***بسم الله الرحمن الرحيم***

*** ***

***Graduation Project***

***Factor that affect Quality of Life for Patient who undergoing Chemotherapy in Nablus***

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***الإهداء***

***إلى من ربتني صــــــغيرا  
إلى من علمتني كــــيف أحيا  
إلى من أعطتني الحـــــب والعطف  
نبع الحنان .نور حيــــــــــاتي  
أنت من وصى الرسول بك ثلاثة  
وذكـــــــرك الله في كتابه   
إن الجنة تحــــــــت قدميك  
أنت التي امديتني بالأمل   
وأعطيتني القوة لأواجه الجــــــــــميع  
فكنت ذلك الشعاع الذي ينيـــــر دربي   
إليك يا ســــــت الحبايب  
أمي***

***الى والدي العزيز***

***إلى أحب الخلق إلى الله ..وأحبهم إلى قلبي.. إلى قدوتي....***

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***إلى من علمونا حروفا من ذهب.. وكلمات من درر  
وعبارات من أسمى واجلي عبارات في العلم  
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**Conceptual and operational definition**

|  |  |  |  |
| --- | --- | --- | --- |
| **Concept** | |  | | --- | | **Conceptual definition** | | | **Operational definition** |
| **quality of life (QOL)** | “An individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, and standards and concerns  **(WHO, 1997).** | (By questionnaire) |
| **Chemotherapy** | antineoplastic agents are used in an attempt to destroy tumor cells by interfering with cellular functions and reproduction. **(Brunner and Suddarth,2008.pp329-330).** | (By questionnaire) |
| **Pain** | “An unpleasant sensory and emotional experience associated with actual or potential tissue damage.  **(IASP, 2014).** | (By questionnaire) |
| **Physical function** | The ability to perform a range of activities of daily living  **(Wikipedia, 2014)** | (By questionnaire) |
| **Symptoms** | Patients’ subjective perceptions of an abnormal physical or psychological state.  **(Wikipedia, 2014)** | (By questionnaire) |
| **Functioning** | Assessments of ability to perform specific tasks or functions, **(TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Fatigue** | Physical and mental exhaustion that can be triggered by [stress](http://medical-dictionary.thefreedictionary.com/Stress), medication, overwork, or mental and physical illness or disease.**(TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Weight loss** | A reduction in body weight  **(TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Dyspnea** | A difficulty in breathing or shortness of breath, **(TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Insomnia** | Inability to obtain an adequate amount or quality of sleep. **(TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Constipation** | Acute or chronic condition in which bowel movements occur less often than usual  **TheFreeDictionary.** Medical2014)) | (By questionnaire) |
| **Diarrhea** | Increased frequency or decreased consistency of bowel movements. **(TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Gender** | The sex of an individual, male or female, based on reproductive anatomy.  **TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Educational level** | The process of imparting or acquiring general knowledge, developing the power of reasoning and judgment. **(TheFreeDictionary.** Medical2014) | (By questionnaire) |
| **Residence** | the state of living in a particular place  **TheFreeDictionary.** Medical2014) | (By questionnaire) |

**Table of abbreviation:**

|  |  |
| --- | --- |
| Quality Of Life | **QoL** |
| World Health Organization | **WHO** |
| Patient | **PT** |
| In situational board review | **IRB** |
| Ministry of health | **MOH** |

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**Abstract**

**Background**

Quality of Life (QoL) is a fundamental for well and ill people. For the cancer patients it is a vital issue in the presence of this condition that all resources on both the individual and community level.

The Quality of Life (QoL ) among Palestinian cancer patients highly affects on patient and it consider the second leading cause of death in Palestine. We conducted this study

**Purpose**

To determine the quality of life for cancer patients who receive chemotherapy.

**Method**:

We used a quantitative descriptive cross-sectional study. A total of 400 cancer patients were included in the present analysis. The study was conducted in An- Najah National hospital and Al-Watany hospital, to describe the quality of life for Palestinian cancer patients who receive chemotherapy.

**Results:**

A total of 400 patients were included in this study .After analyzing data , the result showed that there is no significant relationship between (gender, marital status, place of residence and self care) and QoL among adult chemotherapy patients,but there are significant relationship between the age and the quality of life. And we found significant relationship between duration of treatment and QoL in physical status and in psychological status,also we found a significant relationship between economic status and QoL in patients under chemotherapy.

On the other hand we found that there is a significant relationship between level of education and QoL among adult patients(as patients who has high level of education has a worst QoL than who has lower level of education, Pvalue .0000).

**Conclusion:**

we conduct cross-sectional study on Nablus oncology hospital in order to study QoL for patient who undergoing chemotherapy and we found are many factor affected the quality of life for patient who undergoing chemotherapy we divided it into dependent and independent variable ,independent variable is age and we found there are significant relationship between age and QoL ,the other hand is physical state and there are significant relationship btweenQoL and physical state and the most significant physical factor was fatigue and the percentage of patient who affected by it 87.7 ,and there are many study confirmed our result , we found there are significant relationship between psychological state and QoL , the most significant psychological factor affected QoL for cancer patient is sleep-weak disturbances our patient number who affected by it was 87.1%, we don’t found significant relationship btween setting and freaqanty of treatment and QoL and this disagree with tow study .Amongst 400 patients on chemotherapy ,were married 273(68.3%),who live with a nuclear family 367 (91.8%), patient living with more than 6 members 301 (75.3%), Bachelor education 134 (33.5%), Monthly income was more than 2000 Shekel for most Patients 177 (44.3%), were residents of rural areas 244 (61%). The most patients' age was between (18-29 year) 167 (41.8%). Getting personal care without the help of family members290 (72.5%), take treatment most weekly167(41.8%), provide about treatment information doctors 388(97%), availability of treatment is always 365 (91.3 %), take treatment in outpatient clinic of chemotherapy 346 (86.5%).

**Chapter 1**

**1-Introduction**

**1.1The term quality of life** (QoL) is used to evaluate the general well-being of patient and his/her family. According to the World Health Organization WHO quality of life (QoL) defined as individual perception of life, values, objectives, standards, and interests in the framework of culture(1997). Previous studies showed that there are several diseases such as cancer can affect on patient QoL.

Cancer is a disease process that begins when an abnormal cell is transformed by the genetic mutation of the cellular DNA. This abnormal cell forms a clone and begins to proliferate abnormally,ignoring growth-regulating signals in the environment surrounding the cell. The cells acquire invasive characteristics, and changes occur in surrounding tissues. The cells infiltrate these tissues and gain access to lymph and blood vessels, which carry the cells to other areas of the body. This phenomenon is called **metastasis** (cancer spread to other parts of the body). Cancer is not a single disease with a single cause; rather, it is a group of distinct diseases with different causes, manifestations treatments, and prognosis**(Brunner and Suddarth,2008.pp316).**

**1.2Epidemiology**

Although cancer affects every age group, most cancers occur inpeople older than 65 years of age. Overall, the incidence of canceris higher in men than in women and higher in industrializedsectors and nations.

More than 1.2 million Americans are diagnosed each yearwith a cancer affecting one of various body sites . Cancer is second only to cardiovascular disease as a leading cause of death in the United States. Each year, more than 550,000 Americans die of a malignant process. In order of frequency, the leading causes of cancer deaths in the United States are lung, prostate, and colorectal cancer in men and lung, breast, and colorectal cancer in women **(Jemal .et .al, 2002**)..

**Chemotherapy**

In the early 1900s, the famous German doctor Pau Ehrlich was the one who establish the term" chemotherapy” and defined it as the use of chemicals to treat disease**(Vincent.et.al, 1900).**

In **chemotherapy**, antineoplastic agents are used in an attempt to destroy tumor cells by interfering with cellular functions andreproduction. Chemotherapy is used primarily to treat systemic disease rather than lesions that are localized and amenable to surgery or radiation. Chemotherapy may be combined with surgery or radiation therapy, or both, to reduce tumor size preoperatively, to destroy any remaining tumor cells postoperatively, or to treat some forms of leukemia. The goals of chemotherapy (cure, control, palliation) must be realistic because they will define the medications to be used and the aggressiveness of the treatment plan,**(Brunner and Suddarth,2008.pp329-330).**

We chose this topic because the cancer disease is widespread in the world in general and especially in Palestine.According to Palestinian Health Information Center (2012), Cancer is second leading cause of death in Palestine accounting for 13.7% of all deaths, and due to the suffering of patients who take chemotherapy which reflected negatively on theirphysical, psychological, social and marital we wanted to examine what is the effect of chemotherapy on these factors.

