

# Effect of Psycho-educational intervention on Psychological Status among Breast Cancer Patients

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**Abstract:** Breast cancer is the most frequent neoplasm in women and it has a negative impact on self-concept and the emotional well-being of the patients who suffer from it. Aim of this study was to evaluate the effect of psycho-educational intervention on psychological status among breast cancer patients. Design: A quazi - experimental research design two group (study and control group pre/ posttest) was used to achieve the purpose of this study. Setting: The study was conducted at new cancer institute at Menoufia University . Subject:A purposive sample consisted of 50 patients from the above mention setting who fulfilling the inclusion criteria of the study .Tools: Data were collected using three tools: Social Characteristics Structured interview questionnaire ,Hospital Anxiety and Depression Scale, Rosenberg Self-Esteem Scale scale. Results: The present study revealed that there was a highly statistically significant difference between study and control group in the level of both of anxiety, depression and self-esteem post psycho-educational intervention. It was concluded that the psycho-educational intervention has a positive effect on reducing anxiety ,depression level and enhancing self-esteem among breast cancer patients. Recommendation: Guidance and counseling unit should be part of the treatment system so that patients can come there to discuss issues affecting them. Screening for high-risk patients should be done and referral when necessary

**Keywords:** Psycho-education, Psychological status, Breast cancer.

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## 1. INTRODUCTION

Cancer is a major public health problem throughout the world . it remains the top fear in most arab countries with most of the people fearing to mention its name . Breast cancer is the most common cancer type among females worldwide, as 1 in 8 women will be diagnosed with the disease in their lifetime (Christensen and Marck, 2017). Breast cancer significantly contributes to the health care costs. In 2018, there were more than 626,679 cases of breast cancer related mortality . Despite the increasing global mortality rate of breast cancer, an increase in prevalence on the one hand and the advancement of technology and early diagnosis on the other hand have led to an increase in the number of breast cancer patients( Hashemi , Rafemanesh, Aghamohammadi, Badakhsh and Amirshahi,2020).In Egypt, According to Egyptian Natioal Cancer Institute (NCI); breast cancer incidence increased from 18.9% to reach 38.8% in 2014 (Ibrahim, Khaled, Mikhail, Baraka, and Kamel, 2014).

Despite improvements in screening, early detection, treatment, and overall survival of breast cancer; having breast cancer represents a greater distress for females more than others diseases (Miller, Nogueira, Mariotto, , Rowland and Yabroff ,2019). Breast cancer led to many social and emotional problems . Arab women share the same fear, but with a set of different cultures, norms, and beliefs . Women experience a wide range of cancer induced stress problems such as depression, anxiety, and relationship difficulties ( Niedzwiedz, Knifton, Robb, KatikireddiandSmith,2019).

Depression and anxiety are the two most common psychiatric co-morbidities encountered in breast cancer patients . Breast cancer patient may experience depression and/or anxiety at any stage of their illness from pre-diagnosis to the terminal phase of the illness(Srivastava, Ansari, Kumar, Shah and Meena, 2016). The loss of breast is equivalent to the loss of femininity. In this context, many factors lead to the installation of depression. Anxieties, low self esteem(Rezaei, Eliyasi, Janbabai, Moosazadeh,andHamzehgardeshi,2016).

Risk factors for anxiety and depression in women with breast cancer include: a past history of anxiety or depressive disorder, younger age at diagnosis, poor social support, burdensome somatic symptoms, currently undergoing active cancer treatment, specific drug treatments, and worries regarding fear of death and disease recurrence, altered body image, alteration of femininity, sexuality and attractiveness. Adjuvant chemotherapy may lead to an increased risk of depression, anxiety, or both during but not after treatment(Tsaras, Papataniasiou, Mitsi, Veneti and Kelesi ,2018).in addition to manifestation of the disease itself, pain and fatigue, the fear and the need to adjust to the new situation. The patient's life changes dramatically, immediately following diagnosis, as they need to reconsider their priorities, engage in a new set of behaviors, accept limitations, and restructure their core beliefs (Bredicean ,Crăniceanu,Opresan, Riviş and Papavă etal.,2020).

Following a breast cancer diagnosis, self-esteem often declines , which may be due in part to physical changes from surgery and chemotherapy including scarring, hair loss, and weight gain. However, this construct has been identified as an important factor in influencing health-related quality of life and wellbeing, allowing survivors to continue to thrive after diagnosis and treatment (Awick ,Phillips ,Lloyd and Auley,2017).The importance of a woman's breast has a dramatic impact upon her body image, and depending on the woman, the loss of a breast through mastectomy will have multiple meanings and can trigger conflicting emotions ( Koçan , Gürsoy,2016). A positive perception of self-worth can help cancer patients engage in coping with burden and stress of the disease ( Harorani , Safarabadi , Jadidi , Seavey and Masmouei , 2018).

Patients with cancer may also benefit from psycho educational programs that are designed to increase understanding and knowledge about cancer and associated issues as opposed to learning techniques to reduce anxiety and cope with stress or pain, which is the primary focus of most psychosocial interventions(Mamedova, 2014). The psycho education helped the survivors to make sense of their major problems and recognize their feelings about these problems and thus supported metalizing these experiences. Psycho education enables one to stay in a certain state and understand that state meaningfully and become aware of feelings, which are the targets of many dynamic therapies.(İnan and Üstün,2018).

The most frequently observed adaptive strategies are characterized by being active and focused on the problem (Cao, Qi, Cai & Han, 2018), the most notable of these being positive reframing and personal growth, active coping and planning, followed by the use of religious beliefs , acceptance, and social support .It has been observed that the majority of women present an active coping style, helping them to carry out activities that are enjoyable such as reading, walking, or physical exercise (Joaquín-Mingorance , Arbinaga, Carmona-Márquez and Bayo-Calero, 2019).

The nursing team must establish therapeutic communication with the patient. This aims to provide an affective and conscious relationship between them, in order to assist the women in coping with stress, to exist with other people and to adjust to what can not be changed. This bond, associated with the access to information, induces the women to speak about their discomforts, anxieties and fears, which makes the process of coping with the disease less stressful and exhausting ( Benbenishty ,2017).

## 2. SIGNIFICANCE OF THE STUDY

Breast cancer remains the most commonly diagnosed cancer among women worldwide (WHO, 2017). In the Arab world, breast cancer represents 14% to 42% of all female cancers (Rahou, El Rhazi and Ouasmani et al., 2016) .Breast cancer is the most prevalent cancer among Egyptian women .According to Egyptian National Cancer Institute; breast cancer incidence increased from 18.9% to reach 38.8% in 2014(Ibrahim , Khaled , Mikhail , Baraka and Kamel ,2014) .The prevalence of depression, anxiety, or both (including borderline cases) is 46.87%, 49.96%, and 32.29%, respectively among breast cancer patient in sohag university hospitals( Aly, Abd El Lateef and Mohamed,2017).Also, they are expected to have low self esteem( Prates1, Freitas-Junior, Prates2, Veloso and Barros, 2017). Arab women with breast cancer, especially those receiving lack of support and those with a poor body image, had a powerful psychological

distress with secondary negative effect on their QOL ( Fearon,Hughes and Brearley , 2020). So, the aim of the study evaluate the effect of psycho-educational intervention on psychological status among breast cancer patients.

### **2.1 The Aim of the Study**

The present study was carried out to evaluate the effect of psycho-educational intervention on psychological status among breast cancer patients.

### **Research hypotheses**

1.The patients who participate in psycho-educational intervention (study group) will have lower mean scores of depression than patients who don't receive the intervention (control group).

