

## Psycho-Social Program for Women with Mastectomy undergoing Chemotherapy

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### Abstract

**Background:** Facing a diagnosis of breast cancer and its treatment is often equivalent to facing death itself, which leads to the emergence of powerful emotions that often seem to get out of control. After mastectomy, many women experience serious psycho-social reactions. These reactions can adversely affect treatment outcomes and cancer prognosis. **Aim of the study:** This study aimed to evaluate the effect of psycho-social program for women with mastectomy undergoing chemotherapy. **Study design:** A quasi-experimental design, one group (pre and post-test) was used. **Setting:** This study was conducted at department of oncology in the Nasser Institute of Oncology at Cairo City. **Study subjects:** 30 women who were divided into 8 groups, each group includes 4 women who were chosen by convenience sample. **Tools of data collection:** Four tools were used for data collection: **Tool (1):** Structure interview questionnaire sheet for assessing socio-demographic data and clinical data of women, **Tool (2):** Depression, Anxiety and Stress Scale, **Tool (3):** Rosenberg Self-Esteem Scale and **Tool (4):** Ucla Loneliness Scale. **Results:** There was high statistical significant positive correlation between women's' depression, anxiety, stress, self-esteem and loneliness levels pre and post implementation of the psycho-social program. **Conclusion:** The psycho-social program had a positive effect on the women with mastectomy undergoing chemotherapy. **Recommendations:** Necessity of providing psycho-social services for women with mastectomy and keeping it aside for medical treatment, in order to reduce the emotional stress that accompanies the disease affecting the course of treatment.

**Keywords:** Chemotherapy, Mastectomy, Psycho-social program.

### Introduction:

A mastectomy is an operation to remove the entire breast. It is usually done to treat breast cancer. But, it has emotionally stressful among women. It affects a woman's identity, perception of self as a woman, femininity, and self-confidence which are all closely bound to body-image (Fox et al., 2015). Woman with mastectomy has to deal with the loss of a body part, which is important to femininity and sexuality. After mastectomy and the treatment process, the woman's body image and concerns related to

situation can negatively affect both physical and emotional health. The woman's preoccupation about body image, family life, the recurrence or metastasis, and partners attitudes can dominate daily life (Koçan & Gürsoy, 2021).

Chemotherapy is the systematic treatment of cancer with chemical drugs and use of antineoplastic drugs to promote tumor cell destruction by interfering with cellular function and reproduction. There are three main goals for chemotherapy in cancer treatment. First cure of cancer means that the

cancer is destroyed and it goes away and doesn't come back. Second if cure is not possible, the goal may be to control the disease, by chemotherapy which is used to shrink tumors or stop the cancer from growing and spreading. This can help the person with cancer feel better and live longer. Third, palliative chemotherapy which used to reduce symptoms caused by the cancer and improve comfort (**American Cancer Society, 2020**).

Psychological consequences of cancer treatments can be very significant. On the physical level, mastectomy can cause great changes in body image and in the way patients perceive their body. These women often experience severe psychological and physical distress that disrupts their self-esteem and interpersonal relations. Physical discomfort and changes in body image often make women after mastectomy had negative emotions about themselves and in interpersonal and social life. Moreover, mastectomy threatens the independence and ability of women for playing an effective role in the family and society, leading the women to feel lack of competence and self-confidence (**Buchi, 2018**).

Psycho-social program should include minimizing the distress reported by the women with mastectomy undergoing treatment of chemotherapy, and mobilization of social support available, the emphasis on psychosocial issues and the provision of information to women, to facilitate effective coping with the disease and surgical procedure, restoring a sense of normally and physical independence (**Halkett, 2018**). Psychosocial interventions including therapeutic communication have been used successfully to minimize stress, improve quality of life, treat depression, and support cancer patients throughout the course of diagnosis and recovery. Also, Emotional

support involves relationships that provide love, friendship and solidarity. Practical support consists of physical nearness and practical assistance, advice and counseling (**Landmark et al., 2015**).

**Significance of the study:**

Women's health status is important for the health of their children, family, and community, in addition to the traditional roles of women as wives, mothers and primary caregivers to their families. Women with mastectomy have to deal not only with the trauma of disfigurement but also with the fear of rejection from their partners and loss of femininity. Breast cancer treatment changes body reality and affects body presentation. Thus, this study on women's psychological and social reactions to breast cancer treatment can help to provide better understanding about women's psychological aspects as well as developing effective strategies to improve women's physical, psychological and social wellbeing (**AlGhabeesh et al., 2019**).

**Aim of the Study:**

The study aimed to evaluate the effect of psycho-social program for the women with mastectomy undergoing chemotherapy.

It was achieved through:

- Assessing psycho-social problems among women with mastectomy undergoing chemotherapy.
- Accordingly, designing a psycho-social program for women with mastectomy undergoing chemotherapy.
- Implementing the designed psycho-social program for women with mastectomy undergoing chemotherapy.
- Evaluating the effect of the program on psycho-social problems among women with mastectomy undergoing chemotherapy.

**Research hypothesis:**

The psycho-social program will have a positive effect on psycho-social problems

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among women with mastectomy undergoing chemotherapy.

### **Subjects & Method:**

**Research design:** A quasi-experimental design, one group (pre and post-test) was used to achieve the aim of the study.

**Setting:** This study was conducted at department of Oncology in the Nasser Institute of Oncology at Cairo City which is affiliated to Ministry of Health.

**Sample size:** The sample of the study consisted of 30 women, one group (pre and post)

### **Tools of data collection:**

Four tools were used in this study:

#### **Tool 1: Structure Interview Questionnaire Sheet:**

Questionnaire sheet was developed by the researchers. It included two parts:

**1- Socio-demographic data:** to elicit data about characteristics of women such as; age, occupation, level of education, marital status and income.

**2- Clinical data:** It included onset of disease, family history, number of chemotherapy and side effects.

**Tool 2: Depression, Anxiety and Stress Scale (DASS-21).** This scale was developed by (Lovibond and Lovibond, 1995). It set of three domains namely; depression, anxiety and stress. Each domain contains 7 items, divided into subscales with similar content.

