

Title: Quality of Life among Breast Cancer Patients at Khartoum Oncology Centre, Radiotherapy and Nuclear Medicine in Sudan

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Abstract: *The research aimed to identify the level of quality of life among breast cancer patients at Khartoum Center for Oncology, Radiotherapy and nuclear Medicine .it was a descriptive correlational study, the sample consisted of (116), of women with breast cancer at the Khartoum Oncology Center, and they were selected by a simple random selection, The researchers used the quality of life scale, Prepared by Ahmed Hussain Ahhmed Mohamed (2011), the data were analysed by the statistical package for social sciences (SPSS), using the T.Test for one sample, the T.Test for the two independent samples, and the single variance test. There are statistically significant differences in the quality of life of breast cancer patients due to the age variable. There are statistically significant differences in quality of life scores in breast cancer patients attributed to marital status. . There are differences in the quality of life scores of breast cancer patients that attributed to the level of education. There are statistically significant differences in the quality of life scores of breast cancer patients attributed to the duration of the disease. The study came out with a set of recommendations, the most important of which is to build guidance programs to raise awareness of breast cancer among breast cancer patients in hospitals.*

Keywords: Quality of Life, Breast Cancer, Oncology, Radiotherapy.

Introduction:

Researchers' interest in the concept of quality of life has increased since the beginning of the second half of the twentieth century linked to positive psychology, which came in response to the importance of a positive view of the lives of individuals, and research issues have varied in this context, including subjective experiences, habits and positive personality traits, and everything that leads to improving the quality of life, and studies of the last century have confirmed that the positive side of the human personality is more prominent than the negative side, and that these two aspects do not necessarily represent opposite directions, but rather move Human behaviour Between them according to many factors associated with this behaviour. the term quality of life is concept that have received great attention in the natural, human and social sciences, where psychology was interested in studying the quality of life in the first place, where this concept was adopted in various psychological aspects, and psychology was the first to understand and identify the variables affecting the quality of human life, primarily because the quality of life in the end is an expression of self-awareness of that quality of life For the human being. The term quality of life is also used frequently to study the effects of incurable diseases, including cancer in its various aspects, especially breast cancer, which causes a threat to human life, especially women, as it causes them a state of fear, panic and dissatisfaction with their life.

Study problem:

The quality of life is a component that influence individual at any setting, when individual is ill the quality of life can help in overcoming the illness in particular if it is chronic illness, Brest cancer among the most common type of cancer that fortunately is curable, study the quality of life in relation to breast cancer patients among breast cancer patients at the Oncology Hospital in Khartoum will be of great issues by looking to the following questions:

1. What is the general characteristic of the quality of life level of breast cancer patients at Khartoum Oncology Hospital?
2. Are there differences in the quality of life of breast cancer patients in the study sample in according to marital status?
3. Are there differences in the quality of life of breast cancer patients according to the age variable?
4. Is there a relation between quality of life among breast cancer patients in the study sample by their educational level?
5. Is there a relation between quality of life in breast cancer patients according to the duration of the disease?

Importance of the study:

The importance of the study lies in identifying the quality of life for breast cancer patients at the Oncology Hospital in Khartoum State, as well as working to help the competent authorities in building treatment and guidance programs based on the findings, 'as it is a theoretical contribution to the field of positive psychology' in addition to the impact of the library with a theoretical framework for students with specialization.

Study hypotheses:

1. The quality of life of breast cancer patients at Khartoum Oncology Hospital is low.
2. There are differences in the quality of life of breast cancer patients in the study sample according to marital status.
3. There are differences in the quality of life of breast cancer patients according to the age variable.
4. Relationship is found in the quality of life in breast cancer patients with the educational level variable.
5. There is a relation between quality of life in breast cancer patients in the study sample according to the duration of the disease.

Study Terminology:

Breast cancer: It is the abnormal growth of breast cells where these cells grow in a way that is not controlled by the body, and if not treated in time, they will spread to other areas of the body, and their symptoms are physically, psychologically and socially harmful (American Cancer Society, 2012).

Breast Cancer Patients:

In the present study, they are patients who have been diagnosed with breast cancer by oncologists and specialist doctors through clinical examinations, and registered with the Khartoum Oncology, Radiotherapy and Nuclear Medicine Center in Khartoum State.

Quality of Life:

The individual's sense of satisfaction, happiness and the ability to satisfy needs in the subjective and objective dimensions of life that include personal growth, physical and material happiness, social integration, and rights. (Khansa Al-Karkhi, 2011), either procedurally the scores obtained by breast cancer patients in the quality of life measures used in the current study.

Study limits: Limit in terms of time and place 2021 at Oncology Hospital in Khartoum.

Quality of Life: Definition

The World Health Organization (WHO, 2005) has defined quality of life as: "an individual's perception of his or her status in life in the context or cultural environment and value systems in which he lives, and in relation to his or her goals, expectations, norms and affairs.

It is defined as: the individual's sense of satisfaction, happiness and the ability to satisfy needs in the subjective and objective dimensions of life that include personal growth, physical and material happiness, social integration, and rights. (Khansa Al-Karkhi, 2011).

Betton (2004) noted that it is a cognitive-emotional assessment of life that includes an individual's mood, emotional reactions to events or judgment about life achievements, and life satisfaction with a sense of conformity.

From the above, the researcher believes that the quality of life expresses the extent to which the individual feels satisfied, happy and psychologically and socially compatible.