2.The patients who participate in psycho-educational intervention (study group) will have lower mean scores of anxiety after implementation of the intervention than patients who don't receive the intervention (control group).

3.The patients who participate in psycho-educational intervention (study group) will have high mean scores of self esteem than patients who don't receive the intervention (control group).

4. - The patients who participate in psycho-educational intervention (study group) show better enhancement in their recovery than those who do not participate .

### **2.2 Research Design**

A quasi experimental design, two group (study and control group pre/ posttest) was used to achieve the purpose of the study.

### **2.3 Research Setting**

This study was conducted at new cancer institute Menoufia University.

New cancer institute menoufia university consisted of four floors .the first floors consisted of two departments (first department is for radiotherapy, second department is for emergency room , three clinics, bath room and room for patient's files).The second floor is for chemotherapy ,clinic for new cases and three offices for patients services. The third floor is for (female and male)inpatient department. The last floor is for intensive care unit ,secretary office , kitchen and leadership office.

### **2.4 Subjects**

A purposive sample of 50 patients of the above mentioned settings who fulfilling the following inclusion criteria was recruited in the study.

#### **Inclusion Criteria**

-Patient who agree to participate on the study

-pre and post mastectomy

#### **Exclusion Criteria**

patient who has any history of psychiatric illness e.g. depression. Because these illnesses may lead to high stress and low psychological wellbeing and interfere with results.

#### **Instruments of the Study**

**Three tools were used in this study:-**

#### **Instrument one:-Social Characteristics Structured interview questionnaire:**

This questionnaire will be developed by the researcher based on pertinent literature and guidance of supervisors to assesses socio demographic characteristics of the patients as age, education, marital status and income ..... etc.

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### **Instrument two: Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).**

The Hospital Anxiety and Depression Scale (HADS) was used to measure levels of anxiety and depression (psychological reaction). This instrument was developed by Zigmond and Snaith (1983). It was translated into Arabic by El-Rufaie and Absood (1987). The scale consists of 14 items and two subscales (anxiety and depression) with seven items in each subscale. Each item is scored on a 4-point Likert-type scale (0–3), each statement has four optional responses which are scored, as follows: 3 most of time, 2 a lot of time, 1 from time to time, and 0 not at all. The sum of scores for each scale was between 0 and 21 and . Total scores for each subscale are calculated by simple summation of individual items, a higher score indicating more distress.

HADS consists of two subscales, one measuring anxiety, with seven items, and another measuring depression, with seven items, which score separately. Each item was answered by the patient on a 4-point (0–3) scale, so the possible scores ranged from 0 to 21 for each of the two subscales, taking 2–5 minutes to complete. The HADS manual indicates that a score between 0 and 7 is “no anxiety and depression” between 8 and 10 “mild,” between 11 and 14 “moderate,” and between 15 and 21 “severe.”

Total scoring system for anxiety and depression according to (Snaith & Zigmond, 1994)

- No anxiety and depression :0-7
- Mild :8-10
- Moderate :11-14
- Sever:15-21

### **Instrument three : Rosenberg Self-Esteem Scale likert scale .**

The scale was developed by Rosenberg (1965). It was translated into Arabic and tested by Garas, Ahmed and Bader (1991). It was used to measure self-esteem . It consisted of 10 statements (5 statements are phrased positively and 5 statements are phrased negatively). These statements were rated on a 4-point Likert scale, as follow: (4) strongly agree, (3) agree, (2) disagree, (1) strongly disagree.

Scoring system

Scoring ranged from 10 to 40, with 40 indicating the highest possible score. Scoring for negative answers was reversed, i.e., 1 for strongly agree and 4 for strongly disagree, and so on. Total scores were graded as follows:

Total scoring system for self-esteem

- Low :10-16
- Mild :17-26
- Moderate :27-36
- High :37-40

### **Tools validity**

The study tools were tested for content validity by a jury of five experts in the field specialty of psychiatric mental health nursing, psychiatric medicine, obstetric and gynecological nursing, and psychologist to ascertain the relevance, coverage of the content and clarity of the questions. The tools were approved to be valid following the judgment of the experts.

### **Tools reliability**

The internal consistency of the questionnaire was calculated using Cronbach's alpha coefficients. The reliability of the tools were done using test - retest reliability and proved to be strongly reliable , instrument 2 was reliabled at 0.81 and instrument 3 was reliabled at 0.84

### Procedure

An official letters were issued from the dean of Faculty of Nursing Menoufia University, then send to the head of the department of new cancer institute menoufia university after explanation of the aim of the study to get the permission. Informed consent from patients was obtained after complete description about the purpose, nature and confidentiality of the study. Ethical consideration: the patients were informed about the purpose of the study and encouraged and give full informed consent was obtained from all subjects after providing an appropriate explanation about the purpose of the study and nature of the research. The confidentiality and anonymity of the individual responses, volunteer participation and right to refuse participating in the study were emphasized. A Pilot study A pilot study was conducted on 5 patients to test the clarity, applicability of the instruments and to estimate the time needed for data collection. On the basis of the pilot results the necessary modifications were done accordingly. The sample of pilot study was excluded from the total sample to assure the stability of the results. Data collection the study was carried out in the period from September 2019 to October 2019 over a period of two months. Oral informed consent was obtained from each participant. Then brief description of the purpose of the study was given to each participant. The study subject (50 patients) was divided randomly into two equal groups (study and control group, each group 25 patients). The study group (25 patients) were divided into four groups each group contain from 6 to 7 patients (group1, group 2, group3, group4). The researcher meets each two groups one day per week from 9 AM to 12 PM (group1 from 9 am to 10,30 am, group2 from 10,35 am to 12 pm) in one day and (group3, group4) in another day in the same week. Each group met for eight consecutive weekly sessions each session lasted approximately from 60 to 90 minutes. The implementation of the study passed into four phases (pre assessment phase, planning phase implementation phase, and post assessment phase)

#### Pre assessment phase:-

A comfortable, private place was chosen for the interviewers. Orientation was done about the purpose and content of the study.

#### Phase (1): Assessment phase:

Once the permission was obtained to continue this study, orientation was done about the researcher's name, purpose, significance, content of the study. Assessment was done using the Hospital Anxiety and Depression Scale, Rosenberg Self-Esteem Scale on 50 patients, which are divided into control group (25) who don't receive psycho-educational intervention and study group (25) who receive psycho-educational intervention.

#### Phase (2): planning

Groups were planned with full attention to the goals of psycho educational intervention. the researcher gave complete description about psycho educational intervention in each session.

Through this phase the researcher determined the following points.

1-structure of the sessions.

The format of each session included an introduction, knowledge about breast cancer, review of previous session and implementation of current topic and activity.

2-relaxation technique kit.

The relaxation technique kits were used to facilitate carrying out the session of the program .the kit consists of pictures and videos for deep breathing, progressive muscle relaxation and meditation and poster for explanation of the steps of relaxation techniques.

#### Phase (3): Implementation Phase

This study hypothesized that the patients who will participate in the psycho-educational intervention (study group) will have lower mean scores of anxiety, depressive symptoms and high self esteem after implementation of the psycho-educational intervention than patients who don't receive the intervention (control group). Intervention group met for eight consecutive weekly sessions that lasted approximately 60 to 90 minutes. The researcher led the intervention group and inform them that they will attend (8 sessions) within two months (one days/week). This was achieved through several

teaching methods such as lecture, discussions, brain storming, and demonstration, re demonstration, giving examples & modeling. Data show, video, pictures and booklet were used as media to facilitate explanation and to be a reference for them. At the end of each session, summary, feedback, further clarifications were done for vague items and the researcher gave the patients homework.