#### **Scoring system for Depression, Anxiety and Stress Scale (DASS-21):**

1- Depression: Normal 0-9, Mild 10-13, Moderate 14-20, Severe 21-27 and extremely severe 28 and more.

2- Anxiety: Normal 0-7, Mild 8-9, Moderate 10-14, Severe 15-19 and extremely severe 20 and more.

3- Stress: Normal 0-14, Mild 15-18, Moderate 19-25, severe 26-33, Extremely severe 34 and more.

**Tool 3: Rosenberg Self-Esteem Scale (Rosenberg, 1965):** A 10-item scale that measures global self-worth by measuring both positive and negative feeling about the self. The scale is believed to be uni-dimensional. All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree.

#### **Scoring system for Rosenberg Self-Esteem Scale:**

- Items 1, 3, 4, 7, and 10 score: Strongly agree =3, Agree =2, Disagree =1, and Strongly disagree =0

- Items 2, 5, 6, 8, and 9 score: Strongly agree =0, Agree =1, Disagree =2, and Strongly disagree =3

Give Strongly Disagree 1 point, Disagree 2 points, Agree 3 points and Strongly Agree 4 points. Sum scores for all ten items. Keep scores on a continuous scale. Higher scores indicate higher self-esteem.

#### **Tool 4: UCLA Loneliness Scale (Russell et al., 1978):**

A 20-items scale that was designed to measure one's subjective feeling of loneliness as well as feeling of social isolation.

- O indicates (I often feel this way)
- S indicates (I sometimes feel this way)
- R indicates (I rarely feel this way)
- N indicates (I never feel this way).

#### **Scoring system for UCLA Loneliness Scale:**

Make all Often =3, all Sometimes =2, all Rarely =1, all Never =0.

#### **Administrative design:**

The researchers obtained permission from the Dean of Benha Faculty of Nursing and Director of the Nasser Institute Hospital to conduct the study and then it was possible to carry out the study with minimum resistance.

#### **Content validity:**

To achieve the criteria of trust and worthiness of tools of data collection in the study, the tools were translated into Arabic by a certified translation office, then retranslated

into English and then was compared to the original version to validate that the translation (the Arabic version) had the same exact meaning as the original version. The tools were reviewed for appropriateness of items and content validity by Jury of five experts in Psychiatric and Mental Health Nursing /Faculty of Nursing/ Benha University

#### **Reliability of the tools:**

Reliability of the tools was applied using Cranach's Alpha Coefficient test to measure the internal consistency for the tools. It was 0.837 for depression, anxiety and stress scale, 0.851 for self-Esteem scale, and 0.862 for loneliness scale that reflect accepted internal consistency of the tools.

#### **Ethical considerations:**

A written approval was obtained from the Scientific Research Ethical Committee at the Faculty of Nursing/ Benha University. Before the actual collection of data, the researchers explained to the participating women the purpose of the study and took written consent from them in order to participate in the study. Confidentiality of data obtained was protected by the allocation of a code number to the questionnaire sheets. Women were informed that the obtained data will be used for the research purpose only. Participants' right to withdraw from the study at any time with no consequences was ascertained.

#### **Pilot study:**

It was carried out on 10% of the sample size to check the clarity and feasibility of designed tools and to estimate the time needed to complete its items. The required modifications were done according to the available resources. Study subjects included in pilot study were excluded from the final sample.

#### **Field work:**

The actual study was carried out through 6 months starting from the November 2022 (4 weeks for pretest, 4 months for the implementation phase, 4 weeks for posttest).

The study was started and finished through the following phases:

#### **Phase I: Assessment phase (pretest)**

The researchers attended the department of Oncology in the Nasser Institute of Oncology two days per week (Monday, Thursday), from 9.00 A.M. To 1.00 P.M. The data collection took four weeks started in the November 2022. The number of study subjects was 30 women with mastectomy undergoing chemotherapy. The researchers divided the subjects into 8 groups, each group contains 4 women. The researchers met two groups in the first week which contained 8 women, the second two groups containing 8 women in the second week, the third two groups containing 8 women in the third week and the fourth two groups containing 6 women in the fourth week. The researchers interviewed each woman individually in a private room and briefly explained the nature and the purpose of the study. Each woman took about 20 minutes to fill the questionnaires in the presence of the researchers for any clarification. The data collected in this phase were utilized as assessment data that served in preparing the program, and later for evaluating the effectiveness of the program in the post test.

#### **Phase II: Development of psycho- social program**

After reviewing recent literature, the program content was developed by the researchers in the form of booklet. The psycho-social program consisted of theoretical and practical parts in which each had a set of specific objectives. Objectives of theoretical part provided the studied women with theoretical knowledge about breast cancer, its treatment and psychological and social effects on the studied subjects. Objectives of practical part provided the studied subjects with techniques to deal with effects of chemotherapy psychologically and

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socially. The program was written using a simplified Arabic language by the researchers. The illustrative colored booklet was distributed to each woman in the implementation phase.

### **Phase III: Implementation phase**

The training sessions were conducted in a private room which was little quiet, ventilated, good furnished, and had adequate lighting for implementing the program. The studied subjects were 30 women who were divided into 8 groups and each group consisted of 4 women. Implementation of the program lasted over a period of 4 months, starting from December 2022 to Mars 2023.

The program content and its objectives were developed by the researchers in the form of 13 sessions (introductory session, 4 sessions for theoretical part, 7 sessions for practical part and the final session was summery for the contents of the program). Each session took about 30-60 minutes according to the understanding and span of attention of women. The researchers met 8 groups for 2 days per week, groups (1 & 2) in the morning (3 & 4) in the afternoon at Monday and groups (5 & 6) in the morning (7 & 8) in the afternoon at Thursday. The researchers gave only one session (theoretical) per 2 day every week for each group and one session (practical) every 2 weeks.

The program was presented in a clear and concise manner, following the principles of adult learning and focusing on interactive learning and active participation. The researchers designed and distributed an illustrative colored booklet to the women to be able to follow the content in the program. Every session of the program has general and specific objectives which were achieved through several teaching methods and media as lecture, group discussion, role-playing, booklet, video, and posters.