The concept of quality of life:

We find that the concept of quality of life is comprehensive and broad, and psychology has taken precedence in determining its concept, as it is used in all areas, including: professional, father of my head and health, and is a measure to assess the well-being of individuals and communities. In addition, the concept of quality of life came as an extension of previous efforts in sciences other than psychology, where the beginnings of scientific knowledge of this concept were organized in economics and sociology, and therefore the study of this concept from a psychological perspective It has gained great importance as a result of the awareness of economists, sociologists and political decision-makers, of the fact that life is not measured by numbers and statistics, but in fact it is

responses and feelings, as the increase in economic growth rates, the rise in average per capita income and the improvement in the level of services and well-being provided to him, does not necessarily lead to satisfying his diverse needs and satisfying his personal ambitions as well as confirming his human values (Ibrahim Ragab, 2005).

A historical view of the concept of quality of life:

In 1975, the term quality of life began to be used and became part of the medical term used, and it began to be used systematically and regularly in the early eighties when this term was used with Ornam patients, when doctors faced the problem that the treatment of some diseases has a high cost of payment in order to increase the life expectancy of these patients. Quality of life has made an effective contribution to research related to patient care.

It is used to reflect the importance of how the patient feels and is satisfied with the health services provided, along with the traditional view that focuses on disease outcomes. Saleh whisper. 2010, p. 47) Judd (1990) believes that quality of life is the product of unique interactions between the individual and private life situations, and defined it as the degree to which the individual enjoys his important potential in his life or in other words to what extent the individual sees his good life and that quality of life is a concept that reflects the desired life situations of the individual in three main areas of life: community family life Community, work and health.

Components of quality of life:

It can be said that quality of life is the emotional practice of daily social and environmental activities with a high degree of success and psychological satisfaction with life in general and his sense of positivity and mental health, and overcoming the obstacles and pressures facing him effectively in order to accomplish these activities competently, as the quality of life has three main components:

- 1- The inner sense of good condition and satisfaction with the actual life that the individual lives While the feeling of good condition is associated with emotions, satisfaction is linked to intellectual or cognitive convictions that support this feeling, both of which are subjective psychological concepts, that is, related to the vision, perception and evaluation of the individual.
- 2- The ability to self-care, commit and fulfill social roles represents an obstacle to the perspective contrary to this ability, and is related to the inability of the individual to commit or fulfil social roles.
- 3- The ability to take advantage of the available social environmental resources, including (social support) and material, (standard of life) and employ them positively. (Mohammed Abu Halawa, 2010).

The researcher concludes from the above that the ability to satisfy the needs of the individual through the richness of the environment and the sophistication of the services provided to him and social support is one of the most important components of the quality of life.

Theoretical trends in explaining quality of life:

There are many theoretical trends explaining the quality of life, including the psychological and cognitive trend, the social, medical, religious and integrative trend, and other trends, and in our study we have identified the following:

- The social trend of quality of life: The social perspective focuses on the beneficial society, and on social welfare as the goal of wealth, and the ability to access its source, which enables individuals to control their standard of living depending on money, knowledge, property, physical health, social relations, security and other indicators, which are closer to translating the social dimension so it depends on objective indicators (Ramadan Za'tout, 2014), so we find that researchers according to this trend focus on indicators for the objective dimension of quality of life and includes Thematic Approach The objective approach to the quality of life includes a set of observable and directly measurable indicators such as: work conditions, income level, social status, mortality rate, disease victim rate, quality of housing, educational levels of community members in addition to the level of income, and these indicators vary from one society to another, and the quality of life is related to the nature of the work done by the individual and the material return he earns from his work, his professional status and his influence. Many researchers believe that the individual's relationship with colleagues is one of the effective factors. in achieving quality of life It significantly affects the satisfaction or dissatisfaction of an individual with his work (Ibrahim Ragab, 2009).

Psychological direction of quality of life:

Psychological approaches to quality of life focus on human needs and satisfying them, and several theories have contributed to addressing the concept of quality of life from a psychological perspective, including the following:

Psychoanalytic theory: Freud explained that the personality consists of three dimensions, the first dimension is biological and represented by the id, and the second dimension is psychological and represented by the ego, and the third dimension is social and represented by the superego, and these three dimensions are interacting with each other as Freud says (psychological life is an exchange of sites or interaction between a catalytic force and another inhibitor) Valho pushes the individual to primitive instinctive things that may harm him socially, The superego continues to attract the individual to roles and actions that may be anti-honest Character ideal, and remains ego balances and reconciles between the requirements of it and the superego and the requirements of reality remains constantly equivalent between these two dimensions and if weakened, one of them may prevail over the other, becomes like an animal in satisfying his instincts strongly it, or extreme ideals and theory looks at the concept of quality of life as a total construction that consists of various variables aimed at satisfying the basic needs of individuals living within the scope of this life m And as a person moves to a new stage From growth imposed on him new requirements and needs for this stage insist on satisfaction, which makes the individual feel the need to face the requirements of life in the new stage shows satisfaction in the case of satisfaction or dissatisfaction in the case of non-satisfaction as a result of the availability of an appropriate level of quality of life. (Mohammed Abu Halaweh, 2010).