**Psycho-educational intervention program:**

It was designed by the researcher focused on the following sessions:

**Session 1:** Introduction about aim of psycho-educational intervention.

**Session 2:** Give knowledge about breast cancer and its risk factors.

**Session 3:** Effect of breast cancer on psychological status.

**Session 4:** Practice relaxation training as deep breathing exercise.

**Session 5:** Practice relaxation training as progressive muscle relaxation technique

**Session 6:** Practice relaxation training as meditation.

**Session 7:** Practice self-esteem skills.

**Session 8:** Evaluation of the psycho-educational intervention by using post test.

**Phase (4): post assessment phase (Evaluation):**

During this phase, the participant was encouraged to ask any questions or demand clarifications they needed and the post-test was given to them. The researcher reintroduced Hospital Anxiety and Depression Scale, Rosenberg Self-Esteem Scale to participants to assess the achievement of the aim of the study.

**The sessions for psycho educational intervention program were:****Session 1: Introduction and orientation**

1. The researcher provides a warm and secure atmosphere among patients, to relieve anxiety, tension and increase the motivation to participate in the program.
2. The researcher welcomes patients, introduces herself and explains the nature and purpose of the study and the possibility to convince the patients that the program is very important.
3. Taking oral informed consent of the patients who agreed to participate in the program and setting an agreement on the number of sessions, time and duration of every session, then specifying the subject of the next session.
4. Orienting the patients about the program (8 sessions. One session every week, for 60-90 minutes). Patients must follow setting an agreement on the rules of the sessions that as follows: confirming the privacy and confidentiality of research information, commitment to sessions dates and time, avoiding interruptions while others talk, avoiding sarcasm about other' opinions and applying essential activities during every session.
5. The pretest Hospital Anxiety and Depression Scale, Rosenberg Self-Esteem Scale was given to them (pre intervention assessment).

**Session 2: Overview on breast cancer**

- At the beginning of the session, the researcher welcomes all patients and

Thanks them for their renewed attendance. The researcher asks patients to answer for the following question: What is the breast cancer? What are the risk factors of breast cancers? And so on. After listening to their answers the researcher provides a detailed explanation about the concept of breast cancer and its risk factors .

-At the end of the session, the researcher assigned homework for patients

**Session (3): Overview on effect of breast cancer on psychological status**

-At the beginning of the meeting the researcher welcomes all patients and thanks them for their renewed attendance. The researcher reviews homework with patients at the beginning of the session.

- The researcher asks patients to answer the following question: What is the effect of breast cancer on psychological status? After listening to their answers, the researcher provides a detailed explanation on the effect of breast cancer on psychological status - At the end of the session, the researcher assigned homework for patients

**Session (4): Relaxation training**

- At the beginning of the meeting the researcher welcomes all patients and thanks them for their renewed attendance. The researcher reviews homework with patients and then demonstrates deep breathing exercise in front of the patients,. The researcher shows photos that illustrate how to practice deep breathing exercise. Then, the researcher acts as a model to illustrate steps of deep breathing exercise to patients, Home work: The researcher asks patients, to apply deep breathing exercise at home.

**Session (5): Relaxation training**

- At the beginning of the meeting the researcher welcomes all patients, and thanks them for their renewed attendance. The researcher reviews homework with patients, asks patients, to re-demonstrate steps of deep breathing exercise at the beginning of the session. The researcher demonstrates progressive muscle relaxation in front of the patients. The researcher shows photos that illustrate how to practice progressive muscle relaxation. Then, the researcher acts as a model to illustrate steps of progressive muscle relaxation to patients. Home work: The researcher asks patients to apply progressive muscle relaxation

**Session (6): Relaxation training**

- At the beginning of the meeting the researcher welcomes all patients, and thanks them for their renewed attendance. The researcher reviews homework with patients, asks patients, to re-demonstrate steps of progressive muscle relaxation. at the beginning of the session. The researcher demonstrates meditation in front of the patients. The researcher shows photos that illustrate how to practice meditation. Then, the researcher acts as a model to illustrate steps of meditation to patients. Home work: The researcher asks patients to apply meditation at home.

**Session(7) : Self esteem:**

1. The researcher welcomes the participants and thanks them for their attendance again. The researcher reviews the homework with the patients. The researcher discuss with the participants how to improve self-esteem through:

- Strength your relation with god and ask him for help
- Develop good behavior through:
  - Replace your negative thoughts with positive one
  - Stay away from negative people
  - Discover your talent and develop it
- Make your body language express your self esteem eg., your head up and your back straight, wear tidy and clean clothes, shake people with confidence and power.
- Have balance in judging situations without over or under estimation.
- You should acquire new skills and be open minded in dealing with people

**Session (8): final session**

1. In the beginning of the meeting the researcher welcomed all patients and thanks them for attendance and completing the sessions.
2. The researcher explains to patients that this is the last meeting for evaluating of the effectiveness of the psycho educational intervention and provides the research tools (Hospital Anxiety and Depression Scale, Rosenberg Self-Esteem Scale) (Post-Test) to measure the level of benefit to patients and to evaluate psycho educational intervention effectiveness.

**3. STATISTICAL ANALYSIS**

Data was coded and transformed into specially designed form to be suitable for computer entry process. Data were collected, tabulated, statistically analyzed using an IBM personal computer with Statistical Package of Social Science (SPSS) version 20 where the following statistics were applied. a-Descriptive statistics: in which quantitative data were presented in the form of mean ( $\bar{X}$ ), standard deviation (SD), and qualitative data were presented in the form numbers and percentages. b-Analytical statistics: used to find out the possible association between studied factors and the targeted disease. The used tests of significance included: \*Chi-square test ( $\chi^2$ ): was used to study association between two qualitative variables.

\*Fischer exact test: for 2 x 2 tables when expected cell count of more than 25% of cases were less than. Pearson correlation (r): is a test used to measure the association between two quantitative variables. A significant level value was considered when P-value <0.05 and highly significant level value was considered when P value < 0.001 while P value of >0.05 indicated non-significant.

**4. RESULTS****Table 1: Socio demographic characters of the studied groups sample (N=50):**

This table shows that, the mean age of the studied subjects is (50.3±9.77), the majority of studied subjects (88%) are married and the same percentage for not working subjects. more than half of them (60%, 60% and 64 %,) from rural area, have not enough income and illiterate respectively. Nearly half of them have the same percentage (52%) have good partner relationship and have a duration of disease from 1-3years, more than three quarters(86%,80%) of them not have family history of the disease or chronic illness

**Figure (1):** Illustrates that there is a highly statistically significant difference between study and control group in the anxiety level post psycho-educational intervention. Where anxiety level reduce from moderate (76%) to (0%).

**Figure (2) :** Illustrates that there is a highly statistically significant difference between study and control group regarding total depression level post psycho-educational intervention. Where depression level reduce from moderate (72%) to (40%).