Each session started by greeting the participants, assessing their motivation for learning, getting feedback about what was given through the previous session, and present the objectives of the new topic. At the end of every session, questions were discussed to correct any misunderstanding that would have happened. After finishing the program sessions, the researchers thanked the women for their participation and asked for any unclear points.

### **Program sessions**

**Session (1):** Introductory session about the objectives and outlines of the program, methods of teaching to be used and the expected outcome of program.

**Session (2):** Brief information regarding to breast cancer including; definition, causes, risk factors and sign and symptoms of breast cancer.

**Session (3):** Different forms of treatment of breast cancer.

**Session (4):** Physical side effect of treatment and how to deal with it.

**Session (5):** Consequence of chemotherapy on women with mastectomy as psychological problems.

**Session (6):** Methods to deal with stress, anxiety and depression by replace the negative feelings with positive feelings to improve the psychological state.

**Session (7):** Methods to deal with stress, anxiety and depression by deep breathing.

**Session (8):** Methods to deal with stress, anxiety and depression by relaxation technique.

**Session (9):** Methods to improve self-esteem.

**Session (10):** Methods to improve self-esteem.

**Session (11):** Consequence of chemotherapy on women with mastectomy as social problems (symptoms of social isolation).

**Session (12):** Methods to reduce social isolation and loneliness.

**Session (13):** Summary session

### **Evaluation phase:**

This phase aimed to estimate the effect of psych-social program for women with mastectomy undergoing chemotherapy. After conduction of the psycho-social program sessions, posttest was done for using the pervious assessment tools for data collection to compare the effect of the program pre and post-intervention.

### **Statistical analysis:**

The collected data organized, tabulated and statistically analyzed using Statistical Package for Social Science (SPSS) version 25 for windows, running on IBM compatible computer. Descriptive statistics were applied (e.g. frequency, percentages, mean and standard deviation). Qualitative variables were compared using qui-square test ( $\chi^2$ ) as the test of significance, and paired (t) test was used to compare between quantitative variables. Correlation coefficient test (r) was used to test the correlation between studied variables. Reliability of the study tools was done using Cronbach's Alpha. A significant level value was considered when  $p < 0.05$  and a highly significant level value was considered when  $p < 0.01$ . No statistical significance difference was considered when  $p > 0.05$ .

### **Results:**

**Table (1):** Clarified that, (36.7%) of the studied subjects aged between 35-<45 years old, with mean SD  $43.66 \pm 6.86$  years. Also, (50.0%) of them had secondary education. As regard marital status, (63.3%) of them were married. Also, (90.0%) of them didn't work. Moreover, (86.7%) of them had enough monthly income.

**Table (2):** Clarified that, (80.0%) of the studied subject had disease from more than 6 months. Also, (10.0%) of the studied women had family history of breast cancer, (66.6%) of them were mothers. Furthermore, (60.0%) of them underwent 6-

<9 chemotherapy sessions. Also, (50.0%) of them reported nausea and vomiting due to chemotherapy.

**Figure (1):** Shows that, (50.0%) of the studied subjects had severe level of depression pre implementation of psycho-social program. While, (53.3%) of them had mild level of depression post implementation of psycho-social program.

**Figure (2):** Shows that, (73.4%) of the studied subjects had extremely severe level of anxiety pre implementation of psycho-social program. While, (56.7%) of them had moderate level of anxiety post implementation of psycho-social program.

**Figure (3):** Shows that, (56.7%) of the studied subjects had severe level of stress pre implementation of psycho-social program. While, (56.7%) of them had mild level of stress post implementation of psycho-social program.

**Figure (4):** Shows that, (60.0%) of the studied subjects had moderate level of self-esteem pre implementation of psycho-social program. While, (50.0%) of them had high level of self-esteem post implementation of psycho-social program.

**Figure (5):** Shows that, (46.7%) of the studied subjects had high level of loneliness pre implementation of psycho-social program. While, (73.3%) of them had low level of loneliness post implementation of psycho-social program.

**Table (3):** Revealed that, there was high significant statistical negative correlation between woman's self-esteem and both of depression, anxiety, stress and feeling of loneliness at pre and post implementation of the psycho-social program at  $p < 0.01$ . While, there was high significant statistical positive correlation between woman's depression, anxiety, stress, self-esteem and loneliness levels pre and post implementation of the psycho-social program at  $p < 0.01$ .

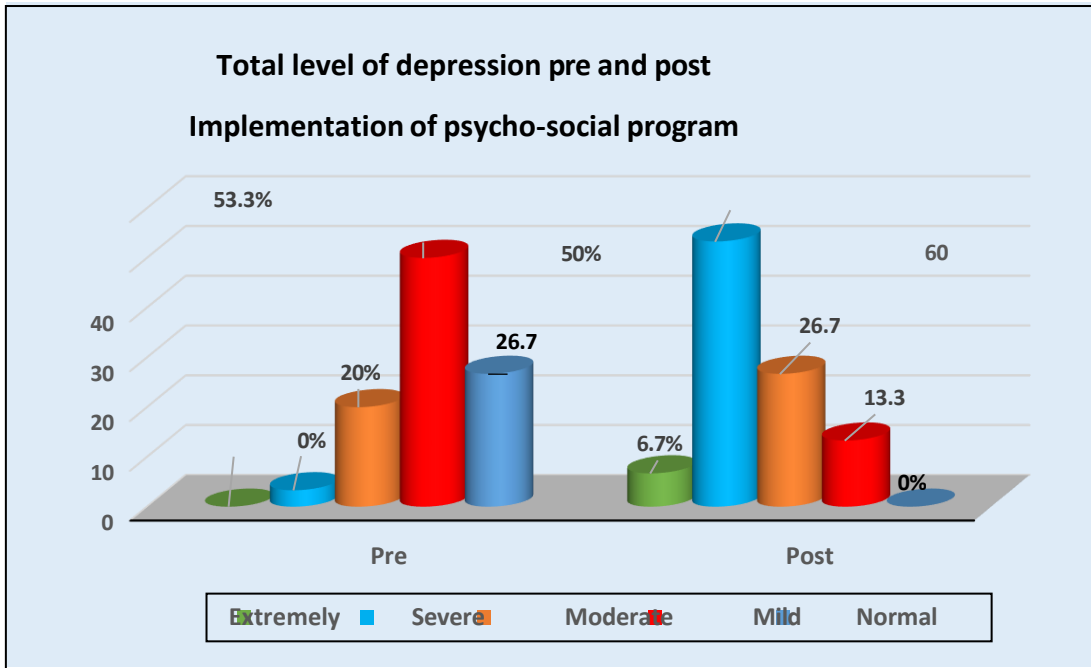
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**Table (1): Socio-demographic data of the studied subjects (n=30).**