**1.3Problem statement:**

There is inappropriate approach for the quality of life among Palestinian patient who receive chemotherapy because there is a lack of information and guidance in order to be familiar with their life. In addition to that there is a lack of Palestinian studies related to the quality of life among patients who receive chemotherapy.

**1.4Justification of the study:**

Nowadays cancer is the second leading cause of death after cardiovascular disease. Worldwide, approximately 10 millions people are diagnosed with cancer annually and more than 6 millions die of the disease every year; currently, over 22 million people in the world are cancer patients**(Brunner and Suddarth,2008.pp329-330).**

Approximately 70% of cancer death occur in low and middle income countries . According to Palestinian Health Information Center at 2012 Cancer is a second leading cause of death in Palestine that accounting about 13.7% of all death,the significance of health- related quality of life among cancer patients has been globally increased over the past decades.

**1.5 Aim of the study:**

To determinethe quality of life (QoL) with in Palestinian cancer patients who undergoing chemotherapy at Al-NajahNational hospital, and Al-watany governmental hospital.

**Objectives of the study:**

**1-** To determine how demographics data such as (age, gender, marital status, educational level, economic) influence the Quality of Life (QoL) among cancer patients who are receiving chemotherapy.

**2-** To identify the effect of duration of chemotherapy treatment and the place on the patient’s quality of life.

**3-** To identify the psychological, social, and physical factors that can make effect on the quality of life among cancer patients who are receiving chemotherapy.

**1.6 Research questions :**

* 1. What is the nature quality of life for patient who received chemotherapy ?

2. is the patient educational level affect on his /her and quality of life?

3. Is the psychological factor affect on his /her quality of life?

4. Is there a economic status affect on his /her quality of life?

5. What is the main factor affected on patient quality of life who received chemotherapy?

* 6.Is chemotherapy affect on patient participation with his/her family and performing daily activities ?

**Hypothesis:**

1. There is no relationship between the patient's educational level and his /her QOL , (a ≤ 0.05)

2. There is no relationship between the psychological factor and patient QoL ,( a ≤ 0.05)0

3. There is no relationship between the patient economic status and his /her QoL , (a≤ 0.05)

* 4.There is no significant relationship between the patient’s age and his/her QOL, (a≤ 0.05)
* 5.There is no significant relationship between the patient's physical health and his/her QOL, (a≤ 0.05)
* 6.There is no significant relationship between duration chemotherapy and patient's QOL, (a≤ 0.05)

**1.7 Feasibility of the study :**

The study was carried out as a requirement for bachelor's degree in nursing at An-najah National University. The study is self-funded and was implemented in West Bank at An- Najah National hospital and Al-Watany hospital. Ethically there was no harm for participation, the anonymity and autonomy was ensured and their consent was taken before participation in the study.

**1.8 Background of the study:**

In 1870s, the German doctor start to search about chemotherapy and he was considered as first doctor who define the concept of Chemotherapy (Paul Earlich).

In the early 1900s, the famous German doctor Pau Ehrlich ,was the one who establish the term" chemotherapy” and defined it as the use of chemicals to treat disease (Vincent, T.et.al )

In 1960s and early 1970s still that chemotherapy has not clarify role for the ability to cure advanced cancers.

Dr. Min Chiu Li. A pioneer chemotherapist who developed new curative chemotherapy for metastatic carcinoma (Circa 1968).

**Chapter 2**

**Literature review**

**Introduction:**

The term quality of life (QoL) is used to evaluate the general well-being of patient and his/her family. According to the World Health Organization (WHO), quality of life (QoL) defined as individual perception of life, values, objectives, standards, and interests in the framework of culture. Previous studies showed that there are several diseases such as cancer can affect on patient QoL**(World Health Organization, 1997).** There are many measures for health Quality of life are designed in order to tap such consequence of the cancer treatment together with the effect of disease itself **(Vari ,et.al ., 2002).** An increasingly important issue in oncologyis to evaluate QoL in cancer patients**(Rizzo, Maronato, Marchiori, Gaya, 2008, P.266)**the health –related Quality of life mark a many of Dimension including physical mental and social Domains **(Vari,et.al .2011).**

**There are many factor affecting the Quality of life for cancer patient who undergoing chemotherapy this factor divided into dependant and independent factor** :

**2.1 The independent factor**including the demographic data such as the age ,sex economic state, educational level and family size for example:- the acceptance of the physical appearance was also affected by treatment intensity (with more negative effect on the female patients who also suffered more than males from treatment anxiety and worry).Also the Pain and hurt was increased with the patient who has lower age at the time of diagnosis,and large family size are associated negatively with quality of life(**Fernard ,et.al 2010),**this study had been happened in Egyptian cancer children who are undergoing chemotherapy **.**There are another studies had been shown negatively relationship between the family size and the QOL for patient who undergoing chemotherapy such as increasing the family size is a risk factor for poor Quality of life **(Brakat,et.al 2010)**,but in the other studies that shown a positive association between the education and the Quality of life such as "that patient 's own beliefs and understanding of health and treatment regulate their health behavior (**Robert ,et al 1984).** Contrary to what was said ; there are other study showed a statistically significant association between QoL and sex, marital status, occupation, duration of disease, phase of disease, and performance status. While there was no statistically significant association between QoL and age, socioeconomic status, and educational level. Also the result shows no effect of disease and treatment related on quality of life,**(Adel , et.al, 2012)**

Other study showed that pain management education reduced pain intensity in patients suffering from cancer and improve quality of life(**Sharif , et al., 2012).**

**"**There are a Significant improvement during treatment was found in some of the physical activities, emotional state, relief from pain and fatigue, , anorexia, sleep, and the global quality of life. When chemotherapy, age, gender and lymphoma type were taken into account, the most important factor influencing the global quality of life was educational status**"(Saatç, at el.2007.p98).**

The study was to highlight on the concept Quality of Life (QOL) for Palestinian cancer patients through providing an understanding about influences of chemotherapy on QOL for cancer patient,by examining the five functional aspects (Physical, Emotional, Social, Cognitive, and role function) .Results were showed a negative impact of cancer and chemotherapy on QOL of Palestinian cancer patients in all five aspect **(Thweib ,N .2011).**

**2.2 The dependent variable:**

According to Livia, et.al. (2012), in her study the result showed about physical , Psychological and social and environment domains as dependent variables and showed that the most affected was physical domain by the toxicity of chemotherapy by generate effects such as pain, fatigue, nausea and vomiting and anorexia then reducing their quality of life. The second was Psychological domain,these affected by low self image caused by the diagnosis of cancer and chemotherapy. In conclusion there was a strong correlation between physical and psychological domains with QOL. However,the social and environment domains was the lowest correlation with QOL related to support from family and friends.

**2.2.1 the social life:**

The individual mustn't try to request medical explanation of their disease ,but also must try to understand there disease within social and cultural context**(Radley, 1994).**

The family member and the friend relationship and the social net work and the health care provider are play important role in formation of health benefit and the behavior**(Awasthi ,et.al.,2013)** and this will improve theQ**ol**.

