

# Counseling Psycho-Motor Program to Life Adaptation for Breast Cancer Women "Before and After Mastectomy"

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**Abstract:** ***Background:** Breast cancer a form of major health and psychological crisis that affect women and its impact is similar to trauma, the patient psychological and social in a bad state. The main aim of this study was to assess the impact of the psycho-motor program to life adaptation for breast cancer women "before and after mastectomy". The participants were 45 female patients, recruited from the oncology department of the University Hospital in the Beni Suef Governorate. Data were collected on one tool consisting of three parts, sociodemographic questionnaire, post/traumatic stress disorder (PTSD) questionnaire, and the psychological pressures questionnaire. Results indicated that, the psychological pressures questionnaire scores were improved after the intervention with statistically significant difference in all axes; Flexibility and strength were improved after the intervention with statistically significant difference in all physical variables. Conclusion: Based on the findings of the present study, it can be concluded that, the highest statistically significant association was between psycho-motor program and life adaptation for breast cancer women "before and after mastectomy".*

**Keywords:** Counseling, Psycho-motor, Adaptation, Breast cancer, Mastectomy

## 1. Introduction

The body is made up of trillions of living cells. Normal body cells grow, divide into new cells, and die in an orderly fashion. During the early years of a person's life, normal cells divide faster to allow the person to grow. After the person becomes an adult, most cells divide only to replace worn-out or dying cells or to repair injuries. Cancer begins when cells in a part of the body start to grow out of control. There are many kinds of cancer, but they all start because of out-of-control growth of abnormal cells. Cancer cell growth is different from normal cell growth. Instead of dying, cancer cells continue to grow and form new, abnormal cells. Cancer cells can also invade (grow into) other tissues, something that normal cells cannot do. Growing out of control and invading other tissues are what makes a cell a cancer cell [1].

Definition of breast cancer: Cancer that forms in tissues of the breast. The most common type of breast cancer is ductal carcinoma, which begins in the lining of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple). Another type of breast cancer is lobular carcinoma, which begins in the lobules (milk glands) of the breast. Invasive breast cancer is breast cancer that has spread from where it began in the breast ducts or lobules to surrounding normal tissue. Breast cancer occurs in both men and women, although male breast cancer is rare [2].

A multidisciplinary team will be involved in a breast cancer patient's treatment. The team may consist of an oncologist, radiologist, specialist cancer surgeon, specialist nurse, pathologist, radiologist, radiographer, and

reconstructive surgeon. Sometimes the team may also include an occupational therapist, psychologist, dietitian, and physical therapist [3].

Breast cancer is the most common noncutaneous cancer in women, with an estimated 60,290 cases of disease, 231,840 new cases of invasive disease, and 40,290 deaths expected in 2015. Thus, one of six women diagnosed with breast cancer die of the disease. Men account for 1% of breast cancer cases and breast cancer deaths [4].

Physiotherapy plays an important role in recovery after breast cancer surgery. Some of the potential problems women may develop after breast cancer surgery or reconstruction surgery is reduced movement and strength in the arm, cording (inflammation of the lymph vessels), backache, pain, poor posture and reduced function. Physiotherapists are experts in addressing these issues and can provide advice and treatment to ensure optimal recovery and promote return to normal function. Some women will also require radiotherapy after surgery and physiotherapy can help women regain the movement in the arm needed to be comfortable in the position [5].

Compared with what is known about demographic, medical, and psychosocial factors contributing to the long-term course of psychological di among women diagnosed with breast cancer [6], there is relatively little known about factors influencing the course of psychological adaptation. In an attempt to fill this void, there has been increasing attention paid to this topic over in the last decade. These studies have pointed to a number of personal and social factors contributing to adaptation. Greater pre-surgical appraisals of more hopelessness and uncertainty [7].

## 2. Objective and Research Question

### 2.1 Objective

This research aims to analyze the impact of counseling psycho-motor program to life adaptation for breast cancer women "before and after mastectomy".

