function” score ($p=0.0001$). The “Physical Functioning” score of the patients who did not receive radiotherapy is significantly higher than those who received it. There is a significant difference in the “Role Function” score between the patients receiving radiotherapy ($p=0.001$). The “Role Functioning” score of the patients who did not receive radiotherapy was significantly higher than those who received it. There is a significant difference in the “Social Function” score

between the patients receiving radiotherapy ($p=0.003$). The “Social Functioning” score of the patients who did not receive radiotherapy is significantly higher than those who received it. The patients receiving radiotherapy regarding the “Total Functional Scales” score ($p=0.0001$) are very different. The “Total Functional Scales” score of patients who received radiotherapy is markedly lower than those who did not (Table 3.11).

The relationship between the radiotherapy status of the patients and the Symptom Scales is examined with no significant difference between the patients receiving radiotherapy in terms of “Nausea,” “Dyspnea,” “Appetite loss,” “Constipation,” “Diarrhea” and “Financial Function” scores ($p>0.05$). There is a significant difference in the “Fatigue” score between the patients receiving radiotherapy ($p=0.0001$). The “Fatigue” score of the patients who received radiotherapy is significantly higher than those who did not. There is a significant difference in the “Pain” score between the patients receiving radiotherapy ($p=0.002$). The “Pain” score of the patients who received radiotherapy is significantly higher than those who did not. There is a significant difference between the patient's receiving radiotherapy in terms of the “Insomnia” score ($p=0.024$). The “Insomnia” score of the patients who received radiotherapy was significantly higher than those who did not. There is a significant difference between the patient's receiving radiotherapy in terms of the “Total Symptom Scales” score ($p=0.003$). The “Total Symptom Scales” score of patients who received radiotherapy is significantly higher than those who did not (Table 3.11).

Table 3.12 The correlation between receiving targeted treatment status and quality of life for patients with breast cancer (n=170)

Scales	Receiving targeted treatment status			
	(Mean $\pm$ SD)			
	Yes (n=78)	No (n=92)	p*	U
Global health status/QOL	36,32 $\pm$ 21,15	36,78 $\pm$ 21,58	0,989	3593,5
Functional Scales				
Physical Function	57,09 $\pm$ 24,68	60,51 $\pm$ 25,14	0,414	3327,5
Role Function	51,71 $\pm$ 25,00	53,26 $\pm$ 31,08	0,799	3508
Cognitive Function	64,96 $\pm$ 25,57	60,87 $\pm$ 33,83	0,635	3438,5
Emotional Function	46,37 $\pm$ 26,24	43,48 $\pm$ 27,84	0,57	3407,5
Social Function	45,51 $\pm$ 29,01	51,09 $\pm$ 33,50	0,35	3293,5
Total Functional Scales	53,02 $\pm$ 19,81	53,79 $\pm$ 23,61	0,57	3406,5
Symptom Scales				
Fatigue	58,12 $\pm$ 26,68	61,59 $\pm$ 25,27	0,347	3290
Nausea	47,01 $\pm$ 29,52	52,90 $\pm$ 30,72	0,242	3219,5
Pain	58,33 $\pm$ 26,15	57,61 $\pm$ 29,07	0,93	3560,5
Dyspnea	35,47 $\pm$ 32,39	34,42 $\pm$ 30,64	0,863	3535,5
Insomnia	65,81 $\pm$ 31,77	67,39 $\pm$ 32,02	0,717	3478
Appetite loss	53,42 $\pm$ 31,94	61,23 $\pm$ 33,98	0,115	3104,5
Constipation	28,20 $\pm$ 31,82	33,33 $\pm$ 37,63	0,521	3396
Diarrhea	33,76 $\pm$ 31,55	41,67 $\pm$ 34,10	0,136	3131,5
Financial Function	47,44 $\pm$ 34,20	56,16 $\pm$ 35,95	0,117	3104
Total Symptom Scales	49,93 $\pm$ 18,54	53,85 $\pm$ 19,52	0,275	3239,5

Mean: Mean, SD: Standard Deviation, *Mann Whitney U Test.

When the relationship between Receiving targeted treatment statuses and Functional Scales is examined, no significant difference between receiving targeted treatment status in terms of “Global health status/QOL,” “Physical Functioning,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning,” “Social Functioning” and “Total Functional Scales” scores is found ($p>0.05$) (Table 3.12).

When the relationship between the receiving targeted treatment statuses and Symptom Scales is examined, the receiving targeted treatment statuses, in terms of “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” “Diarrhea,” “Financial Function” and “Total Symptom Scales” scores are not significantly different ($p>0.05$) (Table 3.12).

Table 3.13 The correlation between receiving a psychological diagnosis status and quality of life for patients with breast cancer (n=170)

Scales	Receiving a psychological diagnosis status			
	(Mean $\pm$ SD)			
	Yes (n=45)	No (n=125)	p*	U
Global health status/QOL	40,37 $\pm$ 23,23	35,20 $\pm$ 20,52	0,089	2335,5
Functional Scales				
Physical Function	62,22 $\pm$ 22,83	57,76 $\pm$ 25,61	0,342	2544,5
Role Function	57,04 $\pm$ 28,53	50,93 $\pm$ 28,26	0,155	2416,5
Cognitive Function	64,81 $\pm$ 34,31	62,00 $\pm$ 28,84	0,345	2549,5
Emotional Function	46,30 $\pm$ 29,97	44,27 $\pm$ 26,06	0,644	2682,5
Social Function	50,37 $\pm$ 28,97	47,87 $\pm$ 32,52	0,56	2650
Total Functional Scales	56,05 $\pm$ 23,56	52,50 $\pm$ 21,27	0,271	2501
Symptom Scales				
Fatigue	57,78 $\pm$ 24,80	60,80 $\pm$ 26,35	0,404	2578,5
Nausea	50,00 $\pm$ 30,98	50,27 $\pm$ 30,08	0,876	2769
Pain	53,70 $\pm$ 27,27	59,47 $\pm$ 27,79	0,177	2436,5
Dyspnea	31,11 $\pm$ 29,64	36,27 $\pm$ 31,97	0,355	2563,5
Insomnia	60,00 $\pm$ 29,82	69,07 $\pm$ 32,29	0,056	2299,5
Appetite loss	57,78 $\pm$ 32,88	57,60 $\pm$ 33,44	0,969	2802
Constipation	26,67 $\pm$ 33,78	32,53 $\pm$ 35,54	0,339	2559
Diarrhea	44,44 $\pm$ 34,08	35,73 $\pm$ 32,57	0,135	2407,5
Financial Function	43,70 $\pm$ 39,46	55,20 $\pm$ 33,36	0,067	2311,5
Total Symptom Scales	49,57 $\pm$ 20,80	52,94 $\pm$ 18,48	0,166	2420,5