In breast cancer woman ,when they expose to the treatment ,it may lead to many situations that may threaten the psychosocial integrity of those affected by the disease. The social behavior and life of women is affected ,which may leading to restrictions on their social lives and changes in daily life activities and that may contribute to depressive behavior and social isolation then decrease the QoL**(Fernandes,et.al., 2014).** "Religiosity does not directly influence quality of life,though social support provided by support groups and ways to express feelings such as writing, may influencequality of life"**(Fernandes,et.al., 2014. p52).**

Other study found Consistent with numerous previous findings, quality of life increased for patients who were married and for patients with more education than patients who were not married or patients with less education. Breast cancer patients who were married had more physical and psychosocial support than patients who were single, divorced, or separated because their husbands or partners helped them cope with changes and negative emotions **(Change,o., et al., 2014).**

**2.2.2 physical life**

Cancer patient who undergoing chemotherapy faced a many physical problem that resulting from chemotherapy treatment which impact the Quality of patient life. Physicians often have insufficient knowledge about fatigue and its treatments or underestimate the impact of fatigue on quality of life, while patients may consider it an unavoidable and untreatable side-effect and fear that reporting it may incite a change toward less aggressive cancer treatment**(Campos,et.al,2010, P.1273)**. Fatigue is the most common treatable problem faced cancer patient who undergoing chemotherapy and impact all aspect of Quality of Life (**Gupta,et.al,2007**).According to the guidelines of national comprehensive cancer Net work(NCCN),Cancer related fatigue is defined as a persistent subjective sense of physical,emotional and/or cognitive tiredness or cancer treatment that is not proportional to recent activity and that significantly with usual functioning **(Mock.et.al,2000cited it from NCCN,P151-161).**Cancer Patients confirm that fatigue is the most important and distressing symptoms resulting from chemotherapy treatment**(stone,et.al.2000)**. We studied many of study that are confirm that a high percentage of cancer patient experience fatigue around 50%–90% patient**(Wang,2002)**. There are other side of physical problem related to chemotherapy treatment that impact the quality of cancer patient life, such as a pain. According toDehkordi, (2011) the study shown the quality of life was lower in the patients with pain compared to those had no pain . In addition, statistical analyses indicated that there was a significant relationship between the pain intensity with reducing or losing body performance and Quality of life.In other study which talk about fatigue,we found a study tells about Cancer-related fatigue is common among cancer patients who undergoing chemotherapy and it has bad effect on physical, psychosocial, and economic consequences for both patients and caregivers**(Curt ,et.al,2000**). Actually fatigue related chemotherapy is laying under conversional,some of study approved that cancer related fatigue is early sign and symptoms for malignant cancer and this affected the Quality of life for patient who experience it,substantially all patient with chemotherapy experienced fatigue. Approximately 90% of cancer patient who treated with radiology have fatigue,and 80%of cancer patient with chemotherapy experience fatigue **(hofman.et,al.2012** ).The most important problems in regards to physical problems were anorexia (80%) in patients takingchemotherapy**(Alzabaidy, 2012).**Fatigue is one of the most common symptoms experienced by patients with cancer, and it's characterized by feelingsoftiredness, weakness, and lack of energy, the percentage of patients expect fatigue from cancer therapy is up to 90% of patients treated with radiation therapy andthose who treated with chemotherapy is up to 80% **(Hofman, et.al ,2007).**

In other study found that fatigue is the most common and most bothersome symptom in patients with cancer undergoing chemotherapy. They feel fatigue more severe and more constant compared with healthy people and this condition does not improve with adequate rest and sleep. Fatigue is a common and important side effect of chemotherapy and is equivalent to a prevalence of 80%-99%**(Musarezaie,A.et.al.,2014).** Other study explain the effect of chemotherapy in mouth as apart that effect quality of life and it show In many patients, these drugs can cause a number of oral complications including mucositis, pain, infection, hemorrhage, xerostomia, and neurologic and nutritional problems**(**M**ing Wong,H.et.al.,2014).**

**2.2.3 psychological life:**

The simple life review is feasible for terminally ill cancer patient with some cognitive impairment ,and might be effective for improving spiritual well-being ,good death and psychological distress in these patient**(Ando ,et al,2012.p528).**

There are many cancer patient have desire for a hastened death ,hopelessness ,and have suicidal idea or attempt to suicide(**Mcclain,Rosenfeld,Breitbart,2003**),and this result are documented in many study that took about the percentage of patient desire for hastened death is 17% ,and the percentage of patient who meet criteria for a major depressive episode is 16%**(Breitbart,et.al.2000)**.According to **Castro,et al in 2012** there are a relationship between Quality Of life and some of the psychological concepts like self efficacy as result there appositive relationship between Quality of life and Self efficacy. There are other side of psychological problem related to chemotherapy treatment that impact the quality of cancer patient life such as a sleep weak disturbances, and this phenomena are showed by many study which demonstrate that sleep-wake disturbances is major symptoms in cancer patient who undergoing chemotherapy and the result showed a negative association between poor sleep and Quality of life for cancer patient who undergoing chemotherapy**(Dickerson ,et al.2014) .**We have very interesting study which took about Quality of life assessment for patient with breast cancer receiving adjuvant treatment, this study evaluate the adjuvant treatment in Quality of life with breast patients ,the patients divided into two groups who had mastectomy with radiation treatment and who had mastectomy with chemotherapy ,after cross-sectional survey study the result was recorded both group don't satisfying in their live ,approximately 92%for chemotherapy ,and 80%for radiation therapy, the two groups worried about their future about 92%for chemotherapy and 80%for radiotherapy .The percentage of patient who concerned and worry about their appearance about 84% in chemotherapy and 72% in radiation **(Alzabaidy.2012)**. Unfortunately, just poor data exits regarding the affect of professional psychological support on the Quality of life **(Jorg,H,et.al.2012)** moreover there are a study talk about  patient need were significantly associated with both psychological distress and Quality of life there are moderate to  strong association exists between patient need and psychological distress or Quality of life**(Terukazn.A,et.al.2010).**Many previous study was appeared that there are 20-40%of breast cancer woman complaining from psychiatric morbidity,including depression and anxiety **( Burgess.c,et,al.2005),**and this not just lead to serious complaining **(Block ,SD,et.al.2000)**but will affect badly on the Quality of life**(Grassi,L.et.al,1996),**reduce compliance to chemotherapy treatment(**Colleoni,M.et,al.2000),** and that can lead to suicidal attempt**(Herniksson,M.et,al.1995).S**tudies have identified many of the psychosocial burdens and needs face by ovarian cancer woman such as many physical complication and many side effect have significant affection badly with psychosocial health and this lead to impact  the Quality of life ,there are low level on sexual activity and satisfaction and high level of the distress ,depression and anxiety (**katherine,B.et,al.2013**).Most of cancer patient who undergoing chemotherapy have depressive attitude toward their disease ,fears and have depressive mood are connect with bad Quality of life (**Vivar,CG,et.Al.2009).**

**2.2.4 Pharmacological data(duration of treatment ):**

The High and medium treatment intensities and long duration of hospital admission were associated with a poorer QOL. Perceived physical appearance was also affected by treatment intensity (**Fawzyl, et.al ,2013).**

The aim of this study was to describe the QOL in cancer patient with chemotherapy cycles and the result showed there is no correlation between QOL and these variables (age , sex , duration of disease, gender, social status, marriage, type of the job ,and educational level),but a strong correlation was found between QoL and number of chemotherapy cycles that’s means the complete a chemotherapy course may play an important role in the treatment. **(Ali ,D. et.al 2009 )**

Other study found quality of life is highly influenced during the period of chemotherapy for both patients and caregivers and is often under reported. Interventions that can improve health related QoL, especially in the domain of mental health for both cancer patients and their caregivers. **(Vrettos , et al. 2012)**

Other study talk about exposure the cancer pt to nausea and vomiting during chemotherapy and how can affect on the patient quality of life, the result found despite antiemetic prophylaxis given during chemotherapy ,nausea and vomiting was still prevalent and often impacts on the quality of patient life, in addition to that the result shows that nausea occurrence more than vomiting. **(Ballatori ,A.et al.2006).**

And about palliative care and medical oncology the study shows integration of palliative care and medical oncology led to an improvement in the care and support of cancer patients, early palliative care can reduce of late-stage chemotherapeutic treatments and carnival of life and to decrease toxicity from chemotherapy alone on patient ,**(Marri,M.2013).**

**2.2.5 And about the Setting of treatment.**

we have study showed the quality of life (QOL) during outpatient chemotherapy was better than QOL prior to hospital discharge The result shows that the patients who receiving outpatient chemotherapy were able to go home after finishing the chemotherapy and live at their residence until their next visit to the doctor and receive a next dose of chemotherapy .This indicated the QOL in outpatient is better than from prior hospital discharge**(Matsuda ,et. Al, 2010).**

**Chapter 3**

**Conceptual framework**

Factors that have affected by chemotherapy

**Chapter 4**

**4. Methodology:**

**Introduction:**

This chapter describes the methodology used for this study, it includes the study design, study population, accessibility and ethical consideration, eligibility criteria, data collection and data analysis procedures. In addition, it illustrates the validity and reliability of the instrument that was constructed and utilized for purpose of data collection in this study. Moreover limitations of the study are also presented in this chapter.