**Figure (3):** Illustrates that there is a highly statistically significant difference between study and control group regarding total self-esteem level in post psycho-educational intervention .where self-esteem level increase from moderate (20%) to (72%)

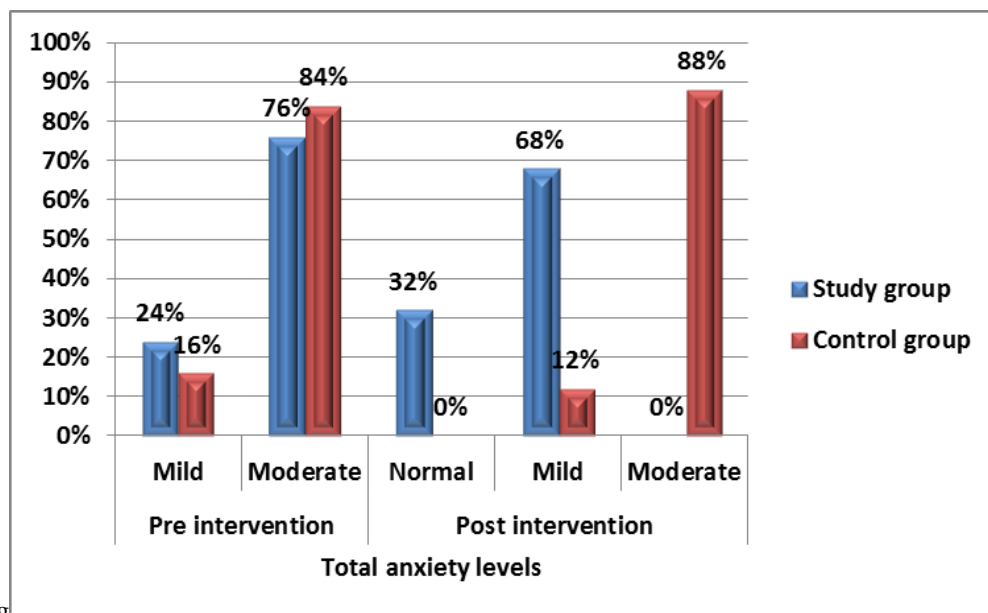
**Table (2): Correlation between total anxiety, depression and self esteem score among study group pre and post intervention:**

Table (2): shows that there is a highly statistically significant positive correlation between total anxiety and depression pre and post psycho-educational intervention where p value (p = 0.0.001and 0,005) respectively, I.e. when anxiety decrease depression decrease and vice versa. While there is statistically significant negative correlation between self- esteem, and anxiety and depression post intervention at p value (0.046 and 0.005) respectively, i.e. when self- esteem decrease depression and anxiety increase

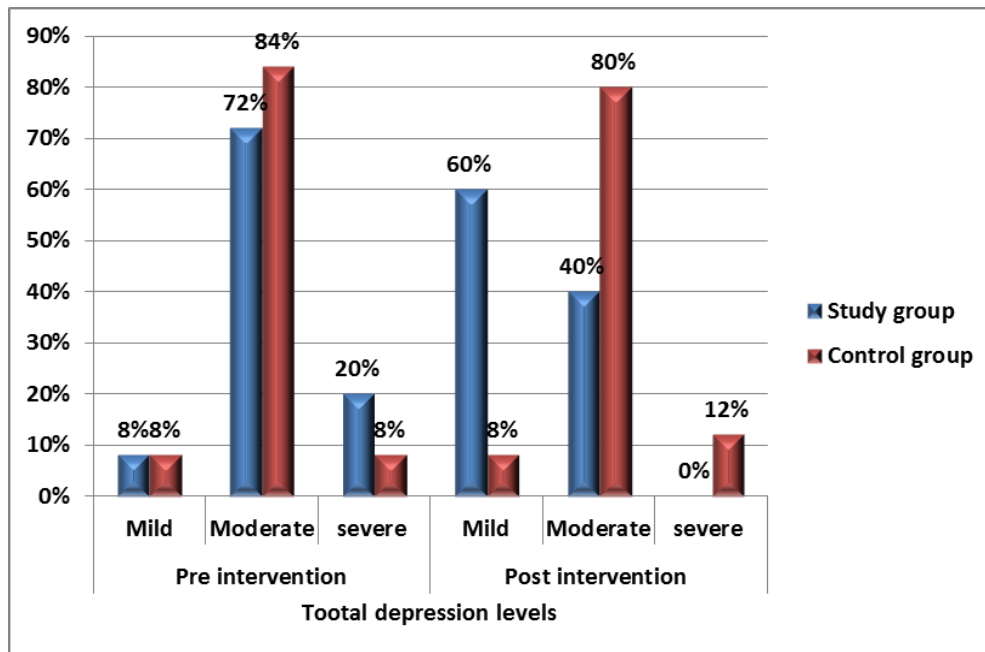


Table (1): Socio demographic characters of the studied groups

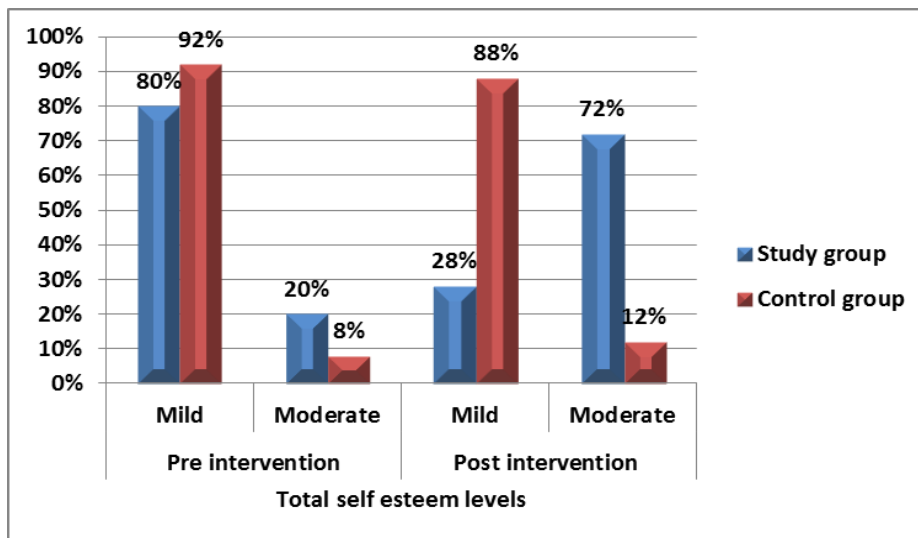
Socio demographic characters items		Study group (N=25)		Control group (N=25)		Total (N=50)		Test of sig.	P value
		No.	%	No.	%	No.	%		
Age / years	Mean ±SD Range	49.9±10.9 35 - 74		50.7±8.64 40 - 74		50.3±9.77 35 - 74		t-test 0.287	0.776 (NS)
Marital status	Married Widow	21 4	84.0 16.0	23 2	92.0 8.00	44 6	88.0 12.0	FE= 0.758	0.667 (NS)
Residence	Urban Rural	11 14	44.0 56.0	9 16	36.0 64.0	20 30	40.0 60.0	$\chi^2$ 0.33	0.563 (NS)
Educational level	Illiterate Read& write Secondary University	15 4 5 1	60.0 16.0 20.0 4.00	17 1 7 0	68.0 4.00 28.0 0.00	32 5 12 1	64.0 10.0 24.0 2.00	$\chi^2$ 3.25	0.353 (NS)
Occupation	Work Not work	2 23	8.00 92.0	4 21	16.0 84.0	6 44	12.0 88.0	FE= 0.760	0.384 (NS)
Income	Enough Not enough	9 16	36.0 64.0	11 14	44.0 66.0	20 30	40.0 60.0	$\chi^2$ 0.333	0.564 (NS)
Disease duration	<1year 1 -3 years 4 – 6 years > 6 years	8 10 6 1	32.0 40.0 24.0 4.00	6 16 3 0	24.0 64.0 12.0 0.00	14 26 9 1	28.0 52.0 18.0 2.00	$\chi^2$ 3.67	0.299 (NS)
Family history	Yes No	5 20	20.0 80.0	2 23	8.00 92.0	7 43	14.0 86.0	FE= 1.50	0.221 (NS)
Chronic illness	Yes No	6 19	24.0 76.0	4 21	16.0 84.0	10 40	20.0 80.0	$\chi^2$ 0.500	0.480 (NS)
Partner relationship	Good Bad	11 14	44.0 56.0	15 10	60.0 40.0	26 24	52.0 48.0	$\chi^2$ 1.28	0.258 (NS)