Mean: Mean, SD: Standard Deviation, *Mann Whitney U Test.

When the relationship between the receiving a psychological diagnosis status and Functional Scales is examined, significant differences between receiving a psychological diagnosis status in terms of “Global health status/QOL,” “Physical Functioning,” “Role Functioning,” “Cognitive Functioning,” “Emotional Functioning,” “Social Functioning” and “Total Functional Scales” scores are not found. ($p>0.05$) (Table 3.13).

When the relationship between Receiving a psychological diagnosis status and Symptom Scales is examined, “Fatigue,” “Nausea,” “Pain,” “Dyspnea,” “Insomnia,” “Appetite loss,” “Constipation,” “Diarrhea,” “Financial Function” and “Total Symptom Scales” scores among those receiving a psychological diagnosis status are not significantly different ($p>0.05$) (Table 3.13).

Table 3.14 Scale dimensions correlation

Correlation																	
Scales		Role Function	Cognitive Function	Emotional Function	Social Function	Total Functional Scales	Fatigue	Nausea	Pain	Dyspnea	Insomnia	Appetite loss	Constipation	Diarrhea	Financial Function	Total Symptom Scales	Global health status/QOL
Physical Function	r	,573**	,562**	,512**	,526**	,850**	-,680**	-,468**	-,455**	-,324**	-,347**	-,481**	-,252**	,013	-,236**	-,648**	,397**
	p	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,000	,001	,864	,002	,000	,000
Role Function	r		,424**	,369**	,497**	,685**	-,579**	-,246**	-,514**	-,231**	-,274**	-,431**	-,136	-,039	-,234**	-,532**	,370**
	p		,000	,000	,000	,000	,000	,001	,000	,002	,000	,000	,078	,617	,002	,000	,000
Cognitive Function	r			,485**	,567**	,744**	-,557**	-,327**	-,537**	-,236**	-,417**	-,434**	-,183*	-,082	-,404**	-,613**	,427**
	p			,000	,000	,000	,000	,000	,000	,002	,000	,000	,017	,288	,000	,000	,000
Emotional Function	r				,505**	,768**	-,532**	-,401**	-,522**	-,241**	-,373**	-,379**	-,226**	-,060	-,290**	-,592**	,454**
	p				,000	,000	,000	,000	,000	,002	,000	,000	,003	,436	,000	,000	,000
Social Function	r					,760**	-,515**	-,372**	-,477**	-,204**	-,275**	-,392**	-,251**	,026	-,365**	-,549**	,579**
	p					,000	,000	,000	,000	,008	,000	,000	,001	,734	,000	,000	,000
Total Functional Scales	r						-,736**	-,498**	-,618**	-,325**	-,438**	-,525**	-,283**	-,038	-,358**	-,757**	,550**
	p						,000	,000	,000	,000	,000	,000	,000	,626	,000	,000	,000
Fatigue	r							,460**	,728**	,394**	,492**	,570**	,380**	,039	,302**	,889**	-,433**
	p							,000	,000	,000	,000	,000	,000	,611	,000	,000	,000
Nausea	r								,329**	,327**	,287**	,462**	,293**	-,093	,273**	,663**	-,359**
	p								,000	,000	,000	,000	,000	,229	,000	,000	,000
Pain	r									,408**	,411**	,427**	,239**	-,008	,347**	,767**	-,363**
	p									,000	,000	,000	,002	,918	,000	,000	,000
Dyspnea	r										,331**	,266**	,224**	-,057	,186*	,544**	-,296**
	p										,000	,000	,003	,459	,015	,000	,000
Insomnia	r											,408**	,254**	-,047	,338**	,632**	-,342**
	p											,000	,001	,547	,000	,000	,000
Appetite loss	r												,244**	,003	,237**	,676**	-,386**
	p												,001	,973	,002	,000	,000
Constipation	r															-,595**	,114
	p														,000	,140	,000
Diarrhea	r															,029	,042
	p															,712	,588
Financial Function	r																,493**
	p																,000
Total Symptom Scales	r																-,519**
	p																,000
	N	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170