**4.1 Study Design:**

We used a quantitative descriptive cross-sectional study. A total of 400 cancer patients were included in the present analysis. The study was conducted in An- Najah National hospital and Al-Watany hospital.In order to describe the quality of life for Palestinian cancer patients who receive chemotherapy . Before being asked the subjects to participate and fill out QoL questionnaire, a formal consent was obtained from all of them. If the patients met our criteria and we will discuss it later , then they were invited to participate.

**4.2 Study Population:**

**Sample and sampling**:We selected our sample from An- Najah National hospital and Al-Watany hospital as randomized sampling was used to select patient from each hospitals. An- Najah hospital has 1000 patients who received chemotherapy without radiology treatment divided into Hematology and Oncology patient and Al-Watany hospital has 600 patients who can be included in our study, by randomization our target population of those patients is 400 patients to fill the questionnaire. We developed sampling frame,then the patient’s names are numbered consecutively, after that a table of random numbers used to draw a sample of the desired size, then selected the participant blindly by put our finger on the table then we selected the patient who have number that located under our finger. This process continued until the 400 patients was chosen from the two hospital (200 patients from An- Najah National hospital and 200 patients from Al-Watany hospital ) and we choice this sample size because the target sample large and we don’t have enough time to used all them and we selected this sample by used simple randomized sample equation .

The questionnaire used is EORTC QLQ-C3 Version 3.0 Arabic version; the permission got from the company awning the tool. The QLQ-C30 (V.3) incorporates five functional scales (physical, role, cognitive, emotional, and social), three symptoms scales (fatigue, pain, and nausea and vomiting), a global health status / QoL scale, and a number of single items assessing additional symptoms commonly reported by cancer patients (dyspnea, loss of appetite, insomnia, constipation and diarrhea) and perceived financial impact of the disease. The tool has many translations, one of them Arabic, it’s valid and reliable.

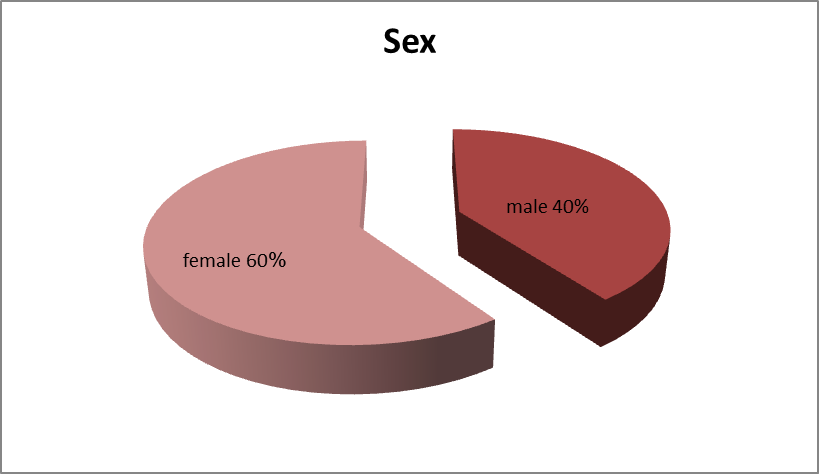
**The study sample**: know the study sample as a subset of the members of the statistical community, selected statistical represent the best society in a way to represent and sings seeking hardship study the community and being able to collect the data required to achieve the objectives discussed and can be generalized findings on all members of the study population, and thus the study sample was 400 patients undergoing chemotherapy in the West Bank.

The following tables show the sample according to the distribution of the variables.

**First, the personal data variables**

**1.Gendervariable:**

Table (1) showed the study sample distribution by sex variable and the result is 60.0% of the study sample were female, and 40.0% of males.and this result more clarify in Graph (1).

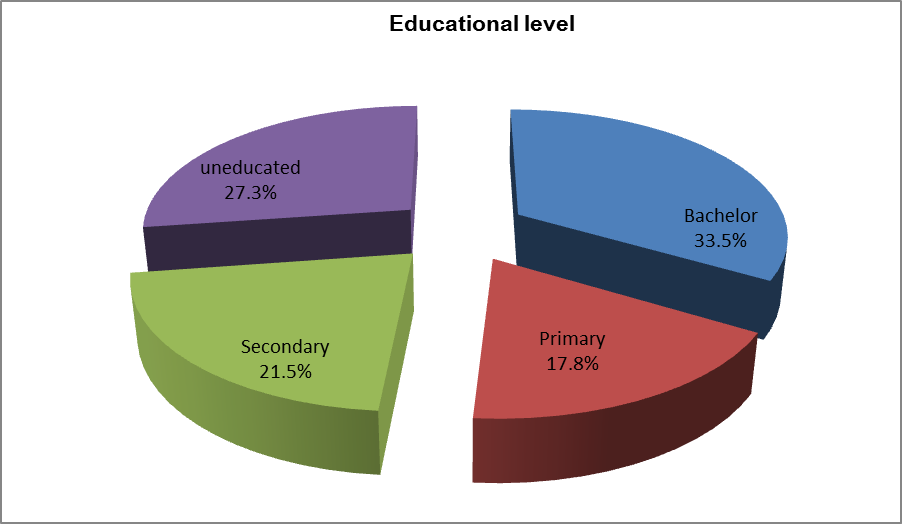


1. **Age variable:**

Table (2) showed the study sample distribution by age variable,From itwe note that 41.8% of respondents were aged from 18 to 29 years, 24.5% of 40 to 49 years, 20.3% of 30 to 39 years, and 13.5% of 50 to 65 years**,** and this result more clarify in Graph (2).

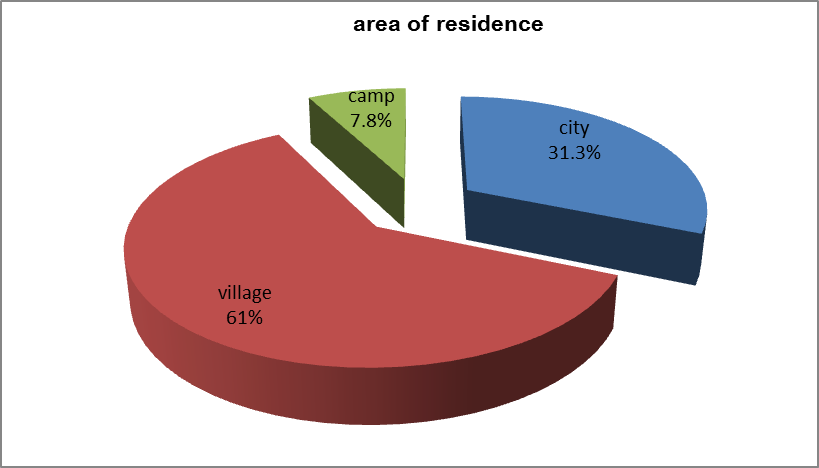
1. **level of education variable:**

Table (3) showed the study sample distribution by level of education variable we can deduce from it the largest proportion of the study sample was educational level Bachelor by 33.5%, while 27.3% uneducated, 21.5% secondary, and 17.8% essential, and this result more clarify in Graph (3).