### 2.2 Research Question

What is the impact of counseling psycho-motor program to life adaptation for breast cancer women "before and after mastectomy?"

## 3. Methods

### 3.1. Participants

A convenience sample of 45 patients from oncology department of the University Hospital of Beni Suef in the Beni Suef Governorate. They were satisfying the following inclusion criteria:

- Women with breast cancers were included.
- Between 35- 50 years old.

### 3.2 Instruments

#### I- Sport Instrument

1. Ganaomitr to measure the shoulder joint flexibility.
2. Dinamomcitr to measure the strength of the grip.
3. Rstamitr to measure the height and weight.

#### II- Psychiatric Tools

- Literature review after modifying them to simple Arabic language for the women to suit their level of understanding.
- Data were collected through using one tool which includes 3 main parts as follows:

\* **The First Part Sociodemographic Questionnaire** of the patient and her family. It was developed by the researchers. This questionnaire includes patient's name, and age, as well as level of education, (Questions 1-10).

\* **The Second Part Post/traumatic Stress Disorder (PTTSD) Questionnaire.** It was developed by the researchers (Ibrahim & El Azzab).

It consists of 15 questions. The questionnaire is designed to provide an overview of a patient's symptoms and their intensity of (PTTSD) after diagnosis of breast cancer. Responses were measured in 3- point Likert Scale, where the highest score indicated the highest level of symptom intensity, ranging from "1 to 3" as: 1 never, 2 sometimes, 3 often; all statement follow this consequence (positive statement); accept the 14<sup>th</sup> statement (negative statement) as: 3 never, 2 sometimes, 1 often. The range of possible score is from "15"to "45". There are three levels of "PTTSD", from 15 - 24 lower level; from 25 - 35 moderate level; from 36 - 45 severe level of "PTTSD", and proved to be reliable (Cronbach's  $\alpha = 0.88$ ); and (Guttman Split-Half Coefficient = 0.92).

\* **The Third Part of the Psychological Pressure in Women with Breast Cancer questionnaire.** It was developed by the researchers (Ibrahim & El Azzab). It consists of 39 items spread over eight axes. The questionnaire is designed to provide an overview of a patient's symptoms and their intensity. Symptom of subscales, Body image consists of 4 items questions (positive statement, 1, 9, 17, 25; negative statement, 1, 25), Psychological adjustment consists of 5 items questions (positive statement, 2, 33; negative statement, 10, 18, 26), social adjustment consists of 6 items questions (positive statement, 3, 19; negative statement, 11, 19, 34, 39), Marital adjustment consists of 4 items questions (positive statement, 4, 20; negative statement, 12, 28 ) Fear of the Spread of the Disease consists of 5 items questions (positive statement, 5, 13, 21, 35; negative statement 29) Fear of Death consists of 5 items questions (positive statement, 6, 14, 22, 30, 36; negative statement, 6, 36), Side effects of the Drugs consists of 5 items questions (positive statement, 7, 15, 23, 37; negative statement, 31), The inability to carry out daily activities consists of 5 items questions (positive statement, 8, 16, 24, 32, 38; no negative statement). Responses were measured in 3- point Likert Scale, where the highest score indicated the highest level of symptom intensity, ranging from "1 to 3" as: 1 Does not happen, 2 Does happen in moderate degree, 3 Does happen in large degree. There 19th statements are positive and 15th statements are negative. The range of possible score is from "39"to "117". There are three levels of psychological pressures, from 39 – 65 lower level; from 66 - 91 moderate level; from 92- 117 severe level, and proved to be reliable (Cronbach's  $\alpha = 0.75$ ); and (Guttman Split-Half Coefficient = 0.92)