Spearman Correlation Test

There is a significant and positive correlation between the "Physical Function" score and the "Role Function" score ($r=0.573$; $p<0.05$). As the "Physical Function" score increases, the "Role Function" score rises. In addition, there is a significant and positive correlation between the "Physical Function" score and the "Cognitive Function" score ($r=0.562$; $p<0.05$). The same is valid with the "Physical Function" score and the "Emotional Function" score ($r=0.512$; $p<0.05$) and the correlation between the "Physical Function" score and the "Social Function" score ($r=0.526$; $p<0.05$). Similarly, there is a significant and positive correlation between the "Physical Function" score and the "Total Functional Scales" score ($r=0.850$; $p<0.05$). As the "Physical Function" score increases, the "Total Functional Scales" score also increases. In contrast, there is a significant and negative correlation between the "Physical Function" score and the "Fatigue" ($r=-0.680$; $p<0.05$), and this is true with the correlation between the "Physical Function" and the "Nausea" ($r=-0.468$; $p<0.05$) and with the correlation between the "Physical Function" and the "Pain" ($r=-0.455$; $p<0.05$). The exact correlation is between the "Physical Function" and the "Dyspnea" ($r=-0.324$; $p<0.05$), between the "Physical Function" and the "Insomnia" ($r=-0.347$; $p<0.05$), between the "Physical Function" and the "Appetite Loss" ($r=-0.481$; $p<0.05$). Also, the "Physical Function" score increases, and the "Constipation" score decreases ($r=-0.252$; $p<0.05$). There is no significant relationship between the "Physical Function" score and the "Diarrhea" score ($p>0.05$). When the "Physical Function" score increases, the "Financial Function" score decreases ($r=-0.236$; $p<0.05$). The "Physical Function" score rises, the "Total Symptom Scales" score falls ($r=-0.648$; $p<0.05$). It is similar ($r=0.397$; $p<0.05$) with the "Physical Function" and between the "Role Function" score and the "Cognitive Function" score ($r=0.424$; $p<0.05$) (Table 3.14).

Also, the "Role Function" score increases with the increase in the "Cognitive Function" score, and this also happens with ($r=0.369$; $p<0.05$) the "Role Function" and the "Emotional Function." Similarly, there is a significant and positive correlation between the "Role Function" score and the "Social Function" score ($r=0.497$; $p<0.05$). There is a significant and positive correlation between the "Role Function" score and the "Total Functional Scales" score ($r=0.685$; $p<0.05$), and the same occurs with a correlation between the "Role Function" score and the "Fatigue"

score ($r=-0.579$; $p<0.05$). There is a significant and negative correlation between the "Role Function" score and the decreases in the "Nausea" score ($r=-0.246$; $p<0.05$) increases the "Role Function" score ($r=-0.514$; $p<0.05$). Additionally, the "Role Function" ($r=-0.231$; $p<0.05$) increases, causing a drop in the "Dyspnea." Furthermore, ($r=-0.274$; $p<0.05$), the "Role Function" score increases with the drop in the "Insomnia" score. There is a significant and negative correlation between the "Role Function" score and the "Appetite Loss" score ($r=-0.431$; $p<0.05$), and the same is with a significant or negative correlation between the "Role Function" score and the "Constipation" score ($p>0.05$) and ($p>0.05$) there is a significant and negative relationship between the "Role Function" score and the "Financial Function" score. ($r=-0.234$; $p<0.05$). Also, the "Role Function" score and the "Total Symptom Scales" score are significantly and negatively correlated. ($r=-0.532$; $p<0.05$) and the "Role Function" score increases, the "Total Symptom Scales" score decreases. Likewise, ($r=0.370$; $p<0.05$) the "Role Function" score increases, and the "Global health status/QOL" score also increases (Table 3.14).

There is a significant and positive correlation between the "Cognitive Function" score and the "Emotional Function" score ($r=0.485$; $p<0.05$) and ($r=0.567$; $p<0.05$) the "Cognitive Function" score increases results in the growth in the "Social Function" score. In addition, ($r=0.744$; $p<0.05$) the "Cognitive Function" score increases with the rise in "Total Functional Scales." Likewise, the "Cognitive Function" score increases with the decrease of the "Fatigue" score ($r=-0.557$; $p<0.05$). There is a significant and negative correlation between the "Cognitive Function" score and the "Nausea" score ($r=-0.327$; $p<0.05$). Also, there is a negative correlation between the "Cognitive Function" score "Nausea" score. There is a significant and negative correlation between the "Cognitive Function" score and the "Pain" score ($r=-0.537$; $p<0.05$). In addition, the correlation between the "Cognitive Function" score and the "Dyspnea" score ($r=-0.236$; $p<0.05$) is significant and negative, and the same is true with the "Cognitive Function" score and the "Insomnia" score ($r=-0.417$; $p<0.05$) and between the "Cognitive Function" score and the "Appetite Loss" score ($r=-0.434$; $p<0.05$). In the same way, there is a significant and negative correlation between the "Cognitive Function" score and the "Constipation" score ($r=-0.183$; $p<0.05$). There is no significant relationship between

the "Cognitive Function" score and the "Diarrhea" score ($p>0.05$) and between the "Cognitive Function" score and the "Financial Function" score ($r=-0.404$; $p<0.05$). There is a significant and negative correlation between the "Cognitive Function" score and the "Total Symptom Scales" score ($r=-0.613$; $p<0.05$). As the "Cognitive Function" score increases, the "Total Symptom Scales" score decreases. There is a significant and positive correlation between the "Cognitive Function" score, the "Global health status/QOL" score ($r=0.427$; $p<0.05$) (Table 3.14) and "Emotional Function" score, and the "Social Function" score ($r=0.505$; $p<0.05$) are in significantly negative correlation. There is a significant and positive correlation between the "Emotional Function" score and the "Total Functional Scales" score ($r=0.768$; $p<0.05$). As the "Emotional Function" score increases, the "Total Functional Scales" score also increases. There is a significant and negative correlation between the "Emotional Function" score and the "Fatigue" score ($r=-0.532$; $p<0.05$). This also happens with the correlation between the "Emotional Function" score and the "Nausea" score ($r=-0.401$; $p<0.05$). There is a significant and negative correlation between the "Emotional Function" score and the "Pain" score ($r=-0.522$; $p<0.05$). As the "Emotional Function" score increases, the "Pain" score decreases. There is a significant and negative correlation between the "Emotional Function" score and the "Dyspnea" score ($r=-0.241$; $p<0.05$). As the "Emotional Function" score increases, the "Dyspnea" score decreases. A significant and negative correlation exists between the "Emotional Function" score and the "Insomnia" score. ($r=-0.373$; $p<0.05$). As the "Emotional Function" score increases, the "Insomnia" score decreases. There is a significant and negative correlation between the "Emotional Function" score and the "Appetite Loss" score ($r=-0.379$; $p<0.05$). The "Emotional Function" score decreases as the "Appetite Loss" score increases. There is a significant and negative correlation between the "Emotional Function" score and the "Constipation" score ($r=-0.226$; $p<0.05$). As the "Emotional Function" score increases, the "Constipation" score decreases. There is no significant relationship between the "Emotional Function" score and the "Diarrhea" score ($p>0.05$), while a significant and negative correlation between the "Emotional Function" score and the "Financial Function" score ($r=-0.290$; $p<0.05$) appears, and a significant and negative correlation between the "Emotional Function" score and the "Total Symptom Scales" score ($r=-0.592$; $p<0.05$) emerges. In the same manner, the