**4. The place of residence variable:**

Table (4) showed the study sample distribution by place of residence variable , we note that the largest proportion of the sample was 61.0% place of residence village, 31.3% City, and 7.8% camp,and this result more clarify in Graph(4):



**5- Monthly income variable:**

Table (5) showed the study sample distribution according to the monthly income variable that 44.3% of respondents were more than 3,000 shekels, 40.5% fewer than 2,000 shekels, and 15.3% from 2000 to 3000 shekels, and this result more clarify in Graph(5):

**6. Personal Care variable**

Table (6) showed the study sample distribution by Personal Care variable 72.5% of the study sample was getting personal care personal care without the help of family, getting 27.5% of personal care assistance of a family, and this result more clarify in Graph(6)

**7. Marital status variable**

Table (7 ) showedThe study sample distribution by social status variable 68.3% of the study sample were married marital status, 31.8% single, and this result more clarify in Graph(7):

**8-Living conditions Variable:**

Table (8) showed the study sample distribution by the living conditions of variable 91.8% of the study sample were living conditions lived with a nuclear family, 5.3% lived with extended family, 3.0% lived alone, and this result more clarify in Graph(8):

**9-Number of family members variable**

Table (9) showed the study sample distribution by a number of family members variable 75.3% of the study sample was number of family members of more than 6 people, 24.8% of 4 to 5 members, and this result more clarify in Graph(9):

**4.3The instrument (Tools**) :

Quastionaire, The questionnaire was used is EORTC QLQ-C3 Version 3.0 Arabic version, the permission got from the company owning the tool. The QLQ-C30 (V.3) incorporates five functional scales (physical, role, cognitive, emotional, and social), three symptom scales (fatigue, pain, and nausea and vomiting), a global health status / QoL scale, and a number of single items assessing additional symptoms commonly reported by cancer patients (dyspnoea, loss of appetite, insomnia, constipation and diarrhea) and perceived financial impact of the disease. The tool has many translations, one of them Arabic, it’s valid and reliable. It has been tested in many studies among Arabic community with good Cronbach’s Alpha result.

**The study tool**: the researcher adapted a questionnaire as a tool for the study to collect data on the subject of study which aims to explore the point of patients undergoing chemotherapy to life in patients undergoing chemotherapy in the West Bank.

**What the questionnaire consisted of (extension(**

**Section I**: Introduction included a questionnaire and contains a set of elements that determine the purpose of the study and the type of data and information that the researcher wishes collected from the study sample, in addition to paragraph encourage respondents to provide assistance and accuracy in the mobilization of the questionnaire.

**Section II**: General information about the participant and the parameters (personal data), which entered the variables in the research, these variables which demographic variables, mainly gender, age, level of education, place of residence, the monthly income of the household, personal care, personal status, living conditions, the number of family members .

**Section III**: axis and physical condition to ensure physiological public, and case psychology and public

|  |  |
| --- | --- |
| **Always** | **five degrees** |
| **Often** | **four degrees** |
| **Sometimes** | **Three degrees** |
| **Rarely** | **two degrees** |
| **Never** | **one degree** |

This has been designed on the basis of paragraphs Likert scale five dimensions have shown paragraphs and given weights as at:

And thus the highest grade in the scale = 5 × 32 = 160 and less degree = 1 × 32 = 32

Interpretation of results (standard calendar)

The averages are converted to percentages and explain the results on this basis according to the following criteria to assess:

High)80-90%).

average(60-79.9%).

Weak(59.9%or lesser).

**Section IV**: It include therapeutic data of the patient

The study measures:

After confirmed researcher of sincerity questionnaire to measure the goals set for it, and prepared its final form, and after the sample was to determine the researcher distributed questionnaires to patients who are undergoing chemotherapy .

After questionnaires filled was reviewed by the researcher were questionnaires encoded and entered into a computer and processed statistically using the statistical software package statistical social Sciences (SPSS) and dump the answers respondents and then was extracted and the results analyzed and discussed.

**The study design**

**The study included the following variables:**

**1.Independent variables:**

-Gender: it has two levels: (Male, Female(

-Age: it has three levels: (from 18 to 29 years, from 30 to 39 years, from 40 to 49 years, from 50 to 65 years(.

-Level of Education: it has five levels: (uneducated, basic, secondary, diploma, university(.

- The area of the place of residence: it has three levels: (city, village, camp).

- Monthly income of the family: it has three levels:( fewer than 2,000 shekels, from 2,000 to 3,000 shekels, more than 3,000 shekels).

- Personal Care: It has three levels: (getting personal care without the help of family, personal care getting the help of a family member, personal care getting with a paid his employees).

- Marital status and has four levels: (Single, married, Widowed, Divorced).

- Living conditions and has three levels: (I live on my own, I live with a nuclear family, I live with extended family).

- The number of family members and have three levels: (2-3 members from 0.4 to 5 members, more than 6 members).

-**The dependent variables**: It includes averages of responses to the question of the study sample questionnaire concerning the quality of life in patients undergoing chemotherapy in the West Bank.

**Statistical treatments: -**

In order to process the data used statistical packages for Social Sciences (SPPS) using the following statistical treatments:

1. Duplicates.
2. Percentages.
3. Averages.
4. SDs.
5. T test for independent variables (independent sample t-test(.
6. Test analysis of variance One Way ANOVA.
7. Chi-square test (Chi-Square).

**4.4 Setting of the study:**

The data collected from Nablus at Al- Watanyhospital, Al- Najah hospitalin the oncology department in each hospital.

**4.5Inclusion criteria:**

1. Cancer patients aged from 18 to 65 years old.

2. Cancer patients attending and have files in any of the two main hospitals for cancer treatment on schedule chemotherapy; Al- Watanyhospital, Al- Najah hospital.

**4.6 Exclusion criteria:**

1.Patients who don’t knowabout his /her diagnosis and treatment.

2.Patient who received chemotherapy at first time.

3. Patient who under 18 and up 65 yrs.

4. Patient who in other hospitals.

5.Patient who take another treatment either chemotherapy such as radiology**.**

**4.7Ethical considerations:**

After approval IRB and MOH we started data collection after we had been taken the permission from the dean of our collage then we took a consent form from the hospitals & patients, and we offered them option to withdraw at any time.We protect the privacy and the confidentiality for the participant.

**4.8 Limitation of the study:**

1. Time pressure and assignment over load during this semester.

2. Lack Palestinian studies related to our research study.

3. We are still undergraduate students, having a little experience in research studies.

Chapter 5

**Finding of the study:**

**Results of the study questions:**

This study aimed to find out the quality of life in patients undergoing chemotherapy in the West Bank. Also aimed to recognize the role of the variables of the study, and to achieve the goal of the study was to develop a questionnaire was sure of sincerity and the coefficient of stability, and after the process of collecting the questionnaires were coded and entered into a computer and processed statistically using statistical Package for Social Sciences (SPSS) Here are the results of the study according to the sequence of questions and hypotheses.

**First, discuss the findings on questions of the study:**

To answer the question of what the study the quality of life in patients undergoing chemotherapy in the West Bank following tables show the circles and standard deviations and the percentage and degree of appreciation for the answers to the study sample areas:

**Table (10) showed standard deviations and the percentage and degree of appreciation to the question of what the quality of life in patients undergoing chemotherapy in the West Bank, according to the averageBy Countdown, and we deduced that:**

* All the quality of life in patients undergoing chemotherapy in the West Bank got a medium degree, as the total score of the trends of the study sample was 70.1% as a percentage.
* Patient quality of life that affected by bodily physiological status take percentage of 69.4% and is a medium degree.
* Patient quality of life that affected by psychology status earned take percentage of 71.7% and is a medium degree.

**Section V: Therapeutic data, frequencies and percentages:**

***Since when did you receive treatment?***

The table (11) showed study sample distribution by variable since when receiving treatment 49.3% of the study sample was receiving treatment since less than 3 months, 38.3% more than 6 months, and 12.5% from 3 to 6 months.

**How to take treatment**:

Table) 12) showed the study sample distribution as how to take the treatment variable

41.8% of the study sample was take weekly of treatment, 33.5% daily,and 24.8% monthly.

**In which Hospital did you receive yourtreatment?**

Table(13) showed study sample distribution by the hospital variable which you receive chemotherapytreatment 50% of the study sample were receiving hospital treatment by the Al-Najah National hospital , 50% in Al-Watany hospital.

**Place of treatment hospital:**

Table)14) showed study sample distribution by variable place of treatment in hospital

That 86.5% of the study sample was a place of treatment in hospital outpatient clinics, 8.5% of chemotherapy, and 5.0% internal department.

**The availability of treatment for you:**

Table (15)showed study sample distribution according to the availability of treatment variable and we deduced that 91.3% of the study sample was the availability of treatment for you always, 5.8% slightly, and 3.0 sometimes.