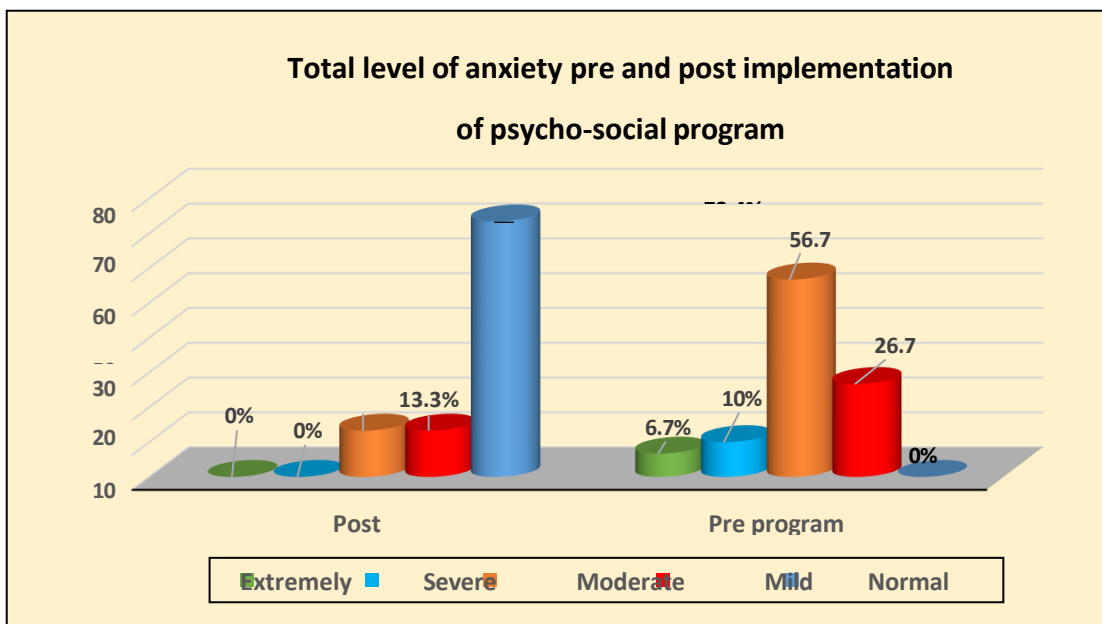
Socio-demographic data	No.	%
<b>Age</b>		
25 Up to 35 Years	8	26.7
35 < 45 Years	<b>11</b>	<b>36.7</b>
45 < 55 Years	7	23.3
More than 55 Years	4	13.3
<b>Mean ±SD</b>	<b>43.66 ± 6.86</b>	
<b>Educational level</b>		
Illiterate	8	26.7
Read and writes	6	20.0
Secondary education	<b>15</b>	<b>50.0</b>
High education	1	3.3
<b>Marital status</b>		
Single	2	6.7
Married	<b>19</b>	<b>63.3</b>
Divorced	1	3.3
Widowed	8	26.7
<b>Occupation</b>		
Work	3	10.0
Don't work	<b>27</b>	<b>90.0</b>
<b>Monthly income</b>		
Enough	<b>26</b>	<b>86.7</b>
Not enough	4	13.3

**Table (2): Clinical data of the studied subjects (n=30).**

Clinical data	No.	%
<b>Onset of the disease</b>		
Less than 6 months	6	20.0
More than 6 months	<b>24</b>	<b>80.0</b>
<b>Family history of breast cancer</b>		
Yes	<b>3</b>	<b>10.0</b>
No	27	90.0
<b>If the answer is yes, what is the relationship of kinship? (n=3)</b>		
Mother	<b>2</b>	<b>66.7</b>
Sister	1	33.3
<b>The number of chemotherapy sessions</b>		
6-<9	<b>18</b>	<b>60.0</b>
9-<12	1	3.3
≥12	11	36.7
<b>*Side effects of chemotherapy</b>		
Diarrhea	6	20.0
Abdominal pain	1	3.3
Constipation	2	6.7
Alopecia	8	26.7
Headache	3	10.0
Nausea and vomiting	<b>15</b>	<b>50.0</b>
Bleeding	1	3.3
Fatigue	10	33.3