"Emotional Function" score and the "Global health status/QOL" score ($r=0.454$; $p<0.05$) work as in Table (14).

There is a significant and positive correlation between the "Social Function" score and the "Total Functional Scales" score ($r=0.760$; $p<0.05$). There is a significant and negative correlation between the "Social Function" score and the "Fatigue" score ($r=-0.515$; $p<0.05$). Also, the correlation between the "Social Function" score and the "Nausea" score ($r=-0.372$; $p<0.05$) is significant and negative, which is the same as with "Social Function" score and the "Pain" score ($r=-0.477$; $p<0.05$). "Social Function" score relates to the "Dyspnea" score ($r=-0.204$; $p<0.05$) in the same way. In terms of the correlation between the "Social Function" score and the "Insomnia" score ($r=-0.275$; $p<0.05$), it is negative, and the same is between the "Social Function" score and the "Appetite loss" score ($r=-0.392$; $p<0.05$) and between the "Social Function" score and the "Constipation" score ($r=-0.251$; $p<0.05$). In contrast, the "Social Function" score and the "Diarrhea" score ($p>0.05$) are not in a relation contradicting the negative correlation between the "Social Function" score and the "Financial Function" score ($r=-0.365$; $p<0.05$). There is a significant and negative correlation between the "Social Function" score and the "Total Symptom Scales" score ($r=-0.549$; $p<0.05$), contradicting the positive correlation between the "Social Function" score and the "Global health status/QOL" score ($r=0.579$; $p<0.05$)(Table 14).

There is a significant and negative correlation between the "Total Symptom Scales" score and the "Fatigue" score ($r=-0.736$; $p<0.05$). And the "Total Symptom Scales" score and the "Nausea" score ($r=-0.498$; $p<0.05$) have the same relationship, which is also an accurate correlation between the "Total Symptom Scales" score and the "Pain" score ($r=-0.618$; $p<0.05$), between the "Total Symptom Scales" score and the "Dyspnea" score ($r=-0.325$; $p<0.05$), between the "Total Symptom Scales" score and the "Insomnia" score ($r=-0.438$; $p<0.05$), between the "Total Symptom Scales" score and the "Appetite Loss" score ($r=-0.525$; $p<0.05$) and between the "Total Symptom Scales" score and the "Constipation" score ($r=-0.283$; $p<0.05$). Yet, there is no significant relationship between the "Total Symptom Scales" score and the "Diarrhea" score ($p>0.05$). In contrast, an effective and negative correlation between

the "Total Symptom Scales" score and the "Financial Function" score ($r=-0.358$; $p<0.05$). There is a significant and negative correlation between the "Total Symptom Scales" score and the "Total Symptom Scales" score ($r=-0.757$; $p<0.05$). As the "Total Symptom Scales" score increases, the "Total Symptom Scales" score decreases. There is a significant and positive correlation between the "Total Symptom Scales" score and the "Global health status/QOL" score ($r=0.550$; $p<0.05$). As the "Total Symptom Scales" score increases, the "Global health status/QOL" score also increases (Table 14).

There is a significant and positive correlation between the "Fatigue" score and the "Nausea" score ($r=0.460$; $p<0.05$), with an opposite relation between the "Fatigue" score and the "Pain" score ($r=0.728$; $p<0.05$). Yet, there is a significant and positive correlation between the "Fatigue" score and the "Dyspnea" score ($r=0.394$; $p<0.05$). And between the "Fatigue" score and the "Insomnia" score ($r=0.492$; $p<0.05$). Likewise, there is a significant and positive correlation between the "Fatigue" score and the "Appetite loss" score ($r=0.570$; $p<0.05$). There is an effective and positive correlation between the "Fatigue" score and the "Constipation" score ($r=0.380$; $p<0.05$), with a zero relationship between the "Fatigue" score and the "Diarrhea" score ($p>0.05$). There is a significant and positive correlation between the "Fatigue" score and the "Financial Function" score ($r=0.302$; $p<0.05$), which happens in the same way in the correlation between the "Fatigue" score and the "Total Symptom Scales" score ($r=0.889$; $p<0.05$). In contrast, a significant and negative correlation between the "Fatigue" score and the "Global health status/QOL" score ($r=-0.433$; $p<0.05$) emerges (Table 14).

There is a significant and positive correlation between the "Nausea" score and the "Pain" score ($r=0.329$; $p<0.05$) and a correlation between the "Nausea" score and the "Dyspnea" score ($r=0.327$; $p<0.05$) works in the same way. As the "Nausea" score increases, the "Dyspnea" score also increases. There is a significant and positive correlation between the "Nausea" score and the "Insomnia" score ($r=0.287$; $p<0.05$). As the "Nausea" score increases, the "Insomnia" score also increases. There is a significant and positive correlation between the "Nausea" score and the "Appetite loss" score ($r=0.462$; $p<0.05$), with the exact correlation between the "Nausea" score

and the "Constipation" score ($r=0.293$; $p<0.05$) and no significant relationship between the "Nausea" score and the "Diarrhea" score ($p>0.05$). Similarly, there is an important and positive correlation between the "Nausea" score and the "Financial Function" score ($r=0.273$; $p<0.05$) and between the "Nausea" score and the "Total Symptom Scales" score ($r=0.663$; $p<0.05$). There is a significant and negative correlation between the "Nausea" score and the "Global health status/QOL" score ($r=-0.359$; $p<0.05$). As the "Nausea" score increases, the "Global health status/QOL" score decreases (Table 14).