**Who will provide you with information about treatment?**

Table (16) showed study sample distribution by a variant of which provides information on treatment for the patient, from it is showed the study sample was that provides information about your treatment doctor was 97%, and 3.0% magazines, books and brochures.

**Part VI: measuring the quality of public health:**

**How was listed in general health during the past week**

Table(17) showed The study sample distribution by variable listed how your health in general during the past weekThis number is scale for patient quality of life from 1 to 10 ,one is express that worst quality of life and 10 is good quality of life . we Noted from it that 37.5% of the study sample was listed how your health generally over the past week( 7), 24.3%(6),15.0% 7.8 5%(2), 5.3%( 1) 3.0 %(8), and 2.5% (3).

**How do you incorporate your quality of life in general / overall level of your life during the past week?**

Table(18)showed the study sample distribution by variable How to insert your quality of life in general / overall level of your life during the past week ,we Noted from it that 39.3% (7)of the study sample was included how quality of life in general / overall level of your life over the past week ,32.0%( 6) 10.3% (2),% 3 (8), 8%(3), 2.8%(1).

**5.1 First: the results of the first hypothesis:**

"There is no statistically significant differences at the level of significance (α = 0.05), in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the educational level variable" in order to examine the validity of the hypothesis concerning the variable level of education used averages and test variability unilateral (one way ANOVA) for independent samples and the results were as shown in Table (19) which showed an averages the quality of life in patients undergoing chemotherapy in the West Bank due to the educational level variable in number arithmetic average variable, we deduced from it there are differences between the circles computational categories variable level of education whether the differences in the averages had reached the level of statistical significance used unilateral variation analysis and table test (20) illustrates this.Table (20) test variance to denote the differences in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the educational level variable resultsstatistically significant ,at the significance level (α = 0.05) ,Can be seen from it The significance level 0.0000 value and this is smaller than specified in the hypothesis value, namely (0.05), and therefore we reject the validity of the hypothesis and say that "no statistically significant differences at the level of significance (α = 0.05), in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the variable level of education.

**5.2 Second: The results of the second hypothesis: -**

In order to study the validity of the hypothesis that "there is no statistically significant relationship at the level of significance (α = 0.05), between the quality of life in patients who are undergoing chemotherapy in the West Bank and the case of bodily physiological" We applied Pearson chi square test for variables hypothesis following table (21)shows the results that Pearson who test between the quality of life in patients undergoing chemotherapy in the West Bank and physiological –physical status From this table, we note that the value of the Pearson chi-squared 5600.000, and the level of significance .0.000 smaller than specified in the hypothesis value so we reject the validity of the hypothesis and say that "no statistically significant relationship at the level of 0.05 between the quality of life in patients who are undergoing chemotherapy in the West Bank and physiological –physical status.

**5.3 Third, the results of the third hypothesis: -**

In order to study the validity of the hypothesis that "there is no statistically significant relationship at the level of significance (α = 0.05), between the quality of life in patients who are undergoing chemotherapy in the West Bank and the psychological status, we have implemented Pearson chi square test for variables hypothesis and table (22) shows the results ,which talk about Pearson who test between the quality of life in patients undergoing chemotherapy in the West Bank and the psychological status ;From these table, we note that the value of the Pearson chi-squared 5000.000, and the level of significance 0.000 smaller than specified in the hypothesis value ;so we reject the validity of the hypothesis ,and say that "no statistically significant relationship at the level of 0.05 between the quality of life in patients who are undergoing chemotherapy in the West Bank and the psychological status".

**5.4 Fourth, the results of the fourth hypothesis:**

"There is no statistically significant differences at the level of significance (α = 0.05), in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the monthly income variable" in order to examine the validity of the hypothesis concerning the variable monthly income used averages and test variability unilateral (one way ANOVA) for independent samples and the results were as shown in Tables No. (23) shows an averages the quality of life in patients undergoing chemotherapy in the West Bank due to the monthly income variable this table Illustrated the differences between the circles computational categories variable monthly income whether the differences in the averages had reached the level of statistical significance test was used contrast unilateral and table analysis (24) illustrates this.Table (24) test variance to denote the differences in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the monthly income variable results and it is show Statistically significant at the significance level (α = 0.05)Can be seen from it The level of significance value of 0.0000 and this is smaller than specified in the hypothesis value value, namely, (0.05), and therefore we reject the validity of the hypothesis and say that "no statistically significant differences at the level of significance (α = 0.05), in terms of quality of life in patients who are undergoing chemotherapy in the West Bank due to the variable monthly income. "

**5.5 Fifth: The results of the fifth hypothesis: -**

"There is no statistically significant differences at the level of significance (α = 0.05), in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the variable age" in order to examine the validity of the hypothesis concerning variable-old used averages and test variability unilateral (one way ANOVA) for independent samples and the results were as shown in Tables No. (25).It shows the averages the quality of life in patients undergoing chemotherapy in the West Bank due to the variable Age this table illustrated the differences between the circles computational categories variable life whether differences in the averages had reached the level of statistical significance used unilateral variation analysis and table test (26) illustrates this. Table (26) test variance to denote the differences in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the age variable results ,it shows Statistically significant at the significance level (α = 0.05)and The level of significance value of 0.0000 and this is smaller than specified in the hypothesis value , namely, (0.05), and therefore we reject the validity of the hypothesis and say that "no statistically significant differences at the level of significance (α = 0.05), in terms of quality of life in patients who are undergoing chemotherapy in the West Bank due to the variable age. "

Chapter 6

**Discussion:**

We will start to discuss the independent variable, after examining our hypothesis the result showed there is a relationship between patient's age and QOL (p value .0000).That's when increased age the situation will increase patient quality of life because older people have more faith to the extent. on the other study said that Qol for patient will increase when the age are increased because the pain with older age decrease when compare them with younger (fernard,et.al2010) this is disagreed with a previous study conducted by (Ali Dehkordi et al., 2009) about quality of life in cancer patients undergoing chemotherapy; the result indicated that there is no relationship between age and QOL. For level of education our result showed that there is a significant relationship between patient's level of education and QOL in tow domains " physical ( P .value 0.000 ) , psychological ( P .value 0.000);when the person have high knowledge about his disease so he can adapted with his disease ,according to robet in 1984 he found positive association between the education and quality of life and said that" patient's own beliefs and understanding of health and treatment regulate their health behavior by this way this study confirm our result ,butThe results of our study are disagreed with findings of previous study conducted by(Adel ,et.al 2012) that reported no relationship between the level of education and the QOL.

On other independent variable ,there is no significant relationship between marital status for the patients and QOL in two domains " physical and psychological ( P. value 0.000 ) this significant finding were in agreement with previous study conducted by (Ali , D. et al 2009) that revealed no significant differences between people who are married, single, separated or live in any other marital condition .On other hand result showed there is significant relationship between patient's economic status and QOL ( P. value 0.000)This result is disagreed with previous study conducted by (Adel .A , KhalidanM., 2012) about impact of chemotherapy upon quality of life for patients with chronic myeloid leukemia, the result indicate that there is no significant difference between economic status and patients QOL. On the other independent variable self-care our result showed that there is no significant relationship between self-care and QOL in ( p. value 0.000). The result of our study are disagreed with previous study conducted by( Vrettos , I . et al . 2012) about comparing health related quality of life of cancer patients under chemotherapy and of their caregiver that reported a relationship between self-care and QOL. Patients problem with self-care and activities related to poor quality of life for patients and their caregiver.

Now we will discuss our result which took about there are significant relationship between Qol and physical state for patient who undergoing chemotherapy in (p.value 0.000),there are a study confirmed our result happen by Livia, et.al. (2012), in her study the result showed about physical , Psychological and social and environment domains as dependent variables and showed that the most affected was physical domain by the toxicity of chemotherapy by generate effects such as pain, fatigue, nausea and vomiting and anorexia then reducing their quality of life. In our result we found that the most physical problem affected the quality of life for patient who undergoing chemotherapy is fatigue and take 87.8% from patient who experienced it , and this result confirmed by Gupta,et.al in 2007. Fatigue is the most common treatable problem faced cancer patient who undergoing chemotherapy and impact all aspect of Quality of Life .and wang in 2002 who took that high percent of cancer patient experienced fatigue around 50%-90% patient.