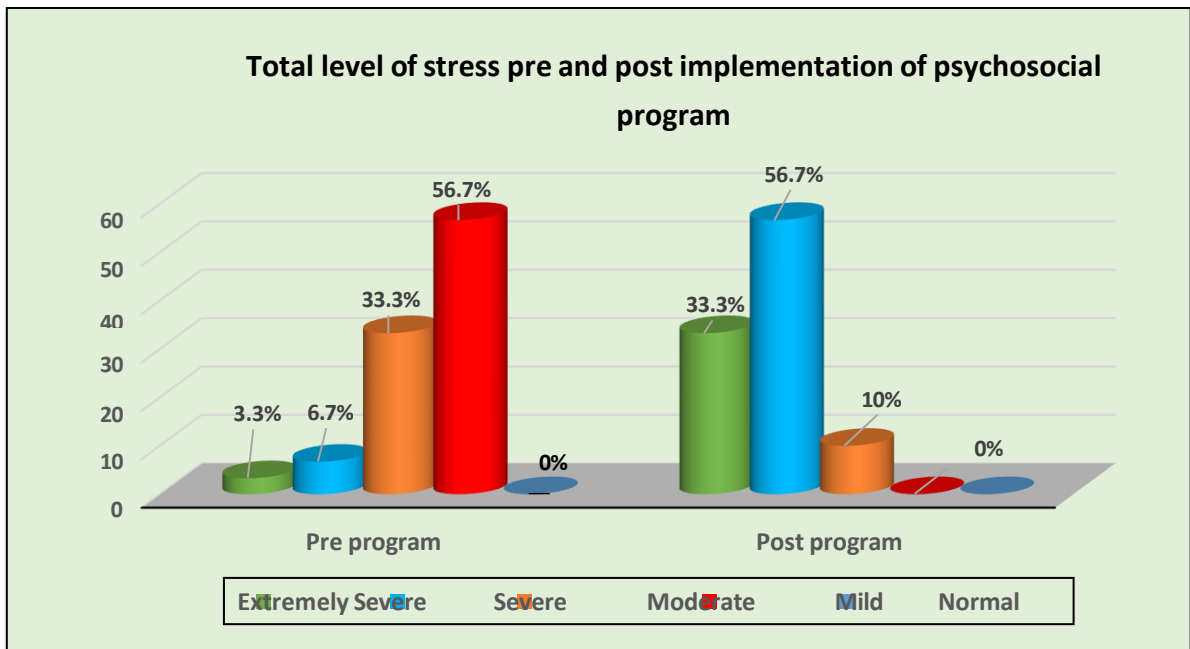
**Figure (1): Comparison between pre and post program implementation among the studied subjects regarding total level of depression (n=30).**



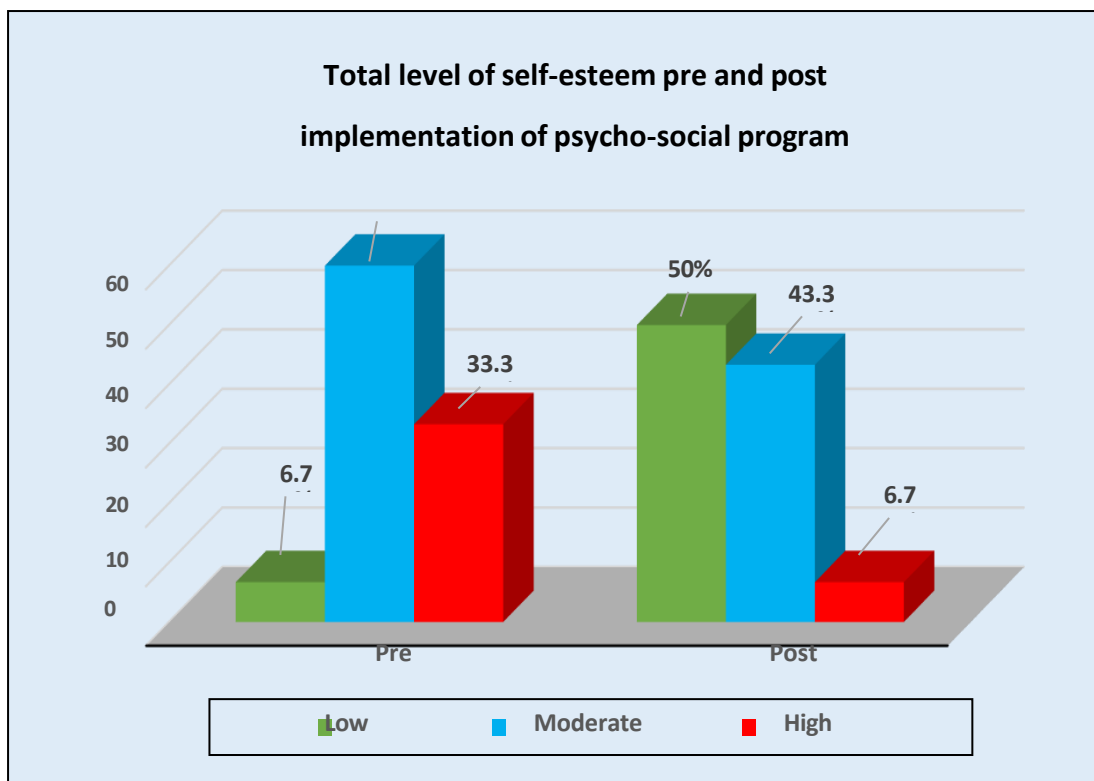
**Figure (2): Comparison between pre and post program implementation among the studied subjects regarding total level of anxiety (n=30).**



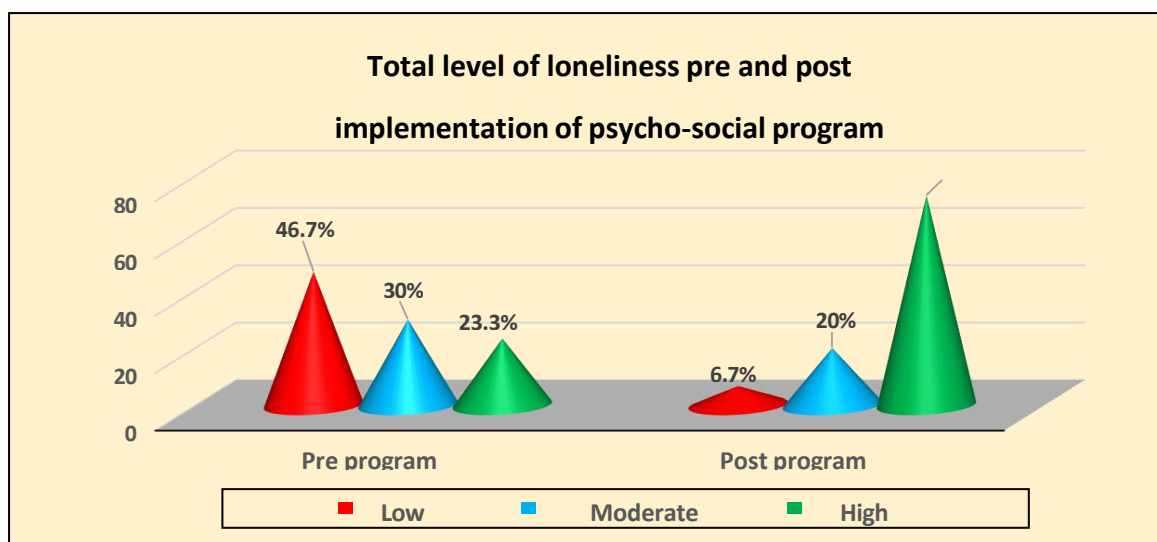
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**Figure (3): Comparison between pre and post program implementation of the studied subjects regarding total level of stress (n=30).**