Humanistic theory: Abraham Maslow has pointed out that satisfying needs is the basic component of the quality of life, and he has clarified and arranged in Maslow's pyramid of human needs, where this arrangement came sequentially and as required by the special necessity of the human being and this from Maslow's perspective as the first thing the individual needs is physiological needs, which are breathing, food, sleep, rest, excretion and others, and after satisfying the physiological needs appear the need for security, which is represented in family security and health, property, physical and psychological safety and others, followed by the social need, which is represented in love and belonging appears through family relations, friendship and relations with the opposite sex, and then the need for appreciation, which begins with self-esteem and the appreciation of others for him, mutual trust and prestigious status, to reach self-realization by exploiting previous gains and basic skills in facing different situations and solving problems with the least losses with the ability to innovate, and thus achieve his ambitions and himself. All these needs identified by Abraham Maslow neglected religious needs, although they are essential in an individual's life, and this order of needs can change with age and individuals. (Hayat Touati, 2018)

Behavioral Theory: The two behaviours define the personality as a total function of the individual's behaviour, and they consider it a strong possibility for the individual to behave in similar ways in different situations that shape his daily life, and focus on what the individual does in different situations without reference to comprehensive features that make the individual act in a personal way, and believe the Both behaviors believe that the individual learns to behave in a specific way through his interaction with the environment, and inherits a biological structure that helps him in the interaction process that determines the behaviour.

Cognitive Theory: Cognitive theory emphasizes that what a person thinks, feels, reacts to him and realizes at the emotional level is what shapes his perceptions of life, formulates his beliefs, leads him and directs his external behavior, both normal and anomalous, and that the idea of man is what the individual thinks Both believe that the individual learns to behave in a specific way through his interaction with the environment, and inherits a biological structure that helps him in the interaction process that determines the behaviour (Ibrahim Ragab, 2009). Bushra Mubarak (2014) pointed out that the cognitive trend focuses on two basic ideas in explaining the quality of life: the first idea that the nature of the individual's perception determines the degree of his feeling of quality of life and this corresponds to the psychological trend, and the second idea Within the framework of the cognitive difference that occurs between individuals, subjective factors are stronger than objective factors in the degree to which they feel quality of life.

Piaget as mentioned in Mohamed Abu Halawa (2010) believes that the general pattern of growth depends on the processes of organization, assimilation and harmonization, which are mental processes that we can call the filter through which we understand the events of the environment around us, at any age stage that a person uses in his life. We act with others, face problems and address the surrounding things with the greatest confidence, in other words, external indicators of quality of life have no value and no importance in themselves, but rather gain their importance through the individual's awareness and evaluation of them.

The importance of quality of life for patients

It is clear that the quality of life from a health perspective is the progress in the lives of individuals as a result of obtaining care subject to various medical and therapeutic programs in consideration of the economic cost aspects according to the social conditions of individuals. Shelley Taylor (2008) pointed out that it was not until relatively late that quality of life was seen as a matter of psychological importance, and for many years, quality of life remained measured by the period in which the patient survived, and the presence of the disease without any regard for the psychological and social consequences of the disease or treatment, and found that although 100% of doctors They stated that the quality of life of their patients improved with the regular use of the drug, but the percentage of patients supported this did not exceed 50%, and none of those around the patient supported it, in addition, many researches indicate that patients perceive some diseases and treat them as a worse amount of death, because they threaten vital and

important aspects or activities in his life Shelley Taylor (2008) pointed out that there are several reasons that explain the importance of studying the quality of life when Patient these are:

* Determining the impact of the disease on the professional, social and personal activity of the patient and on her\his daily life will provide us with an important basis for treatments designed to improve the quality of life. Quality of life measures can help identify the type of problems that arise in patients with diseases of a particular type, and information like this will undoubtedly help crystallize the treatments needed. Such measures may reveal difficulties associated with certain types of cancer. In cancer care, for example, you may need to assess whether the treatment is more harmful than the disease itself, whether it increases survival rates, or whether it has negative side effects.

* Quality of life measures were able to measure the impact of unpleasant treatments, and identify some variables that weaken the patient's commitment to these treatments.

* Information related to quality of life can help the decision to choose treatments that increase the chances of survival and at the same time provide the patient with the best possible quality of life, and can provide them with opportunities to balance the cost and feasibility of treatment on the one hand, and quality of life on the other.

* This attention to issues related to quality of life is of great benefit, as it helps to identify some aspects that require attention or specific therapeutic intervention, when diagnosing the disease. Quality of Life Measurement:

Since there are no clear and specific criteria for measuring the concept of quality of life, so there was great caution to make a measurement of quality of life with the need for this measurement, the scientists and researchers have used many measures to measure the quality of life. There are some things that can measure the quality of life and they can be measured, such as: health status, mobility, quality of the home There are other things to measure the quality of life by obtaining accurate information about a person's life or how efficient and effective the human system is there is another question about measuring the quality of life, and this measurement is based on the value of quality, such as: the extent of a person's ability to independence and control and is considered an indicator of good quality of life or may be described for some people and not for everyone. (Eowlie and Others, How quality of life is achieved:

In order for a person to feel and reach the quality of life, a set of factors must be combined and available, as follows:

1. Self-realization and self-esteem: Both Jaber Abdel Hamid and Alaa El-Din Kafafi (1995) define self-concept as the idea of the individual and his evaluation of himself, including abilities, goals and personal entitlement. The individual's self-concept consists of a set of factors, the most important of which are: determining the role, status, norms and social, social interaction, language, and social relations. The researchers believe that the individual must realize that he has energies and capabilities, and he must appreciate and respect himself, and not to underestimate the value of himself and give in to it, and he must work hard to achieve them, despite the obstacles he faces in life, self-realization is considered as the summit of feeling and feeling satisfied with self, and then his sense of quality of life .
2. Satisfying needs as an essential component of quality of life: Some may see that the core of the issue of quality of life lies in the study of "Maslow" on human needs, and the economic theory of human requirements, and it is known to the people of specialization in psychology that the classification of "Maslow" of human needs includes five levels graded according to their priority and mention (Knower of God Ghandour, 1999): namely:
 - Physiological needs, the need for safety, the need for belongingness, the need for social status and the need for self-esteem.
- 3- Standing on a positive meaning of life: Farnkel mentioned in Magdy El-Desouky (2009) sees the concept of the meaning of life as a very important concept, and considers that it has meaning under all circumstances, and that this meaning is in a permanent state of change, but it always remains, and Farankel believes that a person can discover that meaning in his life in three ways, which are as follows: - Doing something new or doing something., Experiencing experiences and lofty values such as goodness, truth and beauty.-, Meeting another human being at the height of his uniqueness Humanitarian. Frankl identified several sources through which a person can achieve meaning for his life, as follows:
 - Creative values: include everything that an individual can achieve, that achievement may be a work of art or a scientific discovery.
 - Experiential values: It includes all that a person can obtain from sensory and moral experiences, especially what he can obtain through enjoying beauty, or attempts to search for truth, or entering into saturated human relationships such as love or friendship. - Directional values: It consists of the attitude taken by a person towards suffering that he cannot avoid, such as fate, disease or death.

The meaning of life can be achieved through the direction that a person takes towards situations of pain and suffering that he cannot avoid in his journey with life. As well as situations that provokes psychological hardship, which enables him to live with them successfully. The researchers believe that psychological hardness has an important role in the life of the sick

person, which cultivates within him the spirit of challenge and steadfastness, and strengthens his determination, and it also works to provide the individual with the ability to withstand the painful reality he lives.

Magdy Habib (2006) indicates that there are important steps that an individual can use in order to reach quality of life, which are as follows:

Building awareness of the need for improvement and development, identify goals for continuous improvement of performance build an organization to achieve those goals, and implementation of aspects of quality of life.

Magdy Habib (2006) summarizes that the individual should adopt the perspective of continuous improvement of the aspects of his personality, and its psychological, mental, social, cultural, sports, religious and physical dimensions as a lifestyle, while meeting his needs and desires in a balanced manner, and his continuity in generating ideas and interest in creativity, innovation and cooperative learning, in a way that develops his psychological and social skills.

Breast cancer is one of the most prevalent types of cancer in the world among women In Sudan, a number of histology specialists indicated that there is an increase in breast cancer rates in Sudan and that breast cancer represents 20% of the incidence of other cancers and that the percentage ranges between 30-43% among women and 3-5% among men (2018 - Sudan Times). It is define as an abnormal growth of cells lining the milk ducts, breast lobes or the rest of the tissues within the breast (Al-Manshaway et al., 2015). The Breast Cancer Organization (2013) defines it as the irregular growth of breast cells, caused by mutations or abnormal changes in genes responsible for regulating cell growth and maintaining their health.

Among the most important causes leading to breast cancer, according to the consensus of researchers:

1. Age: Aging is the most important risk factor for breast cancer, it is recognized that the risk of the disease increases with age, and the patient's rates are generally lower under the age of forty, and then the risk gradually increases over the age of forty.
2. Age at first birth: that is, a woman who gives birth at a later age is more susceptible to breast cancer.
3. Drinking alcohol: Drinking alcohol regularly and frequently increases the risk of breast cancer, as alcohol Increases the rate of oestrogens.
4. Age at the interruption of the menstrual cycle: The later the age, the greater the likelihood, because the continuation of the menstrual cycle until a later age exposes the woman to a greater amount of oestrogens.
5. Number of births: A woman with less than two children is more susceptible.
6. Birth control pills: A woman's taking of the pill causes a risk of breast cancer.
7. Smoking: It is a serious risk factor for breast cancer.
8. HRT: After menopause, it may be one of the causes of breast cancer (Nabila Bawiya, (2012)
9. Genetic factor: Women with a family history of the disease may increase their chance of infection, in addition to the medical history, as the chance of infection increases in women who have developed benign tumours in the breast. (Smeltzer, Bare, Hinkle & Cheever, 2008)

Psychological effects of breast cancer:

The diagnosis and treatment of breast cancer affects the patient physically and psychologically, as there are a number of factors associated with mental disorders, such as the threat of the disease to the patient's life, in addition to her suffering from pain. Physically, when a woman has breast cancer, and her body is under threat, she feels as if she is losing her identity and life, as the body has a central role in determining female identity. (Bergbom & Lindwall, (2009) Breast cancer threatens the patient's life, as it causes her a state of fear and anxiety And sadness, and thus difficult to see a breast cancer patient psychologically stable, but remains in a state of constant psychological turmoil due to constant thinking about the disease and the expected results. The disease also affects her in establishing social communication relationships with those around her, as a result of excessive sensitivity, and her feeling of shame and embarrassment due to the removal of one or both of her breasts, and this matter is not only reflected on those around her, but also on the marital relationship, because of the gap it creates between the spouses, due to the patient's feeling of loss of self-confidence and self-rejection. The patient is also likely to face some problems The social that may put her in a state of inability to cope, and escape from the looks of pity from others, causing her isolation and loneliness, so the family should show support and assistance to the patient (Kleponis, 2006).

It is possible that the psychological state of a woman with breast cancer varies from patient to patient, which may be reflected in the effectiveness of drug therapy and the level of psychotherapy. Social support from others, specifically family members, especially the husband, may play a crucial role in the treatment process.