Comparison between study and control group regarding their levels of anxiety pre and post intervention



Comparison between study and control group regarding their levels of depression pre and post intervention



Comparison between study and control group regarding their levels of self-esteem pre and post intervention

Table (2): Correlation between total anxiety, depression and self-esteem score among study group pre and post intervention:

Studied variable	Anxiety				Depression			
	Pre intervention		Post intervention		Pre intervention		Post intervention	
	r	P value	r	P value	R	P value	r	P value
Anxiety	--	--	--	--	0.755	0.001 (HS)	0.547	0.005 (HS)
Depression	0.755	0.001 (HS)	0.547	0.005 (HS)	--	--	--	--
Self esteem	-0.239	0.250 (NS)	-0.403	0.046 (S)	-0.349	0.250 (NS)	-0.599	0.002 (HS)

## 5. DISCUSSION

Breast cancer is the most common cancer affecting women. Patients with cancer are psychologically vulnerable for many reasons, including the stress of the diagnosis, debilitating treatments and chronic pain. Distress can compromise compliance with treatment and negatively affect prognosis and survival rates. Multidimensional cancer-related distress manifests along a continuum from normal fears to significant anxiety, depressive symptoms, and/or depression at clinical or subclinical levels. The significance of patients' psychological status forms an essential element of oncological treatment patients (Lally, Kupzyk, Bellavia, Hydeman & Gallo et al., (2020)). Therefore, the purpose of this study was to evaluate the effect of psycho-educational intervention on psychological status among breast cancer.

Concerning the comparison between study and control group regarding total anxiety level pre and post intervention. There is a highly statistically significant difference between study and control group regarding anxiety level post psycho-educational intervention. Where anxiety level reduced from moderate to no anxiety at p value ( $p = 0.001$ ). This indicated that the intervention sessions was within the interest and the needs of the patients so it had a positive effect in increasing patients ability to react and deal with stressful situations. This finding was supported by study Song, Xu, Zhang, Ma, and Zhao (2013) who conducted a study with 50 experimental and 50 control patients who were diagnosed with breast cancer, underwent radical mastectomy, and who would receive chemotherapy for the first time, and perform abdominal breathing exercises and progressive relaxation exercises. They found that the relaxation exercises reduced anxiety.

Also the above result, consistent with Yilmaz, Arslan1, Arslan2 (2015) who studied "Effects of Progressive Relaxation Exercises on Anxiety and Comfort of Turkish Breast Cancer Patients Receiving Chemotherapy." they found that there were statistical significant difference in the mean score of total anxiety among study and control group. In addition to Zhang, Wen, Liu, Peng & Wu (2015) who conduct research about "Effectiveness of Mindfulness-based Therapy for Reducing Anxiety and Depression in Patients With Cancer" found mindfulness-based therapy significantly improved measures of anxiety. therapy was significant at < 12 weeks after the start of intervention

Also Darweesh (2018) who studied "Effect of Relaxation Training Techniques And Psycho educational Program on Depression And Anxiety Among Cancer Patients" reported that the mean score anxiety level of the psycho educational program group was significantly lower than the relaxation training and control group. Also relaxation training program mean score was significantly lower than the control group. at the end of two months intervention. and Benoit (2015) who conduct research about "The Effect of Mindfulness Meditation on Emotional Distress in Adult Cancer Patients" reported that at the end of the six weeks intervention there was statistically significant reduction in anxiety.

In addition to Chen, Wang, Yang & Chung (2015) who conduct study about "Effect of Relaxation With Guided Imagery on The Physical and Psychological Symptoms of Breast Cancer Patients Undergoing Chemotherapy" reported that the experimental group showed significant decreases in anxiety between the pretest and the post test. and Charalambous, Giannakopoulou, Bozas & Paikousis (2015) who conduct study about "A Randomized Controlled Trial for the Effectiveness of Progressive Muscle Relaxation and Guided Imagery as Anxiety Reducing Interventions in Breast and Prostate Cancer Patients Undergoing Chemotherapy" found that the intervention group demonstrated a decrease in its mean anxiety score from baseline to 3 weeks after the intervention. The number of people in the mild to moderate anxiety levels has decreased from 56 (before intervention) to 18 (after the intervention).

Contradict to the above result study conducted by Monteiro, Torres, Lima, Teixeira & Pereira (2018) who conduct research "Effects of a Psycho-Educational Intervention with Mindfulness-Based Strategies in Breast Cancer Survivors" reported that there were no significant clear benefits of intervention at the level of psychopathological symptoms where anxiety level ( $p = 1.37$ ). The present study revealed that more than three quarter of studied sample have moderate depression level. while only less than one fifth have severe depression level.

The present study revealed that there is a highly statistically significant difference between study and control group regarding total depression level post psycho-educational intervention. This might be the effect of program session which was with in the interest needs of the patients as express feeling and exercise. this study in the same line with Guarino, Polini, Forte, Favieri & Boncompagni et al., (2020) who conducted a research about "The Effectiveness of Psychological Treatments in Women with Breast Cancer: A Systematic Review and Meta-Analysis". Found that a highly statistically

significant difference between study and control group regarding total depression level post psycho-educational intervention.

Also, Zhang, Wen, Liu, Peng & Wu (2015) who conduct research about "Effectiveness of Mindfulness-based Therapy for Reducing Anxiety and Depression in Patients With Cancer" found mindfulness-based therapy significantly improved measures of depression. therapy was significant at < 12 weeks after the start of intervention. Also Winterhalter (2015) who studied "The Effect Of Exercise Versus Usual Care On Depression In Breast Cancer Survivors: The Hormones And Exercise (hope) Study" reported that depression scores in women randomly assigned to exercise decreased from moderate at baseline to mild at the end of the intervention period.

In addition Ram, Narayanasamy & Barua. (2013) who conduct research about "Effectiveness of Group Psycho-education on Well-being and Depression Among Breast Cancer Survivors of Melaka, Malaysia". Reported that the proportion of depressed individuals had also reduced from 8 to 1 after the psychological intervention. And Charalambous, Giannakopoulou, Bozas & Paikousis (2015) who conduct study about "A Randomized Controlled Trial for the Effectiveness of Progressive Muscle Relaxation and Guided Imagery as Anxiety Reducing Interventions in Breast and Prostate Cancer Patients Undergoing Chemotherapy" found that the intervention group demonstrated a decrease in its mean depression score from baseline to 3 weeks after the intervention. Severe depression was observed in 89 persons while after the intervention the number dropped to 20.

This study supported by Wondimagegnehu, Abebe, Abraha and Teferra (2019) who conduct research about "Depression and social support among breast cancer patients in Addis Ababa, Ethiopia" found that nearly two third and the minority had moderate and severe depression respectively. this could be due to they have families to take care, they afraid of losing their partner, friends and to their lost of femininity attraction. This contradicted with Aly, Abd ElLateef and Mohamed (2017) who conduct study "Depression and Anxiety among Females with Breast Cancer in Sohag University: Results of an Interview Study." reported that less than one fifth and nearly one quarter had moderate and severe depression respectively

There is a highly statistically significant difference between study and control group regarding total self-esteem level in post psycho-educational intervention. where self-esteem level increase from moderate nearly one quarter to nearly three quarters at p value ( $p = 0.001$ ). this study consistent with Harorani, Zamenjani, Golitaleb, Davodabady & Zahedi et al. (2020) who conduct "Effects of relaxation on self-esteem of patients with cancer: a randomized clinical trial." found that a significant difference was found after the intervention in self-esteem ( $P = 0.0001$ ). this could be due to positive effect of intervention on decreasing depression and anxiety that lead to improving in self esteem.