There is a significant and positive correlation between the "Pain" score and the "Dyspnea" score ($r=0.408$; $p<0.05$). There is a powerful and positive correlation between the "Pain" score and the "Insomnia" score ($r=0.411$; $p<0.05$), and the same is between the "Pain" score and the "Appetite Loss" score ($r=0.427$; $p<0.05$) and between the "Pain" score and the "Constipation" score ($r=0.239$; $p<0.05$). There is no relationship between the "Pain" score and the "Diarrhea" score ($p>0.05$) and significant and positive correlation between the "Pain" score and the "Financial Function" score ($r=0.347$; $p<0.05$). In addition, there is a significant and positive correlation between the "Pain" score and the "Total Symptom Scales" score ($r=0.767$; $p<0.05$) and an inverse correlation between the "Pain" score and the "Global health status/QOL" score ($r=-0.363$; $p<0.05$)(Table 14).

There is a significant and positive correlation between the "dyspnea" score and the "Insomnia" score ($r=0.331$; $p<0.05$). There is an important and positive correlation between the "dyspnea" score and the "appetite loss" score ($r=0.266$; $p<0.05$), which is the same between the "Dyspnea" score and the "Constipation" score ($r=0.224$; $p<0.05$). Yet, there is no significant relationship between the "Dyspnea" score and the "Diarrhea" score ($p>0.05$) and a powerful and positive correlation between the "Dyspnea" score and the "Financial Function" score ($r=0.186$; $p<0.05$), which is also true with the "dyspnea" score and the "Total Symptom Scales" score ($r=0.544$; $p<0.05$). In contrast, there is a significant and negative correlation between the "dyspnea" score and the "Global health status/QOL" score ($r=-0.296$; $p<0.05$)(Table 14).

There is a significant and positive correlation between the "Insomnia" score and the "Appetite loss" score ($r=0.408$; $p<0.05$). There is an effective and positive correlation between the "Insomnia" score and the "Constipation" score ($r=0.254$; $p<0.05$), with no relationship between the "Insomnia" score and the "Diarrhea" score ($p>0.05$). There is a significant and positive correlation between the "Insomnia" score and the "Financial Function" score ($r=0.338$; $p<0.05$). As the "Insomnia" score increases, the "Financial Function" score also increases. There is a significant and positive correlation between the "Insomnia" score and the "Total Symptom Scales" score ($r=0.632$; $p<0.05$) and a significant and negative correlation between the "Insomnia" score and the "Global health status/QOL" score ($r=-0.342$; $p<0.05$) (Table 14).

There is a significant and positive correlation between the "Appetite loss" score and the "Constipation" score ($r=0.244$; $p<0.05$). There is no significant relationship between the "appetite loss" score and the "Diarrhea" score ($p>0.05$), with a powerful and positive correlation between the "Appetite loss" score and the "Financial Function" score ($r=0.237$; $p<0.05$). There is a significant and positive correlation between the "Appetite loss" score and the "Total Symptom Scales" score ($r=0.676$; $p<0.05$). Also, the correlation between the "appetite loss" score and the "Global health status/QOL" score ($r=-0.386$; $p<0.05$) is negative (Table 3.14).

There is a negative correlation between the "Constipation" score and the "Diarrhea" score ($r=-0.595$; $p<0.05$) without any significant relationship between the "Constipation" score and the "Financial Function" score ($p>0.05$) and a positive correlation between the "Constipation" score and the "Total Symptom Scales" score ($r=0.407$; $p<0.05$). There is a significant and negative correlation between the "Constipation" score and the "Global health status/QOL" score ($r=-0.138$; $p<0.05$) (Table 3.14). Moreover, there is no relationship between the "Diarrhea" score and the "Financial Function," "Total Symptom Scales," and "Global health status/QOL" scores ($p>0.05$) (Table 3.14).

There is a significant and positive correlation between the "Financial Function" score and the "Total Symptom Scales" score ($r=0.493$; $p<0.05$), while it is an inverse

relationship between the “Financial Function” score and the “Global health status/QOL” score ($r=-0.444$; $p<0.05$)(Table 3.14).

There is a significant and negative correlation between the "Total Symptom Scales" score and the "Global health status/QOL" score ($r=-0.519$; $p<0.05$)(Table 3.14).

Table 3.15 Distribution of patients' average quality of life scores

	Mean	SD
Global health status/QOL	36,57	21,32
Functional Scales		
Physical Function	58,94	24,92
Role Function	52,55	28,38
Cognitive Function	62,75	30,30
Emotional Function	44,80	27,08
Social Function	48,53	31,55
Total Functional Scales	53,44	21,89
Symptom Scales		
Fatigue	60,00	25,91
Nausea	50,20	30,23
Pain	57,94	27,69
Dyspnea	34,90	31,37
Insomnia	66,67	31,82
Appetite loss	57,65	33,19
Constipation	30,98	35,08
Diarrhea	38,04	33,10
Financial Function	52,16	35,32
Total Symptom Scales	52,05	19,12