**Figure (4): Comparison between pre and post program implementation among the studied subjects regarding total level of self-esteem (n=30)**



**Figure (5): comparison between pre and post program implementation among the studied subjects regarding total levels of loneliness (n=30).**

**Table (3): Correlation between variables of the studied subjects pre and post program implementation.**

Variables		Total depression		Total anxiety		Total stress	
		Pre	Post	Pre	Post	Pre	Post
Total anxiety	r	0.907	0.937				
	p	0.000**	0.000**				
Total stress	r	0.954	0.985	0.867	0.927		
	p	0.000**	0.000**	0.000**	0.000**		
Total self-esteem	r	-0.498	-0.704	-0.378	-0.708	-0.643	-0.715
	p	0.005**	0.000**	0.007**	0.000**	0.000**	0.000**
Total loneliness	r	0.787	0.717	0.709	0.673	0.791	0.708
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**

**Discussion:**

Cancer remains the top fear in most Arab countries with most of the people fearing to mention its name. Arab women share the same fear, but with a set of different cultures, norms, and beliefs. Breast cancer is one of the most common cancers in women and has more severe mental and emotional effects than other types. Stress and anxiety that the disease causes is the biggest problem for cancer patients. Patients who have cancer and receive therapy for it frequently develop physical and mental illnesses. Mastectomy is

a most treatment in many cases of breast cancer. It may provoke psychological challenges as depression, anger, vagueness about the future, hopelessness, fear of recurrence of cancer, fear of separation from relatives, fear of pain, low self-esteem, body image impairment, anxiety of not being loved or shown interest, and fear of death (AlGhabeesh et al., 2019).

Regarding age of the studied subjects, the results of the present study revealed that, more than one third of the studied subjects aged between 35-<45 years old, with mean

SD  $43.66 \pm 6.86$  years. This finding may be due to according to the American Cancer Society; about 1 out of 8 invasive breast cancers develop in women younger than 45 that mean there is a possibility of breast cancer risk at the young age, reaching the age of maturation and productivity constitute the largest portion of affected population.

This result is similar with the results of study performed by **Alsanad et al., (2021)** who stated that more than half of the studied subject were in the age group of 30-<40 years old. But, this result is contraindicated with **Bahcivan et al., (2020)** who showed that, more than half of the studied women aged > 45 year.

Regarding education of the studied subjects, the current study revealed that, half of the studied subjects had secondary education. This finding is similar to the results of **Usman, (2022)** who found that, around one third of the studied patients had secondary education. Also, this result agrees with **Janowski et al., (2020)** who clarified that, most of the studied subjects had secondary educational level.

As regard marital status, the present result demonstrated that, less than two thirds of the studied subjects were married. This result could be due to the age of the studied subjects is the age of productivity and marriage. In fact the problem of mastectomy poses a threat to the marital life of these women particularly as disfigurement of the sexual figure may produce feelings of shame, anxiety and over sensitivity. This result is supported by **Alsanad et al., (2021)** who showed that, more than two-thirds of the subjects were married. But, this finding is in difference with **Abdel-Ghany et al., (2019)** who stated that, more than half of the studied subjects were widow.

Regarding working condition and monthly income of the studied subjects, the present study represented that, most of the studied subjects didn't work. Moreover, the majority of them had enough monthly income. This can be because, in contrary to urban areas, most women in rural areas have limited employment possibilities and marry young before completing their schooling.

These results are in the same line with **Atia et al., (2023)** who showed that, the majority of the studied subjects were housewife and reported low social status. On the same line, **Hamed et al., (2019)** reported that, about three quadrants of the studied subjects were not working.

The current results illustrated that, the majority of the studied subjects had disease from more than 6 months,, the minority of them had family history of breast cancer and two thirds of them were mothers. Furthermore, less than two thirds of them underwent 6-<9 chemotherapy sessions. Also, half of them reported nausea and vomiting due to chemotherapy. These results might be attributed to family history of breast cancer may be a risk factor for breast cancer among the studied subjects because of inheridity and the chemotherapy is the line for treatment to such cases.

These results are supported with a study performed by **Hamed et al, (2019)** who found that, more than three quarters of the studied patients had breast cancer from more than 6 months. Also, these results are in the same line with **Elsherif and Behilak, (2023)** who found that the women had one year diagnosed with breast cancer, the minority of them had no family history to breast cancer and most of women received adjuvant chemotherapy. Also, more than half of them reported side effects as nausea and vomiting due to chemotherapy. This finding disagreed with study done by **Onydibe et al, (2020)** who

found that, the majority of the studied subjects had breast cancer from less than 6 months.

Regarding Depression level among the studied subjects pre and post implementation of the psycho-social program, the present study revealed that, there was a marked decrease in all items of women's depression level post implementation of psycho-social program, with a highly statistically significant difference. These results might be attributed to most of women diagnosed with breast cancer, mastectomy and under chemotherapy have different psychological troubles feeling tired, physical symptoms complication from chemotherapy and fearing from death due to their feeling of weakness, and need psychosocial counseling provided to them. So, after providence of psycho-social program to the studied subjects, depression levels decreased.

These results approved with a study performed by **Joshi et al., (2021)** who represented that, one-week mindfulness-based art therapy intervention for mastectomy patients undergoing chemotherapy significantly decreased the psychological depression and significantly improved. Also, these finding are in harmony with **Younis et al., (2020)** who illustrated that psychosocial intervention program was effective in reducing depressive level among women with breast cancer.