On other hand of dependent variable there are significant relationship between a psychological state and QoL for patient who undergoing chemotherapy and this result confirmed by castro in 2012 who took that there are a strong association between QOL for patient who undergoing chemotherapy and psychological state ,in our study the most significant factor in psychological domains affected the QoL for cancer patient is sleep-wake disturbances the result was87.1% and this confirmed by Dickerson in 2014 he took that "this phenomena are showed by many study which demonstrate that sleep-wake disturbances is major symptoms in cancer patient who undergoing chemotherapy and the result showed a negative association between poor sleep and Quality of life for cancer patient who undergoing chemotherapy" .

In other domains there is no significant relationship between setting of treatment and QOL for patient who undergoing chemotherapy this significant finding were disagreement with previous study conducted by (Mastuda ,A .et al .2010), that revealed a significant differences between setting of treatment and quality of the life, showed the QoL in outpatients is better than from prior hospital discharge .In other hand we found there are no significant relationship between duration and frequency of treatment and QoLfor patient who undergoing chemotherapy. but our result disagree with Fawzyl, on his study in 2013 and Ali on his study in 2009 , according to fawzyl in 2013 The High and medium treatment intensities and long duration of hospital admission were associated with a poorer QOL. Perceived physical appearance was also affected by treatment intensity, and there are strong correlation was found between QoL and number of chemotherapy cycles that’s means the complete a chemotherapy course may play an important role in the treatment (Ali ,D. et.al 2009 ).

**Recommendations:**

1. Develop educational program for patients and families aboutcope with the disease and how to accept treatment to help reduce the complications of which they are exposed.

2. Provide some support systems for these patients to minimize the costs of medical treatments and lab tests.

3. Develop a screening programs for all people to help them detect the disease at early as possible and start treatment for recovery.

4. Provide counselors in hospitals to help patients cope with the disease effectively and accept treatment.   
  
5. Formulate advanced chemotherapy center in the Al-watanygovernmental hospital as the chemotherapy center on ALnajah national hospital on advanced way in building and instrument that used to provided treatment .

As a summary we conduct cross-sectional study on Nablus oncology hospital in order to study QoL for patient who undergoing chemotherapy and we found are many factor affected the quality of life for patient who undergoing chemotherapy we divided it into dependent and independent variable ,independent variable is age and we found there are significant relationship between age and QoL ,the other hand is physical state and there are significant relationship betweenQoL and physical state and the most significant physical factor was fatigue and the percentage of patient who affected by it 87.7 ,and there are many study confirmed our result , we found there are significant relationship between psychological state and QoL , the most significant psychological factor affected QoL for cancer patient is sleep-weak disturbances our patient number who affected by it was 87.1%, we don’t found significant relationship between setting and freaqanty of treatment and QoL and this disagree with tow study.

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Tables

**Table (1) of the study sample distribution by sex variable**

|  |  |  |
| --- | --- | --- |
| Gender | Number | Percentage |
| Male | 160 | 40 |
| Female | 240 | 60 |
| Total | 400 | 100% |

**Table (2) The study sample distribution by age variable**

|  |  |  |
| --- | --- | --- |
| Age | Number | Percentage |
| From18-29 | 167 | 41.8 |
| From 30-39 | 81 | 20.3 |
| From 40-49 | 98 | 24.5 |
| From 50-65 | 54 | 13.5 |
| Total | 400 | 100% |

**Table (3) of the study sample distribution by level of education variable**

|  |  |  |
| --- | --- | --- |
| Level of education | Number | Percentage |
| Uneducated | 109 | 27.3 |
| Primary | 71 | 17.8 |
| Secondary | 86 | 21.5 |
| Bachelor | 134 | 33.5 |
| Total | 400 | 100.0% |

**Table (4) of the study sample distribution by place of residence variable**

|  |  |  |
| --- | --- | --- |
| Place of residence | Number | Percentage |
| City | 125 | 31.3 |
| Village | 244 | 61.0 |
| Camp | 31 | 7.8 |
| Total | 400 | 100.0% |

**Table (5) of the study sample distribution according to the monthly income variable:**

|  |  |  |
| --- | --- | --- |
| Monthly income | Number | Percentage |
| Less than 2,000 shekels | 162 | 40.5 |
| From 2000 to 3000 shekels | 61 | 15.3 |
| More than3,000 shekels | 177 | 44.3 |
| Total | 400 | 100.0% |

**Table (6)The study sample distribution by Personal Care variable :**

|  |  |  |
| --- | --- | --- |
| Getting personal care | Number | Percentage |
| Getting personal care without the help of family members | 290 | 72.5 |
| Getting personal care help of a family member | 110 | 27.5 |
| Total | 400 | 100% |

**Table (7(The study sample distribution by social status variable:**

|  |  |  |
| --- | --- | --- |
| Marital status | Number | Percentage |
| Unmarried | 127 | 31.8 |
| Married | 273 | 68.2 |
| Total | 400 | 100.0% |

**Table (8(The study sample distribution by the living conditions of variable:**

|  |  |  |
| --- | --- | --- |
| Living condition | Number | Percentage |
| I live on my own | 12 | 3.0 |
| I live with the family of nuclear | 367 | 91.8 |
| I live with extended family | 21 | 5.3 |
| Total | 400 | 100.0% |

**Table (9)The study sample distribution by a number of family members variable:**

|  |  |  |
| --- | --- | --- |
| Number of family member | Number | Percentage |
| 4-5members | 99 | 24.8 |
| More than 6 | 301 | 75.3 |
| Total | 400 | 100.0% |

**Table (10)Circles and standard deviations and the percentage and degree of appreciation to the question of what the quality of life in patients undergoing chemotherapy in the West Bank, according to the averageBy Countdown :**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Question number | paragraph | standard deviation | mean | percentage | EstimateDegree |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| The first area: Originality: Status bodily physiological public | | | | | | |
| 10 | 10. Do you need to rest? | 6.35030 | 4.3907 | 87.8% | High |  |
| 11 | 11. Do you suffer from sleep problems (insomnia)? | .86320 | 4.3525 | 87.1% | High |  |
| 22 | 22. Do your status or physical medical treatment effect on your social life? | .70905 | 4.0775 | 81.6% | High |  |
| 23 | 23. Does your status or physical medical treatment led to financial problems? | .85217 | 4.0250 | 80.5% | High |  |
| 21 | 21. Does your status or physical medical treatment effect on your family life? | .96635 | 3.9225 | 78.5% | Medium |  |
| 8 | Do you feel short of breath? | 3.21978 | 3.6375 | 72.8% | Medium |  |
| 20 | 20. Do you have difficulty concentrating on certain things such as reading? | 1.11936 | 3.4875 | 69.8% | Medium |  |
| 18 | 18. Do you feel tired? | 1.14310 | 3.4600 | 69.2% | Medium |  |
| 19 | 19 Is the pain hinders the daily activities? | 1.16969 | 3.4275 | 68.6% | Medium |  |
| 14 | 14. Do you feel nauseous? | 1.13500 | 3.3775 | 67.6% | Medium |  |
| 2 | 2. Do you have difficulty walking for long distance? | 1.25000 | 3.3375 | 66.8% | Medium |  |
| 15 | 15. Do you suffer from frequent vomiting? | 1.19935 | 3.2875 | 65.8% | Medium |  |
| 4 | 4. Do you need to stay in bed or a chair during the day? | 1.16188 | 3.2800 | 65.6% | Medium |  |
| 13 | 13. Do you have a loss of appetite? | 1.21857 | 3.2575 | 65.2% | Medium |  |
| 9 | 9. Do you feel the pain? | 1.18522 | 3.2475 | 65.0% | Medium |  |
| 12 | 12. Do you feel weak? | 1.25594 | 3.2325 | 64.7% | Medium |  |
| 1 | 1. Is it difficult to have to do hard physical exertion? | 1.27217 | 3.2250 | 64.5% | Medium |  |
| 7 | 7. Are you restricted in the exercise of your activities or hobbies and free time do you feel? | 1.21826 | 3.1925 | 63.9% | Medium |  |
| 3 | 3. Do you have difficulty walking short distances? | 1.21762 | 3.1900 | 63.8% | Medium |  |
| 5 | 5.Do you need help in eating, dressing, bathroom? | 1.31742 | 3.1275 | 62.6% | Medium |  |
| 16 | 16. Do you suffer from constipation? | 1.26946 | 3.1225 | 62.5% | Medium |  |
| 6 | .6. Do you feel limited / restricted to do your job and other Aonchatat Daily? | 1.26092 | 3.1075 | 62.2% | Medium |  |
| 17 | 17. Do you suffer from diarrhea? | 1.30699 | 3.0925 | 61.9% | Medium |  |
|  | The total score for the first field | 1.01490 | 3.4692 | *Medium)* 69.4%*)* | | |
| The second area: Fluency: Status psychology and public | | | | | | |
| 28 | 28. Do you have difficulty remembering things? | 7.75909 | 5.00 | 100.0% | High |  |
| 24 | 24. Do you feel nervous? | .89560 | 3.9300 | 78.6% | Medium |  |
| 25 | 25. Are you concerned? | .93081 | 3.8475 | 77.0% | Medium |  |
| 31 | 31. Are you having trouble remembering the events? | 1.03821 | 3.7825 | 75.7% | Medium |  |
| 27 | 27. Do you feel depressed? | 1.05221 | 3.7750 | 75.5% | Medium |  |
| 26 | 26. Do you feel nervous / upset? | 1.04581 | 3.6975 | 74.0% | Medium |  |
| 29 | 29. Do you feel sad? | 1.07482 | 3.6125 | 72.3% | Medium |  |
| 30 | 30. Do you feel good about your health? | 1.59220 | 2.4650 | 49.3% | Medium |  |
| 32 | 32. Do you prefer to stay on your own? | 1.41637 | 1.9625 | 39.3% | Medium |  |
|  | *The total score for the second field* | 1.03358 | 3.5864 | 71.7%*)* Medium*(* | | |
|  | *College degree* | .81502 | 3.5037 | 70.1%( Medium) | | |