Mean: Mean, SD: Standard Deviation

The “Physical Function” scale mean score of the patients participating in the study is 58.94, and the “Role Function” scale mean score is 52.55. The “Cognitive Functioning” scale mean score is 62.75. In addition, the “Emotional Function” scale mean score is 44.80, “Social Function” scale mean score ” scale mean score is 48.53, the “Total Functional Scales” scale mean score of 53.44, and “Fatigue” scale mean score of 60.00, “Nausea” scale mean score is 50.20 and “Pain” scale mean score is 57.94. Yet, the “Dyspnea” scale mean score and the “Insomnia” scale mean score are 34.90 and 66.67, respectively. The “Appetite loss” scale mean score is 57.65; the “Constipation” scale mean score is 30.98; the “Diarrhea” scale mean score is 38.04. Also, the “Financial Function” scale mean score is 52.16, the “Total Symptom

Scales” scale mean score is 52.05, the “Global health status/QOL” scale mean score is 36.57, and the same time, “Physical Function” scale score values (0-100.0). The “Role Function” scale score values (0-100.0), with “Cognitive Functioning” scale score values (0-100.0). In addition, the “Emotional Function” scale score values (0-100, 0). The “Social Function” scale score values are (0-100.0) with the “Total Functional Scales” scale score values (6.67-100.0). The “Fatigue” scale score values and the Nausea” scale score values are (0-100.0) and (0-100.0), respectively. “Pain” scale score values (0-100.0), “Dyspnea” scale score values (0-100.0), and “Insomnia” scale score values (0-100.0). -100.0), “Appetite loss” scale score values (0-100.0), “Constipation” scale score values (0-100.0), “Diarrhea” scale score values (0-100.0) are obtained “ Between “Financial Function” scale score values (0-100.0). The “Total Symptom Scales” scale score values (12.82-94.87) with the “Global health status/QOL” scale score values (0-100.0) change (Table 3.15).

4. DISCUSSION

This chapter presents detailed findings, interpretations, and systematic discussions of the study results regarding the study objectives. Supportive evidence of such findings is available in the relevant literature.

4.1 Discussions of the correlation between age and quality of life for patients with breast cancer

Findings within this table showed that when the relationship between age groups and functional Scales is examined, there is no significant difference between age groups. In terms of "Global health status/QOL" ($p>0.05$). These findings are the same as these of Yusoff et al. (2022). Yusoff et al. (2022) conducted a cross-sectional study on 100 women to assess the quality of life in women with breast cancer in a tertiary referral university hospital, University of Kebangsaan, Malaysia Medical Center, Malaysia. They found that there is no significant difference between age groups in terms of global health status/QOL. This study shows a significant difference between age groups regarding the "Physical Functioning" score ($p=0.003$). The "Physical Functioning" score in the age group of "50-54" is seen to be significantly lower than those in the age group of "40-44", "45-49" and "55+". These findings have disagreed with Al-Zahrani et al. (2019). They conducted a cross-sectional study to assess the quality of life in women with breast cancer undergoing treatment and follow-up at King Salman Armed Forces Hospital in Tabuk in Saudia Arabia. They found no significant association between age groups regarding Physical Functioning (Al-Zahrani et al., 2019). This result is thought to be due to the deceleration in physical functions with the increase in age. There is a significant difference between age groups regarding the "Total Symptom Scales" score ($p=0.022$). The "Total Symptom Scales" score of those in the age group of "40-44" is seen to be significantly lower than those in the age group of "45-49", "50-54" and "55+". It is thought that the incidence of symptoms with age increases since young people are more resistant to signs.

4.2 Discussion of the correlation between employment status and quality of life for patients with breast cancer

Testing relationship between working status and Functional Scales is examined and shows no significant difference between working statuses. These findings agree with Al-Zahrani et al. (2019), who found no significant association between employment and Physical Functioning (Al-Zahrani et al. 2019). In addition, examining the relationship between working status and Symptom Scales reveals no significant difference ($p>0.05$). There is a substantial difference between employment status and the "Financial Function" score ($p=0.001$). The "Financial Function" score of those not working is significantly lower than those of housewives and employees. These findings contradict Al-Zahrani et al. (2019), who found no significant association between employment and Financial Functioning (Al-Zahrani et al. 2019). Gangane et al. (2017) discovered that working women had a higher quality of life than jobless women when it came to quality of life. Therefore, work can be understood as an essential effect for people to fulfill their needs because it easily meets their wants and will make them feel better. This contributes to an increase in their quality of life (Erturhan Turk & Yilmaz, 2018). The average monthly income of a family was found to be one of the primary predictors of individuals' levels of psychological well-being (Alzehr et al., 2022). Therefore, patients with low incomes should be given special consideration because they have a greater likelihood of experiencing psychological impairment and anxiety due to breast cancer (Abu-Helalah et al., 2014). Therefore, these conditions negatively affect the quality of life of patients. This study result is acceptable as the vast majority of women in Iraqi society are homemakers who are not working.

4.3 Discussion of the correlation Income and quality of life for patients with breast cancer

Exploring the relationship between income status and Functional Scales and Symptom Scales shows no significant difference between income status ($p>0.05$). There is a substantial difference between income levels regarding the "Financial Function" score ($p=0.0001$). The "Financial Function" score of those whose income

is higher than their expenses is significantly lower than those whose income is less than their expenses and whose income is equal to their costs. The “Financial Function” score of those whose income is similar to their costs is significantly lower than those whose income is less than their expenses. These findings confirm Yusoff et al. (2022), who found no significant difference between employment regarding financial functioning (Yusoff et al. 2022). This finding can be interpreted as the financial aspect of the patient's quality of life affecting almost all other elements. As in other health conditions, the patient's age plays a negative role as its role increases, possibly due to the aging process. A high educational status might mean a high income, while high income is a synonym for access to high-quality health care.