Concerning levels of depression among the studied subjects pre and post implementation of psycho-social program, the findings of the current study revealed that, half of the studied subjects had severe level of depression pre implementation of psycho-social program. While, more than half of them had mild level of depression post implementation of psycho-social program with a highly statistically significant difference.

This result may be due to that psycho-social program was effective in improving depressive levels among the studied subject. This finding agrees with **Abdoli et al., (2021)** who demonstrated that, nearly two-thirds of the sample had a high level of total depression at the pre- intervention phase, and displayed a low level of depression after emotional regulation mediated by coping strategies for women with mastectomy.

Concerning anxiety levels among the studied subjects pre and post implementation of the psycho-social program, the findings of the current study clarified that there was a marked decrease in all items of studied subjects anxiety level post implementation of psycho-social program with a highly statistically significant difference.

These study findings may be attributed to low of socioeconomic status of the studied women that predispose them to low of social support provided to them that has an impact on the psychological functioning of people coping with a disease. While after the providence of the psycho-social program which were properly prepared in a simple Arabic language had the great effect on coping with the disease and health condition.

These results were in congruent with **Falcicchio et al., (2021)** who indicated that, all the studied women reported high anxiety level at the pre-test. Other than the post-test, shows all the studied subjects had decrease anxiety level at the post-test. Also, the results revealed a highly significant difference between the pre-test and post-test of the study subjects after participating in the rehabilitation pathway program.

In addition to another study done by **Onyedibe et al., (2020)** who found that before applying the cognitive behavioral therapy for the studied subjects with breast cancer, more than forty percent of the them

had high anxiety level. In addition to two weeks and three months after the intervention, the study group had a statistically significant decrease at anxiety level. However, the difference was not noticeable.

In relation to levels of anxiety, the present study showed that less than three quarters of the studied subjects had extremely severe level of anxiety pre implementation of psycho-social program. While, more than half of them had moderate level of anxiety post implementation of psycho-social program, with a highly statistically significant difference. This result may be due to women with mastectomy experienced many problems in various aspects of their lives and causing anxiety level. Social support buffers the harmful impacts of cancer can result in improving their psychosocial adaptation to the disease and decrease at anxiety level.

This finding agreed with **Younis et al., (2020)** who mentioned that, a highly statistically significant difference between total anxiety level among the breast cancer women at pre-and post-implementing the psychosocial support was found. Additionally, this finding is supported with **Mahmood and Amen, (2022)** who indicated that, the mastectomy patients in those who perceived higher social support showed better global health status and lower anxiety level.

Regarding stress level among the studied subjects pre and post implementation of the psycho-social program, the current study clarified that, there was a marked decrease in all items of women's stress post implementation of psycho-social program, with a highly statistically significant difference. This result may be due to support provided to women enables women to manage with their disease better and gain a positive point of view on their medical condition and to physically and

psychologically adapt, and have enhanced value of life.

This finding is in a harmony with **Fekih-Romdhane, (2022)** who stated that, mastectomy women reported higher levels of stress prior to providing social support program, while changed to lower level among most studied subjects after providing social support program that confirms the important role of social support program. On the same line, **Mosher et al., (2018)** showed that there was a marked decrease in all items of women's stress post implementation of social support with a highly statistically significant difference.

According to levels of stress pre and post implementation of psycho-social program, the present study revealed that more than half of the studied subjects had severe level of stress pre implementation of psycho-social program. While, more than half of them had mild level of stress post implementation of psycho-social program with a highly statistically significant difference. This result could be as a result of the intervention's positive benefits, which help the women accept difficult ideas, emotions, and sensations by helping them acknowledge unpleasant experiences and accept painful experiences and emotions without attempting to change or deny them.

This result is congruent with the study achieved by **Zhao et al., (2021)** who found that, acceptance and commitment therapy markedly decreased the psychological distress of cancer patient which most of the studied subjects reported lower stress level compared to higher level before intervention.

Also, this result was in agreement with the study achieved by **Atia et al., (2023)** who mentioned that there was a highly significant difference between the study and control groups in terms of the total mean score for stress with decreasing in it after two months

of intervention, when compared to pre intervention.

Concerning self-esteem level among the studied subjects pre and post implementation of psycho-social program, the present study illustrated that there was a marked improvement in all items of studied subjects self-esteem post implementation of psycho-social program with a highly statistically significant difference.

From the researchers' point of view, breast cancer treatment had an effect on body image due to surgery scars, weight loss or gain, skin changes, hair loss. Some subjects develop lymphedema (swelling) after surgery or radiotherapy to lymph nodes in the armpit. All of those have a negative impact on self-esteem of women. So, the researchers apply psycho-social nursing program to improve and enhance body image and enhance self-esteem of women with breast cancer.

This result is supported with a study performed by **Abdel-Naby et al., (2022)** who concluded that there were highly statistically significant in all items of self-esteem subscale between pre and post implementing psycho-social nursing program.

This result is in agreement with **Hamed et al., (2019)** who reported that there was significant improvement in body image concerns as there was a decrease in the mean score of post mastectomy subject's concerns after receiving the psycho-social program. Statistically significant differences were also found between different levels of body image concerns before and after the program.

According to levels of self-esteem pre and post implementation of psycho-social program, the present study revealed that less than two thirds of the studied subjects had moderate level of self-esteem pre implementation of psycho-social program. While, half of them had high level of self-esteem post implementation of psycho-social

program, with a highly statistically significant difference. This result indicates that the program was successful in improving self-esteem of subjects post mastectomy. This could related to the structure and the content of the program which combined both scientific knowledge about the disease, its treatment, and development of soft skills of communication and problem solving techniques, as well as enhancing the self-disclosure capabilities. This program worked on supporting these subjects in understanding and accepting their illness, improving their ability to make proper decisions so that, they will be able to effectively manage their problems. These factors have led to the observed significant improvement in their self-esteem.