### 3.3 Procedure

#### 3.3.1 Field Work

The researchers were starting with the steps building tools at the beginning of March (2013) up to the end of February (2014) for development of the questionnaire; experts opinion poll; a pilot study; do reliability and validity of the tools. The actual field work was carried out at the beginning of March (2014) up to the end of May (2015). The researchers were interviewing each patient individually to pre-program assessment; the application of the program for three month and one week, 1 day/week, implementing the program, each session takes 50 minutes, each session defened into two session; 20 minutes for medical and/or psychiatric program; then 10 minutes for café break, after that 20 minutes for sport program; unless the first two session the three researchers were interviewing with the patient to explain the aim and program for her and Preparation patient healthily and psychologically and physically for the surgery, the last session the three researchers were interviewing with the patient to answer any question, and conducting the immediate post test. Each patient filled in the questionnaire by herself after the researcher explained it to her (if this is available) as if the patient was not able to fill the questionnaire by herself the researcher explained it to her and marketing her response. Each patient took from 14 – 19 minutes to fill the questionnaire.

#### 3.3.2. Steps to implement counseling psycho-motor program

##### \* *First Medical Program*

- 1)The researcher analyzed the scientific literature and studies that have shown interest in studying the definition of breast

cancer, different treatment methods and side effects of treatment for cancer patients, put the program in the initial image.

2) Display the program for (20 experts) of the professors in the field of breast tumors, nursing and physical rehabilitation and mental health, psychology, education and sports to determine the number of sessions per week and the time of each session, has been making the necessary modification in the proposed program and based on expert opinion as follows:

- The number of sessions (5) sessions by session each week, the time of the meeting 20 minutes.
- One session for identification between the researchers and patient, one session prior the operation to explain the process procedures of surgery and clarify the benefits of lumpectomy process, the breast composition, the types of patients for breast cancer, recognize the difference between a benign and malignant tumor and the importance of medical treatment and one session after operation used for follow-up of operation, the effectiveness of treatments and treatment side effects caused from drugs.
- Final session after complete the application of the program, for interviewing with the patient to answer any question, and conducting the immediate post test.

**\* Second, Psychological Program:**

1) The researcher analyzed the scientific literature and studies that have shown interest in studying the psychological and social aspects and different treatment methods and psychological side effects of treatment for cancer patients in general and breast cancer in particular, put the program in the initial image.

2) Display the program for (20 experts) of the professors in the field of breast tumors, nursing and physical rehabilitation and mental health, psychology, education and sports to determine the number of sessions per week and the time of each session, has been making the necessary modification in the proposed program and based on expert opinion as follows:

- The number of sessions (10) sessions by session each week, the time of the meeting 20 minutes.

- One session for identification between the researchers and patient, one session prior to create psychological rehabilitation for the patient and the surgical process), seven sessions after surgical operation by meeting every week (psychiatric care after the operation, the reduction of cognitive and physical anxiety, adjustment strategies of thinking and improve the image of the body) and that during the application of rehabilitative exercise program
- Final session after complete the application of the program, for interviewing with the patient to answer any question, and conducting the immediate post test.

**\* Third Rehabilitative Exercise Program:**

1) After that the researchers analyzed references Arab and foreign research and which has in the treatment of a breast cancer before and after surgery and the methods of treatment of the shoulder joint, identification of exercises that can be carried out by the patients after the breast cancer surgery.

2) The researchers select the program content of the exercises and the number (31) exercise has been this exercise presented to the experts and their number (20) of experts, professors in the field of breast tumors, nursing and physical rehabilitation, mental health and sports psychology, in order to determine the number of sessions per week and the time of each session, have been making the necessary modification in the proposed program and based on expert opinion as follows:

- The program comprised of (13) for a session (13) weeks of (1) weekly sessions.
- One session for identification between the researchers and patient, one session prior to create rehabilitation for the patient before the surgical process), eleven sessions after surgical operation by meeting every week.
- Final session after complete the application of the program, for interviewing with the patient to answer any question, and conducting the immediate post test.
- The time of the meeting at the beginning of the program (15 minutes) and ranging up to (20 minutes)

**4. Results**

**Table 1:** The distribution of the studied patient as regards basic variables.

Variable	Mean	Median	Std. Deviation	Minimum	Maximum	Range	Skewness	Kurtosis
Age	43.86	43.50	3.91	38.00	48.00	10.00	-0.40	-1.21
Height (cm)	168.09	168.00	2.94	161.00	173.00	12.00	-0.41	-0.33
Weight (kg)	86.91	87.00	9.07	71.00	104.00	33.00	0.05	-0.76

Table 1. The values ranged from Skewness (0.05: 0.41) and the values of Kurtosis between (0.33: 1.21) and all Skewness values and Kurtosis confined between ( $\pm 3$ ) in all the variables indicating that the homogeneity of the sample.