**Table (11) of study sample distribution by variable Since when receiving treatment:**

|  |  |  |
| --- | --- | --- |
| Percentage | number | Since when did receive treatment |
| 49.3 | 197 | Less than 3 months |
| 12.5 | 50 | 3-6 months 12.5 |
| 49.3 | 153 | More than 6 months |
| 100.0% | 400 | Total |

**Table (12)The study sample distribution as how to take the treatment variable:**

|  |  |  |
| --- | --- | --- |
| Percentage | number | How to take treatment |
| 33.5 | 134 | Daily |
| 41.8 | 167 | Weekly |
| 24.8 | 99 | Monthly |
| 100.0% | 400 | Total |

**Table(13) of study sample distribution by the hospital variable which you receive chemotherapy:**

|  |  |  |
| --- | --- | --- |
| Percentage | number | Hospital, which receives its chemotherapy |
| 50 | 200 | Alwatani- Hospital |
| 50 | 200 | An-lnajah-National University Hospital |
| 100.0% | 400 | Total |

**Table)14)The study sample distribution by variable place of treatment in hospital:**

|  |  |  |
| --- | --- | --- |
| Percentage | Number | Place hospital treatment |
| 8.5 | 34 | Department of chemotherapy |
| 86.5 | 346 | Outpatient |
| 5.0 | 20 | Internal departments |
| 100.0% | 400 | Total |

**Table (15)The study sample distribution according to the availability of treatment you variable:**

|  |  |  |
| --- | --- | --- |
| Percentage | Number | The availability of treatment for you |
| 5.8 | 23 | A little |
| 3.0 | 12 | Sometimes |
| 91.3 | 365 | Always |
| 100.0% | 400 | Total |

**Table(16)The study sample distribution by a variant of which provides information on treatment:**

|  |  |  |
| --- | --- | --- |
| Percentage | Number | Who will provide you information about treatment |
| 97.0 | 388 | Doctor |
| 3.0 | 12 | Magazines, books and brochures |
| 100.0% | 400 | Total |

**Table(17) of The study sample distribution by variable listed how your health in general during the past week:**

|  |  |  |
| --- | --- | --- |
| Percentage | Number | How was listed in general health during the past week |
| 5.3 | 21 | 1 |
| 15.0 | 60 | 2 |
| 2.5 | 10 | 3 |
| 7.8 | 31 | 5 |
| 24.3 | 97 | 6 |
| 37.5 | 150 | 7 |
| 3.0 | 12 | 8 |
| 4.8 | 19 | No answers |
| 100.0% | 400 | Total |

**Table(18)of the study sample distribution by variable How to insert your quality of life in general / overall level of your life during the past week:**

|  |  |  |
| --- | --- | --- |
| Percentage | Number | How do you incorporate your quality of life in general / overall level of your life during the past week? |
| 2.8 | 11 | 1.00 |
| 10.3 | 41 | 2.00 |
| 8.0 | 32 | 3.00 |
| 32.0 | 128 | 6.00 |
| 39.3 | 157 | 7.00 |
| 3.0 | 12 | 8.00 |
| 4.8 | 19 | No answers |
| 100.0% | 400 | Total |

**Table(19) averages the quality of life in patients undergoing chemotherapy in the West Bank due to the educational level variable:**

|  |  |  |
| --- | --- | --- |
| Mean | Number | Variable |
| 2.9174 | 109 | Uneducated |
| 3.7533 | 71 | Primary |
| 3.7555 | 86 | Secondary |
| 3.6868 | 134 | Bachelor |

**Table (20) test variance to denote the differences in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the educational level variable results:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source of variation** | **Sum of squares** | **Degrees of freedom** | **Average squares** | **Value (P) calculated** | **Level of significance (P)** |
| **Squares between groups** | 51.831 | 3 | 17.277 | 32.089 | .0000 |
| **Interior squares** | 213.208 | 396 | .538 |
| **Total** | 265.039 | 399 | |

**Table (21)shows Pearson who test between the quality of life in patients undergoing chemotherapy in the West Bank and physiological –physical status:**

|  |  |
| --- | --- |
| 5600.000 | Pearson Chi square test |
| 320 | Degrees of freedom |
| 0.000 | Moral level |

**Table (22) shows Pearson who test between the quality of life in patients undergoing chemotherapy in the West Bank and the psychological status:**

|  |  |
| --- | --- |
| 5000.000 | Pearson Kai square test |
| 280 | Degrees of freedom |
| 0.000 | Moral level |

**Table (23) shows averages the quality of life in patients undergoing chemotherapy in the West Bank due to the monthly income variable.**

|  |  |  |
| --- | --- | --- |
| Mean | Number | Variable |
| 4.0926 | 162 | Less than 2000 |
| 3.0397 | 61 | 2000-3000 |
| 3.1246 | 177 | More than 3000 |
| 3.5037 | 400 | Total |

**Table (24) test variance to denote the differences in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the monthly income variable results:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source of variation** | **Sum of squares** | **Degrees of freedom** | **Average squares** | **Value (P) calculated** | **Level of significance (P)** |
| **Squares between groups** | 94.745 | 2 | 47.372 | 110.437 | .0000 |
| **Interior squares** | 170.295 | 397 | .429 | | |
| **Total** | 265.039 | 399 |

**Table (25) averages the quality of life in patients undergoing chemotherapy in the West Bank due to the variable Age:**

|  |  |  |
| --- | --- | --- |
| Mean | Number | Variable |
| 3.3221 | 167 | 18-29 yrs |
| 3.1879 | 81 | 30-39 yrs |
| 3.6346 | 98 | 40-49 yrs |
| 4.3015 | 54 | 50-65yrs |
| 3.5037 | 400 | Total |

**Table (26) test variance to denote the differences in terms of the quality of life in patients undergoing chemotherapy in the West Bank due to the age variable results:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Source of variation** | **Sum of squares** | **Degrees of freedom** | **Average squares** | **Value (P) calculated** | **Level of significance (P)** |
| **Squares between groups** | 49.633 | 3 | 16.544 | 30.415 | .0000 |
| **Interior squares** | 215.407 | 396 | .544 | | |
| **Total** | 265.039 | 399 |