Stages of development of breast cancer

It goes through four stages:

1. Stage zero: It means that the cancer has not moved to the surrounding parts, so it is called non-metastatic breast cancer and represents about 15-20% of the total cases of breast cancer, and it is not considered a real cancer and there are two types at this stage:
 - a. Ductal Carcinoma in Situ The risk of cancer is high, so it needs careful monitoring of its progression.

In. Situ Lobular Carcinoma breast cancer, in which women choose between partial mastectomy or removal of the entire breast.

This is based on the size of the breast and the area of injury.

2. The first stage, in which the cancerous tumour is no more than two centimeters long and has not spread beyond the breast.

3. The second stage does not exceed the length of the cancerous tumor for two centimetres, but it is spread in the lymph nodes, or the length of the cancerous tumor is between (2-5) centimetre's, and it may be spread in the lymph nodes, or the length of the cancerous tumour exceeds five centimetres, but it has not spread in the lymph nodes.

4. The third stage: This stage is divided into two parts:

a. The breast tumour is less than five centimetres long and spread to the lymph nodes or the breast tumour is more than five centimetres long and spread to the lymph nodes.

In. The cancerous tumour in the breast is spread to the area around the breast, wall, ribs and chest muscles, or the cancerous tumour is metastatic in the lymph nodes, wall and breastbone.

5. Stage IV: In which the cancerous tumour is spread to other parts of the body such as bones, lungs, liver and brain, or it is spread to the skin, lymph nodes, inside the neck and near the collarbone. (Brenda G, 1998).

Breast Cancer Treatment: There are many treatment methods for breast cancer, namely:

1- Surgical treatment: It is the treatment of breast cancer by removing the cancerous tumour with surgery, which is the basic way to treat breast cancer, and the types of surgery to remove the cancerous tumor depend on several things, including the size of the breast, the size and location of the cancerous tumor in the breast, and the extent to which the tumor has spread in the breast or the area near it, or lymph nodes, or other parts of the body, And women's preference for complete mastectomy even though it is not widespread in all breasts. Breast surgery options include:

A- Lumpectomy or CT breast removal :(Lumpectomy)

Some surrounding tissue is removed, the least excusive type in breast cancer surgery.

B- Quarter breast removal or partial breast removal: (Quatranectomy)

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Some surrounding tissue is removed, the least excusive type in breast cancer surgery.

B- Quarter breast removal or partial breast removal: (Quatranectomy)

The quarter of the cancer is located is removed, including some of the skin and membrane lining the pectoral muscle that lies under the tumor.

C- Simple breast removal: (Simple Mastectomy) in which all the breast is removed and a sample of lymph nodes is taken under the armpit.

D. :(Modified Radical Mastectomy)

All the breast, lymph nodes under the armpit and lining above the chest muscles are removed. E:(- Radical mastectomy) in which all the breast, underarm lymph nodes and chest muscles behind them are removed. (James Balch, 2001).

2 - Radiation therapy: It is a local treatment that is done by using strong rays, which destroy cancer cells to stop its activity.

3- Chemotherapy: It is a comprehensive treatment, in which drugs are given periodically, and it is done by injection through a vein or given orally to reach the cancer cells and kill them, and chemotherapy is a comprehensive treatment because the periodicity moves throughout the body. E:(- Radical mastectomy) in which all the breast, underarm lymph nodes and chest muscles behind them are removed. (James Balch, 2001).

Previous studies:

Study of Sawsan Ghazal and Moufida Al-Numan (2014) entitled: Study "Quality of Life of Breast Cancer Patients. The study aimed to investigate the quality of life of breast cancer patients during the period of chemotherapy at Tishreen University Hospital in Latakia. The study was conducted on a sample of (60) patients selected in an intentional way that used the descriptive methodology, and used the quality of life questionnaire of the European Society for Cancer Research and Treatment consisting of 30 questions and a model (Medial) for breast cancer consisting of 23 questions. To collect information and data . The results found that 73.3% of patients under the age of 50 and half of them have a total health condition of less than 50 that reflects a low quality of life with a disorder in social and psychological function in addition to Eldor's function in life. More than 67% of patients suffer from the presence of symptoms associated with treatment, the most important of which were nausea, vomiting, respiratory slip, loss of appetite, insomnia and fatigue as well. The results showed a change in the outcome of the quality of life according to age, social status, and work without being affected by the change in the level. Educational, as for the model of Mediol) breast cancer

The study of Al-Khalif Mohammed Hussein (2013) under the title "Quality of Life of Palestinian Cancer Patients in the Absence of Palliative Care". The study aimed to evaluate the standards of quality and quality of life and symptoms associated with cancer in Palestine. And I researched the relationship between the social, demographic and economic factors associated with the disease. . The sample consisted of 323 patients to investigate the factors associated with their quality of life were selected in a simple randomized way and the interview was based on the collection of information and the tool