4.4 Discussion of the correlation between educational status and quality of life for patients with breast cancer

Findings showed that when the relationship between educational status and Functional Scales is examined, there is no significant difference between the education statuses. ($p>0.05$). These findings agree with Al-Zahrani et al. (2019), who showed no significant association between education level and the Quality of Life Scales. No significant difference is observed when the relationship between educational status and Symptom Scales is examined ($p>0.05$). Gardikiotis et al. (2015) found a positive and moderately significant association between quality of life and higher education. The research (Zhang et al. 2017) yielded similar results, in which this study identified education level as a significant demographic covariate. It is possible to say that education stimulates people to search for and learn about treatments for ailments, enhancing people's abilities to deal with them (Ganesh et al., 2016). A high educational status might mean high income, while high income is the synonym for access to high-quality health care. This study result is acceptable as the vast majority of women in Iraqi society are homemakers who are not working.

4.5 Discussion of the correlation between family history of breast cancer and quality of life for patients with breast cancer

When the relationship between having a family history of breast cancer and Functional Scales and Symptom Scales are examined, a significant difference between having a family history of breast cancer is not seen ($p>0.05$). An important factor in determining a low quality of life score is a history of cancer in one's family (Abu-Helalah et al., 2014). It is recommended that counselors and programs that provide psychological assistance also focus on family history as a factor that could harm quality-of-life scores. The results of this study are thought to be due to the low number of patients with a family history of cancer in the study sample.

4.6 Discussion of the correlation between surgical treatment and quality of life for patients with breast cancer

In the examination, the relationship between surgical treatment types and Functional Scales is examined, found a significant difference between surgical treatment types in terms of the "Global health status/QOL" score. ($p=0.003$). The "Global health status/QOL" score in those with "breast-conserving surgery" is seen to be significantly higher than those with "Mastectomy," with a significant difference in terms of the "Social Functioning" score among surgical treatment types ($p=0.002$). The "Social Functioning" score in those with "breast-conserving surgery" is seen to be significantly higher than those with "Mastectomy." Moreover, the testing relationship between surgical treatment types and Symptom Scales is examined and shows no significant difference ($p>0.05$). There is a substantial difference between surgical treatment types regarding the "Financial Function" score. ($p=0.0001$). The "Financial Function" score is seen to be significantly higher in those whose answer is "Mastectomy" than those whose answer is "Breast-conserving surgery." These findings confirm with Yusoff et al. (2022) that there is no significant difference between surgical mastectomy and Quality of Life Levels (Yusoff et al. 2022). When the literature is analyzed, appearance and feelings about one's body are significant factors, particularly for younger women who have undergone a mastectomy to remove their breasts. According to Winters et al. (2014), the possibility that these

women would experience depression may result in a lower quality of life regarding their ability to engage with others socially, maintain mental health, and manage their emotions. Women diagnosed with breast cancer who underwent mastectomy benefited from emotional support because it allowed them to talk about their thoughts, feelings, requirements, and experiences with the disease. It has been observed that, over time, women may perceive a decrease in emotional support, which may be related to personality factors or one's psychological state (Fallbjörk et al., 2013). It is thought that the result of this study is because breast-conserving surgery protects women's self-confidence and does not affect their social relations.

4.7 Discussion of the correlation between time elapsing from surgery and quality of life for patients with breast cancer

Findings showed that "Functioning" and "Total Functional Scales" between the time groups after surgery ($p>0.05$) had no significant difference in terms of the "Physical Functioning" score between the groups during the duration of the surgery. ($p=0.045$). The "Physical Functioning" score of those with the duration group of "13 months and longer" is significantly lower than those with the duration group of "1-6 months" and "7-12 months". When the relationship between the duration of the surgery and the Symptom Scales is examined, there is no significant difference ($p>0.05$). This study result indicates the improvement of the patient's physical functions after surgery.

4.8 Discussion of the correlation between treatment statuses and quality of life for patients with breast cancer

In this study, since 166 patients received chemotherapy treatment and only four patients did not, a correlation could not be made between the two groups due to insufficient data. Findings showed no significant difference exists when the relationship between hormonal treatment status and Functional Scales and Symptom Scales are examined ($p>0.05$). These findings refute Yusoff et al. (2022) findings. They found that there is no significant difference between hormonal therapy and Quality of Life Levels. There is a significant difference between the radiotherapy status of the patients in terms with "Global health status/QOL" score ($p=0.003$). The

“Global health status/QOL” score of the patients who received radiotherapy was found to be significantly lower than those who did not. These findings contradict Yusoff et al. (2022) who found that there is no significant difference between radiotherapy and Quality of Life Levels (Yusoff et al., 2022). The “Physical Functioning” score of the patients who did not receive radiotherapy was found to be significantly higher than those who received it ($p=0.0001$). Also, there is a significant difference in terms of the “Role Function” ($p=0.001$), “Social Function” ($p=0.003$), and “Total Functional” ($p=0.0001$) Scalescore between the patients receiving radiotherapy. The “Role Functioning” score of the patients who did not receive radiotherapy is significantly higher than those who received it. The “Social Functioning” score of the patients who did not receive radiotherapy is markedly higher than those who received it. The score “Total Functional Scales” of patients who received radiotherapy is considerably lower than those who did not. These findings come in agreement with Al-Zahrani et al. (2019). They found a significant association between the patients receiving radiotherapy and the Quality-of-Life Scales (Al-Zahrani et al., 2019).