The present study reveals that the mean age of the studied subjects is above forty years, the majority of studied subjects were married. This was consistent with Sharma and Zhang (2015) who conducted a research about "Depression and its predictors among breast cancer patients in nepal" who reflected the majority of patients are married and with mean age of 51.92 years. this could be due to stressful life experiences they faced and hormonal changes that occur during this period.

Also, consistent with Mojgana, Karimollahb and Moslemic (2020) who conducted a research about "Analysis of quality of life in breast cancer survivors using structural equation modelling: the role of spirituality, social support and psychological well-being" reported that more than two third were married. In addition to Celik, Tuna, Samancioglu and Korkmaz (2016). who conducted a research about "The fatigue, anxiety and depression levels of patients with breast cancer during radiotherapy" their finding revealed that the majority of study subjects were married.

As regarding to occupation the majority of studied subjects aren't working. this could be due to the impact of breast cancer and they often confronted with fatigue when performing routine activities. This was consistent with Srivastava, Ansari, Kumar, Shah and Meena et al. (2016) who conducted a research about "Study of Anxiety and Depression among Breast Cancer from North India" who reflected that more than three quarters of patients aren't working. In other hand Shafae, Mirghafourvand, Harischi, Esfahani and Amirzehni (2018) who conducted research about "Self-Confidence and Quality of Life in Women Undergoing Treatment for Breast Cancer." who found that nearly three quarters of the participants were housewife,

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According to educational level nearly two third of them are illiterate. This was consistent with Rey-Villar, Pita-Fernández, Cereijo-Garea, Seoane-Pillado and Balboa-Barreiro et al., (2017) who conducted a research about "Quality of life and anxiety in women with breast cancer before and after treatment" who reflected that nearly two third of them are illiterate this might be due to most of studied subjects from rural area and they don't prefer education for the women and poor socioeconomic status.

Concerning residence more than half of them from rural area. This was consistent with Chaubey and Walvekar (2018) who conducted a research about "Risk factors of breast cancer among women admitted to a tertiary care hospital: a case-control study" who reflected more than half of patients from rural area this could be due to less of awareness, education, early detection, and screening of breast cancer in rural areas.

As regarding to income more than half of them have not enough income. This was consistent with Boing, Pereira, Araújo, Sperandio and Loch et al., (2019) who conducted a research about "Factors associated with depression symptoms in women after breast cancer" who reflected the majority of patients with low income level this could be due to that most of patients are not working and in addition to high costs of treatment.

As regard to family history more than three quarters not have family history. This was consistent with Zakaria, El-kinaal, Loay, Nassar and Darwish et al., (2018) who conducted a research about "Triple Negative Breast Cancer, Clinicopathologic Study of Egyptian Patients, NCI Experience" who reflected the more than three quarters not have family history. This could be due to the exact cause of breast cancer is not clear; it is believed that genetic, environmental factors (smoking, obesity, gender, hormonal factors) have a role in triggering the development and progression of breast cancer. Also, Ha and Cho (2014) who studied "The Mediating Effects of Self-Esteem and Optimism on the Relationship between Quality of Life and Depressive Symptoms of Breast Cancer Patients." and found the majority not have family history.

The present study revealed that nearly half of them have good partner relationship. This was consistent with Geyikci, Cakmak, Demirkol and Uguz (2018) who conducted a research about "Correlation of anxiety and depression levels with attitudes towards coping with illness and socio-demographic characteristics in patients with a diagnosis of breast cancer" who reflected that nearly half of them have behavior of their spouse was unchanged after the illness. This could be due to awareness of partner about the effect of this disease on the psychological status of patients and ability to discrete between their relation with her wife and her illness.

The present study revealed that more than half of them have a duration of disease from 1-3 years. This was consistent with Lee, Baek, Jeon and Im (2019) who conducted a research about "Illness perception and sense of well-being in breast cancer patients" who reflected that nearly half of them had a duration of disease less than 3 years. Also, Charalambous, Kaite, Charalambous, Tistsi and Kouta (2017) who studied "The effects on anxiety and quality of life of breast cancer patients following completion of the first cycle of chemotherapy." found that nearly three quarters of study sample have a duration of disease from 1-3 years, this could be due to lack of medical services and cultural role.

Regarding with history of disease or chronic illness more than three quarters of the studied subject not have history of the disease or chronic illness. This was consistent with Bardaweel, Akour, Al-Muhaisen, AlSalamat and Ammar (2019) who conducted a research about "Oral contraceptive and breast cancer: do benefits outweigh the risks? A case-control study from Jordan" who reflected that more than three quarter of them not have history of the disease or chronic illness. This could be due to the absence of clear cause of breast cancer.

The present study showed that there is a highly statistically significant positive correlation between total anxiety and depression pre and post psycho-educational intervention. This could be due to the increase in life stressors and disease itself lead to increase in depression symptoms that increase level of anxiety else. This study is in the same line with Geyikci, Cakmak, Demirkol & Uguz (2018) who studied "Correlation of Anxiety and Depression Levels with Attitudes Towards Coping with Illness and Sociodemographic Characteristics in Patients with a Diagnosis of Breast Cancer." reported that Pearson correlation analysis revealed a significant and highly positive association between depression and anxiety ( $p < 0.05$ ).

The present study revealed that there is statistically significant negative correlation between self-esteem, anxiety and depression post intervention. This could be due to increase of patient self-esteem help them to express their negative

feeling and decrease anxiety and depression .this study in the same line with study done by Sivaperumal, Sidik, Rampal, Ismail& Periasamy (2019) who conduct study" Self-esteem among cancer patients receiving chemotherapy in selected government state hospitals, Peninsular Malaysia." reported that there is statistically significant negative correlation between self- esteem, anxiety and depression among subject.

Also, supported by Pintado (2017) who conduct " Self-concept and emotional well-being in patients with breast cancer " found that Depression and Anxiety had negative correlation with Self-esteem . and Sadoughi & Salehi (2017) who conduct " The Relationship between Anxiety, Depression, and Quality of Life among Women with Breast Cancer ." analysis showed that there is a statistically significant difference among all SES levels in terms of anxiety, and patients with average and high SES experience less anxiety than patients with low SES levels.

## 6. CONCLUSION

It was concluded that the psycho-educational intervention has a positive effect on reducing depression ,anxiety level and improving self esteem among study group than control group with breast cancer patients .There was a positive significant correlation between level of depression and anxiety but there was a negative significant correlation between level of depression ,anxiety and self esteem . There was statistical significant relation between educational level ,income disease duration and parental relationship regarding depression and anxiety only but there was statistical significant relation between income and parental relationship regarding depression ,anxiety and self esteem

## 7. RECOMMENDATIONS

Monitoring the patient's mood, encourage the patients to participate in pleasant activities, developing route and structure in daily life. Guidance and counseling unit should be part of the treatment system so that patients can come there to discuss issues affecting them. Screening for high-risk patients should be done and referral when necessary. Psycho educational program for increasing public awareness about depression, anxiety and its multiple consequences and managements and ways of improving self esteem.