FORTCQLQC for quality of life screening ((of the European Organization for Research and Treatment of Cancer N) The study found that the results of quantitative and qualitative research are consistent in highlighting the extent of low quality of healthy life for cancer patients (41.8%), where the quantitative predictors of quality of life that affected badly are the advanced stage of cancer and the economic situation. The sample consisted of 323 patients to investigate the factors associated with their quality of life were selected in a simple randomized way and the interview was based on the collection of information and the tool FORTCQLQC for quality of life screening ((of the European Organization for Research and Treatment of Cancer N) The study found that the results of quantitative and qualitative research are consistent in highlighting the extent of low quality of healthy life for cancer patients (41.8%), where the quantitative predictors of quality of life that affected badly are the advanced stage of cancer and the economic situation Low, low educational level, and long duration of treatment. Measures of life function were also low, less than half in most cases, as bodily functions (48.8%), Eldors (48.8%), emotion (46%), emotion (60.5%) and social functions (50%) were recorded, in addition to the severity of symptoms in a cancer patient, where fatigue (66.6%) was recorded, pain (63%), insomnia (56.4%). Atallah Hanan Study 2018 Study Title: Quality of Life of Cancer Patients, The aim of the current research is to reveal the quality of life of cancer patients, and for this purpose the research was conducted on a sample of cancer patients estimated at four cases diagnosed with four types of cancers, namely cancer "breast, ovarian, bone and larynx", which are found in the hospital institution specialized in cancer (02 males and 02 (females) were selected in an intentional way, based on the quality of life scale for chronic patients as a study tool and may be of several dimensions represented by) , after the quality of life of religion, after the quality of personal life, after satisfaction with life, after the quality of mental health (and the network of half-guided interview and clinical observation, the study relied on the clinical methodology, the referral message. The results of the research resulted in a difference in the quality of life of cancer patients according to the gender variable (male and female), and according to the economic level. And that there was no difference according to educational level Study of Fouad Sabira and Razan Mualla Ismail 2017 Study Title: Psychological hardness and its relationship to life satisfaction among a sample of Al-Difi cancer patients in Al-Lazqia Governorate The research aims to identify the relationship between psychological hardness and life satisfaction among breast cancer patients, and the level of psychological hardness among breast cancer patients in Al-Azkiya Governorate and the level of life satisfaction The research also aimed to identify the differences in the level of psychological hardness among breast cancer patients and the level of life satisfaction according to the variables (age, marital status, and duration of the disease). The research sample included (112) patients with breast cancer in Al-Azkiya Governorate for the year 2017, and two measures were applied, namely psychological hardness, and life satisfaction, and to judge the validity of the questionnaire, it was presented to a group of (7) specialized arbitrators, and its stability was confirmed by a practical application on a sample Reconnaissance included

28 (Patient with breast cancer After analyzing the study data, the results of the research showed that there were statistically significant differences in the level of psychological hardness attributed to the age variable in favor of ages (45 and over), and according to the social status in favor of the married, and according to the duration of the disease in favor of patients infected for more than five years), and the results also showed that there were statistically significant differences in the level of life satisfaction according to the age variable in favor of those aged 45 (and over), and according to the marital status in favor of the married, and according to the duration of the disease For the benefit of infected patients Infected for more than 5 years.

Methods:

The researchers followed the correlational descriptive approach, where this approach describes the problem to be studied, collects data about it and interprets it.

Population: Represented by breast cancer patients at the National Cancer Center for Radiotherapy and Nuclear Medicine in Khartoum State. With regard to the current research sample, the researcher selected the field research sample from breast cancer patients at the National Cancer Center for Radiotherapy and Nuclear Medicine in Khartoum State. The selection was made by simple random selection, the selected sample size was (116) breast cancer patients.

Table (1) shows the description of the characteristics of the research sample according to the variables of marital status and some other demographic variables

| % | NO | Variable gradient | Variable Characterization |
|------|----|-------------------|---------------------------|
| 22.4 | 26 | married | marital status |
| 57.8 | 67 | single | |
| 10.3 | 12 | widowed | |

| | | | | |
|-------|-----|-------------------|---------------------------|-------------------|
| 9.5 | 11 | divorced | | |
| 100.0 | 116 | 116 | | |
| .9 | 1 | No response | Chronological age | |
| 54.3 | 63 | 30-20 | | |
| 22.4 | 26 | 40-30 | | |
| 16.4 | 19 | 50-40 | | |
| 6.0 | 7 | More than 50 | | |
| 100.0 | 116 | Total | | |
| 4.3 | 5 | illiterate | | Educational level |
| 13.8 | 16 | Basic education | | |
| 12.9 | 15 | secondary | | |
| 57.8 | 67 | University | | |
| 11.2 | 13 | Post university | | |
| 100.0 | 116 | Total | | |
| % | No | Variable gradient | Variable Characterization | |
| .9 | 1 | 0 | Duration of injury | |
| 19.0 | 22 | 1 | | |
| 18.1 | 21 | 2 | | |
| 13.8 | 16 | 3 | | |
| 4.3 | 5 | 4 | | |
| 4.3 | 5 | 5 | | |
| .9 | 1 | 6 | | |
| 2.6 | 3 | 7 | | |
| 1.7 | 2 | 8 | | |
| 1.7 | 2 | 9 | | |
| 6.0 | 7 | 1 month | | |
| .9 | 1 | 15 months | | |
| 2.6 | 3 | 2 months | | |
| 9.5 | 11 | 3 months | | |

| | | | |
|-------|-----|----------|--|
| 1.7 | 2 | 5 months | |
| 5.2 | 6 | 6 months | |
| 3.4 | 4 | 7 months | |
| 1.7 | 2v | 8 months | |
| 1.7 | 2 | 9 months | |
| 100.0 | 116 | Total | |

Research tools: represented in the following:

First: Primary Data Form: The researcher prepared the basic information form to know the primary data of the examinee, which falls within the demographic variables, namely:

1. Marital status.
2. Chronological age.
3. Educational level.
4. Duration of the disease.

Psychometric characteristics of the quality of life scale in breast cancer patients:

To know the psychometric characteristics of the quality of life scale among breast cancer patients at Khartoum Hospital, in the current research community, the researcher applied its modified image under the guidance of the arbitrators, consisting of (26) paragraphs on a preliminary sample size (40) examined were selected in a simple random way from the current research community and after correcting the responses, the researcher monitored the grades and entered them into the computer, and then the following was done:

1. Validity of the internal consistency of the paragraphs in the quality of life scale among breast cancer patients at Khartoum Hospital:

To find out the sincerity of the consistency of the paragraphs with the total degree of quality of life scale among breast cancer patients at Khartoum Hospital when applied to the current research community, the researcher calculated the Pearson correlation coefficient between the scores of each paragraph with the total score of the scale and the following table shows the results of this procedure:

Table No. (2) shows the correlation coefficient of vertebrae with the total score of the quality of life scale among breast cancer patients at Khartoum Hospital when applied to the current research community

| Correlation | item | correlation | item | correlation | Item |
|-------------|------|-------------|------|-------------|------|
| .436 | 21 | .658 | 11 | .711 | 1 |
| .606 | 22 | .420 | 12 | .577 | 2 |
| .503 | 23 | .481 | 13 | .436 | 3 |
| .566 | 24 | .626 | 14 | .270 | 4 |
| .414 | 25 | .576 | 15 | .564 | 5 |
| .377 | 26 | .614 | 16 | .546 | 6 |
| | 27 | .645 | 17 | .542 | 7 |

| | | | | | |
|--|----|------|----|------|----|
| | 28 | .665 | 18 | .612 | 8 |
| | 29 | .688 | 19 | .525 | 9 |
| | 30 | .613 | 20 | .656 | 10 |

From the above table, the researchers found that the correlation coefficients of all paragraphs are statistically significant at the level of significance (0.05), and that all paragraphs are positively indicated and have a strong internal consistency with the overall scores of the scale when applied in the current research community.

2 / stability coefficients: To find out the stability of the total scores of the quality of life scale among breast cancer patients at Khartoum Hospital in its final form in the current research community, the researcher applied the equations (Alpha Cronbach and self-honesty) on the data of the primary sample, the results of this procedure showed the results presented in the following table:

Table No. (3) shows the results of the stability coefficients of the quality of life scale among breast cancer patients at Khartoum Hospital in its final form when applied in the current research community:

| Stability coefficients | | No of items | scale |
|------------------------|-------|-------------|---|
| Q – B | Alpha | | |
| .902 | .927 | 26 | Quality of Life for Breast Cancer Patients at Khartoum Hospital |

The researchers note from the previous table that the stability coefficients of the quality of life scores among breast cancer patients at Khartoum Hospital as a whole are greater than (0.90), which confirms the appropriateness of this scale and its final image to measure the quality of life of the examiners in the current research community.

Statistical methods used:

1. Test (C) for one sample.
2. Test (T) for the average of one population.
3. Shows the results of the test (single variance).

Presentation and discussion of the results of the study hypotheses:

Presentation of the result of the first hypothesis: To verify the validity of the first hypothesis of the current study, which reads: "The quality of life in breast cancer patients is low: To verify the validity of the hypothesis, the researcher conducted a test (T) for the average of one population, and the following table shows the results of this procedure:

Table (4) for the average of one population to judge the trait of quality of life among breast cancer patients at Khartoum Oncology, Radiotherapy and Nuclear Medicine Center (DH=115):

| Conclusion | P-value | Calculated T | Standard value | Standard deviation | Average | No | Variable |
|---------------------|---------|--------------|----------------|--------------------|---------|-----|-----------------|
| Low quality of life | .195 | -1.303 | 78 | 17.529 | 75.88 | 116 | Quality of life |

Conclusion: Looking at the above table, we find that the value of (T), to see if the quality of life is low, has reached (-303.1) with a probability value of (0195), which is lower, which indicates the validity of the hypothesis that there is a low quality of life, and by referring to the arithmetic mean (75.88), we find that the hypothesis has actually been achieved.

Discussion of the result of the first hypothesis: Given the result of the first hypothesis above, it turned out that the result came as expected by the two researchers, the result of this hypothesis agreed with the study of Sawsan Ghazal and Mufida Al-Numan (2014), which indicated that 73% of breast cancer patients have a low quality of life with a disorder in social function, also agreed with the study of Al-Khalif Muhammad Hussein (2013) to highlight the low quality and quality of life for cancer patients, especially in the bloody stages of the disease. In this regard, she explained (Hayat Touati 2018) The human theory indicated that satisfying the need for health security and physical safety is one of the basic components of the quality of life' and the researchers

explain this result, which may be due to the patient's negative view of life because this disease is linked to her culture of death and the look of compassion for her by others, especially family members, increases her suffering and weakens her self-confidence and dissatisfaction with life: Perhaps the situation is more common for married women, because this matter creates a gap between the spouses because of the feeling of the patient By losing self-confidence, because she may feel that she has become unattractive to her husband because the breasts are considered the source of beauty and femininity and therefore the self-image has become distorted.