These results are similar to **Daneshvar et al., (2020)** who found that mastectomy subjects had higher self-esteem after psycho social intervention. On the same line **Richard et al., (2019)** who stated that, self-esteem improved after group training sessions through combining written information with lectures, including guidebooks and printed educational materials and this help subjects to feel more confident and raise their concerns.

Concerning feeling of loneliness levels among the studied subjects, the present study illustrated that there was a marked improvement in all items of studied subjects feeling of loneliness post implementation of the psycho-social program with a highly statistically significant difference. Less than half of the studied subjects had high level of loneliness pre implementation of psycho-social program. While, less than three quarters of them had low level of loneliness post implementation of psycho-social program, with a highly statistically significant difference. From the researchers' point of view, it could be due to participation in group discussion, help subjects to transform

## **Psycho-Social Program for Women with Mastectomy undergoing Chemotherapy**

negative thoughts about their bodies into positive thoughts. This would improve negative perception of their bodies as well as increase self-esteem, self-confidence and decrease their feeling to be alone without any social support.

This finding agrees with **Altaheri et al., (2021)** who mentioned that there was a highly statistically significant difference between feeling of loneliness level among the studied subjects at pre-and post-implementing the psycho social program. Additionally, this finding is supported with **Mahmood and Amen, (2022)** who indicated that, around two thirds of the studied patients had high feeling of loneliness before the psycho social program. After the psycho social program, the majority of the studied patients had low feeling of loneliness.

Concerning correlation between total woman's depression, anxiety, stress, self-esteem and loneliness pre and post implementation of psycho-social program, the current study demonstrated that there was highly significant statistical negative correlation between woman's self-esteem and both of depression, anxiety, stress and feeling of loneliness at pre and post implementation of the psycho-social program. While, there was highly significant statistical positive correlation between woman's depression, anxiety, stress and loneliness pre and post implementation of the psycho-social program.

From the researchers point of view, this result may be explained by that anxiety is considered a problem when symptoms interfere with a person's ability to sleep or otherwise function. Excessive and uncontrolled anxiety could cause severe stress and may lead to depression. All psychological symptoms in cancer women causes more intense signs, longer recovery from cancer, unwanted outcomes, and decreased quality of patients' life and their caregivers which

accompanied by uncertainty and sense of disability, leading to a decrease in self-esteem

This result was coincided with a study performed by **Ghanbari et al., (2021)** who concluded that there was high significant positive correlation between woman's depression, anxiety, stress and self-esteem pre and post implementation of the psychosocial interventions. Additionally, **Abdel-Naby et al., (2022)** who found that there was significant correlation between psychological symptoms as anxiety, depression and body image, self-esteem and quality of sexual life among women with mastectomy pre-post psycho-social nursing program.

### **Conclusion:**

The psycho-social program had a positive effect on the women with mastectomy undergoing chemotherapy. Also, there is a highly significant statistical positive correlation between woman's depression, anxiety, stress, self-esteem and loneliness symptoms pre and post implementation of the psycho-social program.

### **Recommendations:**

- The necessity of providing psycho-social services for women with mastectomy, and keeping it aside for medical treatment, in order to reduce the emotional stress that accompanies the disease affecting the course of treatment.
- Educating relatives of women with the importance of social support and its necessity for women with mastectomy.
- Preparing a cognitive psychotherapeutic program to support positive growth and self-affirmation for women with mastectomy.
- Medical and psychosocial support and counseling should be implemented by health professionals before and after mastectomy until completion of cancer treatment to discover the effective coping mechanisms with new healthy quality of life

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## برنامج نفسي إجتماعي للنساء اللاتي لديهن استئصال الثدي ويخضعن للعلاج الكيماوي

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يعتبر مواجهة تشخيص سرطان الثدي وعلاجه غالباً ما يعادل مواجهة الموت نفسه، مما يؤدي إلى ظهور مشاعر قوية تبدو في كثير من الأحيان وكأنها تخرج عن نطاق السيطرة. حيث تعاني العديد من النساء من ردود فعل نفسية واجتماعية خطيرة بعد استئصال الثدي. يمكن أن تؤثر هذه التفاعلات سلباً على نتائج علاج وتشخيص السرطان. **الهدف من الدراسة:** هدفت الدراسة إلى تقييم تأثير البرنامج النفسي الاجتماعي على النساء المصابات باستئصال الثدي الخاضعات للعلاج الكيماوي. **تصميم الدراسة:** تم استخدام التصميم شبه تجريبي لتحقيق هدف هذه الدراسة. **مكان البحث:** إجريت الدراسة بقسم الأورام بمعهد ناصر للأورام بالقاهرة التابع لوزارة الصحة. **عينة البحث:** تم استخدام عينة ملائمة اشتملت على (30) امرأة خضعت لعملية استئصال الثدي وتخضع للعلاج الكيماوي وتم تقسيمها إلى 8 مجموعات تضم كل مجموعة 4 نساء. **أدوات جمع البيانات:** تم استخدام أربع أدوات لجمع البيانات لهذه الدراسة: الأداة الأولى: استبيان المقابلة المنظمة التي تحتوى على البيانات الاجتماعية والبيانات السريرية، الأداة الثانية: مقياس الاكتئاب والقلق والتوتر، الأداة الثالثة: مقياس روزنبرغ لتقدير الذات و الأداة الرابعة: مقياس الوحدة. **النتائج:** كان هناك وجود علاقة ارتباطية إيجابية ذات دلالة إحصائية عالية بين مستويات الاكتئاب والقلق والتوتر واحترام الذات والشعور بالوحدة لدى المرأة قبل وبعد تنفيذ البرنامج النفسي الاجتماعي. **الاستنتاج:** البرنامج النفسي والاجتماعي له تأثير إيجابي ذو دلالة إحصائية عالية على النساء اللاتي خضعن لعملية استئصال الثدي والخضوع للعلاج الكيماوي. **التوصيات:** ضرورة تقديم الخدمات النفسية والاجتماعية للنساء اللاتي خضعن لعملية استئصال الثدي وإبقائه جانباً لتلقي العلاج الطبي، وذلك للحد من الضغط النفسي الذي يصاحب المرض والذي يؤثر على مسار العلاج.