## REFERENCES

- [1] Christensen, H., &Marck, D .(2017). The efficacy of mindfulness based stress reduction (MBSR) for decreasing anxiety and depression among breast cancer survivors. *Sch Physician Assist Stud*, 16, 613
- [2] Hashemi,S., Rafemanesh,H.,Aghamohammadi,T., Badakhsh,M., ·Amirshahi,M.,Mahdieh Sari,M., Behnamfar,N., & Roudini,K.(2020) Prevalence of anxiety among breast cancer patients: a systematic review and meta-analysis. *Breast Cancer* , 27:166–178
- [3] Ibrahim, A.S., Khaled, H.M., Mikhail, N.N., Baraka, H., &Kamel,H.(2014). Cancer incidence in egypt: results of the national population-based cancer registry program. *Journal of Cancer Epidemiology*,2014,1-19.
- [4] Miller, K.D., Nogueira, L., Mariotto, A.B., Julia H. Rowland, J.H., Yabroff, K.R., Alfano, C.M., Jemal, A., Kramer, J.L., Siegel, R.L.(2019) Cancer Treatment and Survivorship Statistics, 2019 . *CA CANCER J CLIN* ;69(5):363–385
- [5] Niedzwiedz,C.L., Knifton,L., Robb,K.A., Srinivasa Vittal Katikireddi,S.V., & Smith,D.J.(2019) Depression and anxiety among people living with and beyond cancer: a growing clinical and research priority. 19:943
- [6] Srivastava,V., Ansari,M.A., Kumar,A., Shah,A.G., Meena,R.K., Prasant Sevach,P.,& Singh,O.P.(2016) Study of Anxiety and Depression among Breast Cancer patients from North India. *iMedPub Journals Clinical Psychiatry*; 2 (1): 4
- [7] Rezaei,M., Eliyasi,F., Janbabai,G., Moosazadeh,M.,& Hamzehgardeshi,Z.(2016) Factors Influencing Body Image in Women with Breast Cancer: A Comprehensive Literature Review. *Iran Red Crescent Med J*. Inpress(Inpress), doi: 10.5812/ircmj.39465
- [8] Tsaras,K., Papathanasiou,I.V., Mitsi,D.,Veneti,A., Kelesi,M., Zyga,S., &Fradelos,E.C.(2018)Assessment of Depression and Anxiety in Breast Cancer Patients: Prevalence and Associated Factors. *Asian Pac J Cancer Prev*, 19 (6), 1661-1669.

- [9] Bredicean,A., Crăiniceanu,Z., Oprean., Riviş ,I. , Papavă ,I., Secoşan,I., Franduş ,M., Giurgi-Oncu,C., & Grujic,D.(2020) The influence of cognitive schemas on the mixed anxiety-depressive symptoms of breast cancer patients. *BMC Women's Health* , 20:32
- [10] Awick ,E.A` Phillips, S.M` Lloyd, G.R` `McAuley, E .(2017) Physical Activity, Self-Efficacy and Self-Esteem in Breast Cancer Survivors: A Panel Model. *Psychooncology*. 2017 October ; 26(10): 1625–1631. doi:10.1002/pon.4180.
- [11] Koçan,S. and Gürsoy,A.(2016) Body Image of Women with Breast Cancer After Mastectomy: A Qualitative Research. *J Breast Health* ; 12: 145-50 DOI: 10.5152/tjbh.2016.2913
- [12] Harorani,M., Safarabadi,M. , Jadidi,A., Seavey,J., Masmouei,B.,& Bazrafshan,M.( 2018)Relationship Between Self-Efficacy and Self-Esteem in Patients With Cancer. *Journal of Client-Centered Nursing Care*, 4(1), pp. 45-52. <https://doi.org/10.32598/10.32598/jccnc.4.1.45>
- [13] Mamedova,K.(2014) Psychoeducational Program for Breast Cancer Patients: A Pilot Study, YORK UNIVERSITY TORONTO, ONTARIO
- [14] İnan ,F.,& Üstün ,B.(2018) After the Psychoeducational Intervention: Turkish Breast Cancer Survivors' Experiences. *Eur J Breast Health* ; 15(1): 37-42.
- [15] Cao, W., Qi, X., Cai, D. A., & Han, X. (2018). Modeling posttraumatic growth among cancer patients: The roles of social support, appraisals, and adaptive coping. *Psycho-Oncology*, 27(1), 208-215. doi: 10.1002/pon.4395
- [16] Joaquín-Mingorance ,M., Arbinaga,F., Carmona-Márquez,J. , & Bayo-Calero,J.(2019) Coping strategies and self-esteem in women with breast cancer. *annals of psychology* , 35( 2) , 188-194
- [17] Benbenishty,J.(2017) Patient Perspectives on the Influence of Practice of Nurses Forming Therapeutic Relationships. 21( 4).
- [18] WHO (2017). Breast cancer: prevention and control. World Health Organization [Online]. World Health Organization. Available: <http://www.who.int/cancer/detection/breastcancer/en/index1.html> [Accessed May 27 2017]
- [19] Rahou, B.H., El Rhazi, K., & Ouasmani, F, et al., (2016). Quality of life in Arab women with breast cancer: a review of the literature. *Health Qual Life Outcomes*, 14
- [20] Aly, H.Y., Abd ELateef, A.A., & Mohamed, A. E.(2017).Depression and Anxiety among Females with Breast Cancer in Sohag University: Results of an Interview Study. *Remed Open Access*. 2,1-7.
- [21] Prates1,A.C.L., Freitas-Junior ,R.F., Prates2,M.F. O .,Veloso,M.F., Barros,N.M.(2017). Influence of Body Image in Women Undergoing Treatment for Breast Cancer. *Rev Bras Ginecol Obstet* ,39,175–183.
- [22] Fearon,D.,Hughes,S., Brearley,S.D.(2020) Experiences of breast cancer in Arab countries. A thematic synthesis. *Quality of Life Research* (2020) 29:313–324 <https://doi.org/10.1007/s11136-019-02328-0>
- [23] Kim, Y.H., Choi, K.S., Han, K.,& Kim, H.W.(2018) A psychological intervention programme for patients with breast cancer under chemotherapy and at a high risk of depression: A randomised clinical trial. *J Clin Nurs*. 2018; 27:572–581
- [24] Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ:Princeton University Press
- [25] Snaith RP, Zigmond AS. *The Hospital Anxiety and Depression Scale Manual*. Windsor: Nfer-Nelson; 1994
- [26] Zigmond, A.S, & Snaith, R.P. (1983) .The Hospital and Anxiety Depression Scale. *Acta Psychiatry Scandinavia*, 67,361-370.
- [27] El-Rufaie, O.E., Absood, G.(1987). Validity study of the Hospital Anxiety and Depression Scale among a group of Saudi patients. *Br J Psychiatry*. ,151:687–8. [PubMed].