When the relationship between the radiotherapy status of the patients and the Symptom Scales was examined, no significant difference between the patients receiving radiotherapy in terms of “Nausea,” “Dyspnea,” “Appetite loss,” “Constipation,” “Diarrhea” and “Financial Function” scores ($p>0.05$) are found to be a significant difference in terms of the “Fatigue” ($p=0.0001$), “Pain” ($p=0.002$) “Insomnia” ($p=0.024$), “Total Symptom Scales” ($p=0.003$) score between the patients receiving radiotherapy. The “Fatigue” score of the patients who received radiotherapy is significantly higher than those who did not. The “Pain” score of the patients who received radiotherapy was considerably higher than those who did not. The “Insomnia” score of the patients who received radiotherapy is significantly higher than those who did not. The “Total Symptom Scales” score of patients who received radiotherapy is markedly higher than those who did not. Patients being treated for breast cancer said that fatigue is the most common yet underappreciated negative consequence of their treatment. It is a troubling feeling of physical, emotional, or cognitive weakness that is chronic and subjective, and it is associated with malignant disease. This symptom gets significantly worse while undergoing

radiation therapy, and it gets even worse while doing chemotherapy. This is another issue that contributed to the feeling of exhaustion was anemia. According to Xiao et al. (2016), to resolve these issues, several interventional procedures will need to be utilized, and these tactics should be adapted to meet each patient's requirements. Findings of multiple studies indicated that these agonizing symptoms could last for a significant amount of time following a mastectomy, reducing the postoperative quality of life (Murgic et al., 2012). The findings of a study that was quite similar to this one that was carried out in Saudi Arabia with 145 participants similarly showing unpleasant symptoms such as sleeplessness, loss of appetite, and dyspnea were present (Paraskevi, 2012).

4.9 Discussion of distribution of patients' average quality of life scores

In this study, "Cognitive Functioning" and "Insomnia" had the highest scale mean scores. Al-Zahrani et al. (2019) found that there are reasonable means of (physical functioning, role functioning, and cognitive functioning), and moderate means of (emotional and social functioning). They reported high standards of (fatigue, nausea, and pain, insomnia, loss of appetite, and financial functioning), moderate means of (emotional and social functioning) (Al-Zahrani et al. 2019). In a study, the mean overall score of the EORTC QLQ-30 quality of life scale was 73.57, the mean emotional status was 66.58, and the mean social function was 64.35 (Saric, 2021).

Breast cancer is common in Bahrain and other Gulf Cooperation Council countries (Alsayyad and Hamadeh, 2002). Women under 40 have a higher incidence of breast cancer than women in Western countries (Chiedozi et al. 1., 2003). Women living in Arab countries face cultural taboos about breast cancer. Some families think that their daughters cannot marry if the diagnosis of breast cancer is stopped (Abu-Naser, 2007). In Arab countries, the life expectancy of breast cancer patients, the younger age at diagnosis, and the cultural norms and values make information on the quality of life in this region unique.

In Arab countries, for women patients who operated on breast cancer, it is thought that reducing the need for additional treatment by diagnosing breast cancer as early

as possible and regularly evaluating patients in terms of their psychosocial status as well as their physical level will make a significant contribution to the protection and improvement of their quality of life.



5. CONCLUSION AND RECOMMENDATIONS

According to the present study findings and on the bases of the discussions and interpretations, the following conclusions have been listed below:

- There is a significant association between the quality of life of patients undergoing surgical mastectomy in terms of physical functioning ($p=0.003$), fatigue ($p=0.029$), nausea ($p=0.036$), total symptom scales ($p=0.022$) scores, and age groups.
- There is a significant association between the quality of life of patients undergoing surgical mastectomy regarding financial functioning score and employment status ($p=0.001$).
- There is a significant association between the quality of life of patients undergoing surgical mastectomy regarding financial functioning score and income ($p=0.0001$).
- There is no significant association between the quality of life of patients undergoing surgical mastectomy regarding scale scores and educational status ($p>0.05$).
- There is no significant association between the quality of life of patients undergoing surgical mastectomy regarding scale scores and family history of breast cancer ($p>0.05$).
- There is a significant association between the quality of life of patients undergoing surgical mastectomy in terms of total functional score ($p=0.055$), financial function ($p=0.0001$), and surgical treatment. There is a significant association between the quality of life of patients undergoing surgical mastectomy regarding physical function score and time elapsing for surgery ($p=0.045$).
- Since 166 of the patients received chemotherapy treatment and only four did not, a correlation could not be made between the two groups due to insufficient data.
- There is no significant association between the quality of life of patients undergoing surgical mastectomy in terms of scale scores and hormone therapy ($p>0.05$).

- There is a significant association between the quality of life of patients undergoing surgical mastectomy in terms of Global health status/QOL ($p=0,003$), physical functioning ($p=0.001$), role function ($p=0.01$), social function ($p=0,003$), total functional ($p=0,0001$), fatigue ($p=0,0001$), pain ($p=0,002$), insomnia ($p=0,024$) complete symptom scales ($p=0,003$) scores and radiotherapy.
- There is no significant association between the quality of life of patients undergoing surgical mastectomy regarding scale scores and receiving targeted treatment statuses ($p>0.05$).
- There is no significant association between the quality of life of patients undergoing surgical mastectomy regarding scale scores and receiving a psychological diagnosis status ($p>0.05$).
- “Total Functional Scales” mean score is 53.44.
- The “Total Symptom Scales” mean score is 52.05.
- The “Global health status/QOL” mean score is 36.57.

5.1 Recommendations

The study has the following recommendations:

- It provides the necessary information to patients about the complications that may occur after discharge and referral to the hospital in the event of the development of these complications.
- Informing the patients about the check-up times while planning the discharge after the operation.
- It is recommended that the study be repeated in a larger sample group.

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APPENDICES

APPENDIX 1. Questionnaire

APPENDIX 2. Scale

APPENDIX 3. Arabic Scale

APPENDIX 4. Approval of the Ethics Committee

APPENDIX 5. Approval To Use The Questionnaire

**APPENDIX 6. The Agree of The Research Committee of The Medical City
Directorate**

APPENDIX 7. Editing Certificate

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APPENDIX 1. Questionnaire



APPENDIX 1. (continuing) Questionnaire



APPENDIX 2. Scale



APPENDIX 2. (continuing) Scale



APPENDIX 3. Arabic Scale



APPENDIX 3. (continuing) Arabic Scale



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You have my permission.



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