Presentation and discussion of the result of the second hypothesis: To verify the validity of the third hypothesis of the current study, which states: "There are statistically significant differences in the quality of life among breast cancer patients at Khartoum Oncology Hospital according to marital status;

Table (5) shows the results of the test (single variance) to find out the differences in the quality of life of breast cancer patients due to marital status:

| Conclusion | p | F value | Mean of squares | d.f | Total of square | Source of variance | variable |
|--|------|---------|-----------------|-----|-----------------|--------------------|-----------------|
| There are no statistically significant differences | .798 | .338 | 105.680 | 3 | 317.039 | Between groups | Quality of life |
| | | | 312.672 | 112 | 35019.271 | Inside groups | |
| | | | | 115 | 35336.310 | Total | |

Conclusion: Looking at the table above, we find that the value of (P) to know the differences in quality of life in breast cancer patients was 338, at a p-value of 798, which indicates that there were no statistically significant differences in breast cancer patients due to marital status.

View and from us a straw The result of the second hypothesis: The result of this hypothesis differed with the study of Fouad Sabira and Razan Mualla (2017), which showed differences in the level of satisfaction with life in favor of married women, as she indicated (Bushra Mubarak, 2014) that the cognitive trend focuses on two basic ideas in explaining the quality of life: the first idea that the nature of the individual's perception is what determines the degree of his feeling of quality of life and this corresponds to the psychological trend, and the second idea in the framework of the cognitive difference between individuals, the subjective factors They are the strongest of the objective factors in the degree to which they feel quality of life The theory also emphasized that what a person thinks, feels, reacts to and perceives on an emotional level is what shapes his perceptions of life.

Through the look of the cognitive trend, the researcher explains this result, as both groups feel physical and psychological pain, there is no difference between married and unmarried in the pessimistic outlook on life. Also, the lack of differences may be due to the patient's feeling that she has become a burden on her family because the cost of treatment is high and some suffer from the loss of social support, and each of them prefers social withdrawal because social interaction may expose her to the issue and discussion on the subject of the disease, which generates anxiety and fear, and therefore she is vulnerable to social withdrawal, which increases her suffering, all these factors may have led to the absence of differences:

Presentation and discussion of the result of the third hypothesis: To verify the validity of the fourth hypothesis of the current study, which reads: "There are statistically significant differences in the quality of life among breast cancer patients at Khartoum Oncology Hospital by age;

Table No. (6) shows the results of the test (single variance) to find out the differences in the quality of life in breast cancer patients due to age

| conclusion ^l | p | f ^l | Mean of square | d.f | sum of square | Source of variance | variable ^l |
|---------------------------------------|------|----------------|----------------|-----|---------------|--------------------|-----------------------|
| There are no significance differences | .905 | .256 | 80.804 | 4 | 323.216 | Between groups | Quality of life |
| | | | 315.433 | 111 | 35013.094 | With in groups | |
| | | | | 115 | 35336.310 | total ^l | |

Conclusion: Looking at the above table, we find that the value of (P) to know the differences in the quality of life in breast cancer patients reached a value of (256) probability (905), which indicates that there are no statistically significant differences in breast cancer patients due to age.

Discussion of the result of the third hypothesis: The result of this hypothesis differed with the result of the study of Fouad Sabira and Razan Mualla (2017) and the study of Sawsan Ghazal and Mufida Al-Numan (2014), which indicated that there are differences according to age in the level of life satisfaction among breast cancer patients, and the researcher explains this result, which may be due to the convergence of the ages of the sample and thus converge ideas

Presentation and discussion of the result of the fourth hypothesis: To verify the validity of the fifth hypothesis of the current study, which reads: "There are statistically significant differences in the quality of life among breast cancer patients at Khartoum Oncology Hospital according to educational level:

| conclusion ^l | p | f ^l | Mean of squares | d.f | Sum of squares | Source of variance | variable ^l |
|---------------------------------------|------|----------------|-----------------|-----|----------------|--------------------|-----------------------|
| There are no significance differences | .129 | 1.823 | 544.688 | 4 | 2178.750 | Between groups | Quality of life |
| | | | 298.717 | 111 | 33157.560 | With in groups | |
| | | | | 115 | 35336.310 | total ^l | |

Conclusion: Looking at the table above, we find that the value of (P) to know the differences in quality of life in breast cancer patients was 1.823 probability 129, which indicates that there are no statistically significant differences in breast cancer patients .due to educational level

Discussion of the result of the fifth hypothesis: The result of this hypothesis agreed with the result of the study of Al-Khalif Muhammad Hussein (2013), which indicated that the long duration of the time affects the quality of life of cancer patients. The result of this hypothesis differed with the result of the study of Fouad Sabira and Razan Mualla (2017), which indicated that there were differences between breast cancer patients in the degrees of life satisfaction of women with breast cancer for more than five years. The researcher explains this result, which may be due to the fact that all members of the sample suffer from physical pain and psychological pain and pessimistic outlook on life and supports this interpretation of the view of Hamid Abdel Salam (2005) for the quality of life as a state of relative stability, in which the individual is psychologically compatible personally, emotionally and socially, ie with himself and with his environment, (, feel happy with himself and with others, and be able to achieve his self and exploit his vision to the maximum extent possible and be able to face the demands of life and be his personality integrated together, and his behavior is normal, and all these things are almost non-existent in the members of the current sample despite the different duration of the disease. Recommendations: In light of the results reached by the researcher through hypotheses, the researcher recommends the following:

1. The competent authorities should conduct collective counselling programs for patients concerned with the definition of the disease and medical developments in this field and the possibility of hospitalization from it.
2. The competent authorities should conduct guidance programs for the families of patients on how to reduce the pressure on the injured through social support.
3. Increasing the interest of community institutions in cancer patients and working to provide support and assistance in order to enhance self-confidence and reach a level of psychological satisfaction.

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