**International Journal of Novel Research in Healthcare and Nursing**

 Vol. 8, Issue 2, pp: (11-27), Month: May - August 2021, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

- [28] Lally,R.M., Kupzyk,K.A., Bellavia,G., Hydeman,J., Gallo,S., Helgeson,V.S., Erwin ,D., Mills,A.C.,& Brown,J.K.(2020) CaringGuidance™ after breast cancer diagnosis eHealth psychoeducational intervention to reduce early post-diagnosis distress. *Supportive Care in Cancer* (2020) 28:2163–2174.
- [29] Song, Q.H., Xu, R.M., Zhang, Q.H., Ma, M., Zhao, X.P. (2013). Relaxation training during chemotherapy for breast cancer improves mental health and lessens adverse event. *Int J Clin Exp Med.*; 6, 979-84.
- [30] Yilmaz,S.G.,& Arslan,S.(2015) Effects of Progressive Relaxation Exercises on Anxiety and Comfort of Turkish Breast Cancer Patients Receiving Chemotherapy. *Asian Pac J Cancer Prev.*, 16 (1), 217-220.
- [31] Zhang,M.,Wen, Y., Liu, W., Peng, L., Wu,X., & Liu,Q.(2015) Effectiveness of Mindfulness-based Therapy for Reducing Anxiety and Depression in Patients With Cancer. 94(45):e897.
- [32] Darweesh,A.E.M.(2018) Effect of Relaxation Training Techniques And Psychoeducational Program on Depression And Anxiety Among Cancer Patients. *IOSR Journal of Nursing and Health Science (IOSR-JNHS)* ;7(4 ) pp. 70-77
- [33] Chen ,S.F. , Wang, H.H, Yang, H.Y, & Chung, U.L.(2015) Effect of Relaxation With Guided Imagery on The Physical and Psychological Symptoms of Breast Cancer Patients Undergoing Chemotherapy, *Iran Red Crescent Med J.* ;17(11):e31277.
- [34] Charalambous, A, Giannakopoulou ,M, Bozas ,E, Paikousis, L.(2015) A Randomized Controlled Trial for the Effectiveness of Progressive Muscle Relaxation and Guided Imagery as Anxiety Reducing Interventions in Breast and Prostate Cancer Patients Undergoing Chemotherapy. *Evid Based Complement Alternat Med.* ;2015:270876.
- [35] Monteiro,S.,Torres,A., Mariana Lima,M., Teixeira,R.,& Pereira,A.(2018) Effects of a Psycho-Educational Intervention with Mindfulness-Based Strategies in Breast Cancer Survivors . 2-35. DOI: 10.29290/AMHS.1.4.
- [36] Guarino, A , Polini, C , Forte, G , Favieri, F., Boncompagni,I, Casagrande,M . (2020) The Effectiveness of Psychological Treatments in Women with Breast Cancer: A Systematic Review and Meta-Analysis. *J Clin Med.* ;9(1). doi: 10.3390/jcm9010209.
- [37] Winterhalter, B."The Effect Of Exercise Versus Usual Care On Depression In Breast Cancer Survivors: The Hormones And Exercise (hope) Study" (2015). Public Health Theses. 1325.
- [38] Ram,S., Narayanasamy,R .,& Barua,A.(2013) Effectiveness of Group Psycho-education on Well-being and Depression Among Breast Cancer Survivors of Melaka, Malaysia. *Indian J Palliat Care.* ; 19(1): 34–39.doi: 10.4103/0973-1075.110234
- [39] Wondimagegnehu,A., Abebe,W., Abraha,A.,& Teferra,S.(2019) Depression and social support among breast cancer patients in Addis Ababa, Ethiopia. *BMC Cancer* ,19:836
- [40] Harorani, M, Zamenjani, M, Golitaleb, M, Davodabady, F, Zahedi ,S, Jadidi, A, Rezaei, M .(2020) Effects of relaxation on self-esteem of patients with cancer: a randomized clinical trial. *Support Care Cancer.* ;28(1):405-411. doi: 10.1007/s00520-019-05025-3
- [41] Sharma,A.,& Zhang,J.(2015). Depression And Its Predictors Among Breast Cancer Patients In Nepal. *ASEAN Journal of Psychiatry*;Vol. 16 (1).
- [42] Mojgana,F., Karimollahb,H.,& Moslemic,D.(2020) Analysis of quality of life in breast cancer survivors using structural equation modelling: the role of spirituality, social support and psychological well-being. *International Health* ; page 1–10. doi:10.1093/inthealth/ihz108.
- [43] Celik,G.O., Tuna,A., Samancioglu,S., & Korkmaz,M.(2016) The fatigue, anxiety and depression levels of patients with breast cancer during radiotherapy. *Int J Clin Exp Med* ;9(2):4053-4058.
- [44] Shafaei ,F.S., Mirghafourvand, M., Harischi ,S., Esfahani, A.,& Amirzehni ,J.(2018) Self-Confidence and Quality of Life in Women Undergoing Treatment for Breast Cancer. *Asian Pac J Cancer Prev.*;19(3):733-740.



**International Journal of Novel Research in Healthcare and Nursing**

 Vol. 8, Issue 2, pp: (11-27), Month: May - August 2021, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

- [45] Rey-Villar ,R., Pita-Fernández ,S., Cereijo-Garea, C., Seoane-Pillado, T., Balboa-Barreiro ,V.,& González-Martín, C.(2017) Quality of life and anxiety in women with breast cancer before and after treatment. *Rev. Latino-Am. Enfermagem.* ;25:e2958
- [46] Chaubey ,J.K., &Walvekar, P.R.(2018) Risk factors of breast cancer among women admitted to a tertiary care hospital: a case-control study. *Int J Community Med Public Health*; 5(10):4316-4322.
- [47] Boing,L., Pereira,G.S., Araújo,C,D.C.R., Sperandio,F.F., Loch,M..S.G., Bergmann ,A., Borgatto, A.F., &Guimarães, A.C.A.(2019) Factors associated with depression symptoms in women after breast cancer. *Rev Saude Publica.* ;53:30. doi: 10.11606/S1518-8787.2019053000786.
- [48] Zakaria,A., EL-Kinaai,N., Loay, I., Nasser, H.R., Darwish, T., EL-Defdar, M., Allam, R.M., and Nabil,H.(2018) Triple Negative Breast Cancer, Clinicopathologic Study of Egyptian Patients, NCI Experience. *Med. J. Cairo Univ.*, 86( 5 : 2747-2753
- [49] Ha,E.H.,&Cho,Y.K.(2014) The Mediating Effects of Self-Esteem and Optimism on the Relationship between Quality of Life and Depressive Symptoms of Breast Cancer Patients. *Psychiatry Investig.*;11(4):437-445.
- [50] Geyikci, R., Cakmak ,S., Demirkol, M.E., Uguz ,S.(2018) Correlation of anxiety and depression levels with attitudes towards coping with illness and sociodemographic characteristics in patients with a diagnosis of breast cancer. *The Journal of Psychiatry and Neurological Sciences*;31:246-257. <https://doi.org/10.5350/DAJPN2018310302>
- [51] Lee ,Y., Baek,J., Jeon,Y.,& Im ,E.(2019) Illness perception and sense of well-being in breast cancer patients. *Patient Preference and Adherence* :13 .1557–1567.
- [52] Charalambous,A., Kaite,C.P., Charalambous,M., Tistsi,T., & Kouta ,C.(2017) The effects on anxiety and quality of life of breast cancer patients following completion of the first cycle of chemotherapy .*SAGE Open Medicine* ; 5: 1–10.
- [53] Bardaweel,S.K., Akour,A.A., Al-Muhaissen,S., AlSalamat,H.A & Ammar,K.(2019) Oral contraceptive and breast cancer: do benefits outweigh the risks? A case – control study from Jordan. *BMC Women's Health* ; 19:72.
- [54] Sivaperumal,V., Sidik, S.M., Rampal, L., Ismail, S.I.F., Periasamy,U.(2019) Self-esteem among cancer patients receiving chemotherapy in selected government state hospitals, Peninsular Malaysia. *Med J Malaysia* ; 74 (5) .
- [55] Pintado,S.(2017). Self-concept and emotional well-being in patients with breast cancer. *Official Journal of the Latin-American Federation of Psychological Associations* , 8(2), 76-84.
- [56] Sadoughi,M.,& Salehi,Z.(2017) The Relationship between Anxiety, Depression, and Quality of Life among Women with Breast Cancer. *International Journal of Academic Research in Psychology* 2017, Vol. 4, No. 1