**Table 2:** Relation between post-traumatic stress , psychological pressures questionnaire and age.

Scale	M	Age	(41-45) Year		(46-50) Year	
			Difference	Sig	Difference	Sig
Post-traumatic stress questionnaire	34.18	(35-40)	-8.11	0	5.36	0
	42.29	(41-45)			13.47	0
	28.82	(46-50)				
Psychological pressures questionnaire	65.64	(35-40)	-2.83	0.32	4.93	0.08
	68.47	(41-45)			7.76	0
	60.71	(46-50)				

Statistically significant at  $P \leq 0.05$

Table 2. The statistically significant differences between age and post-traumatic stress and psychological pressures questionnaire, which showed (41-45 old) of the most

affected age groups with post-traumatic stress and psychological pressures.

**Table 3:** Relation between post-traumatic stress, psychological pressures questionnaire and work

Scale	workers N=15		House wife's N=30		T	Sig
	M	SD	M	SD		
Post-traumatic stress questionnaire	28.73	4.40	38.47	5.02	-6.38	0.00
Psychological pressures questionnaire	59.60	10.58	67.47	4.24	-3.57	0.00

Statistically significant at  $P \leq 0.05$

Table 3. The relation between post-traumatic stress, psychological pressures questionnaire and work. This table demonstrates statistically significant differences between housewives and psychological pressures and post-

traumatic stress, which confirms that the psychological pressures and post-traumatic was lower in housewives.

**Table 4:** Changes in psychological pressures questionnaire scores before and after the intervention and rates of improvement

Axis	Before		After		Differences		T	Sig	Improve ment
	M	SD	M	SD	M	SD			
Body image	6.42	1.29	9.44	1.99	-3.02	2.24	-9.05	0.00	0.47
Psychological adjustment	8.76	1.45	11.71	2.27	-2.96	2.32	-8.56	0.00	0.34
Social adjustment	9.73	1.45	13.89	3.16	-4.16	2.95	-9.44	0.00	0.43
Marital adjustment	6.82	1.05	9.67	2.02	-2.84	1.92	-9.95	0.00	0.42
Fear of the spread of the disease	8.49	1.32	11.80	2.24	-3.31	2.19	-10.13	0.00	0.39
The fear of death	8.18	1.60	11.47	2.90	-3.29	2.83	-7.81	0.00	0.40
Side effects of treatment	8.16	1.19	11.38	2.66	-3.22	2.33	-9.26	0.00	0.40
The inability to carry out daily activities	8.29	1.83	12.04	2.29	-3.76	2.38	-10.60	0.00	0.45
<b>Total</b>	<b>64.84</b>	<b>7.84</b>	<b>91.40</b>	<b>17.70</b>	<b>-26.56</b>	<b>15.42</b>	<b>-11.55</b>	<b>0.00</b>	<b>0.41</b>

Table 4. The changes in psychological pressures questionnaire scores before and after the intervention and rates of improvement, illustrated that psychological pressures questionnaire scores were improved after the intervention with statistically significant difference in all axes (T test) ranged from (7.81: 11.55), ( $P = 0.00$ ). Also the all axes of the scale improved at different rates ranged

from (33.76%: 47.06%), the better improved to at least as follows: body image; the inability to carry out daily activities; social adjustment; marital adjustment; the fear of death; the side effects of treatment; fear of the spread of the disease; psychological adjustment.

**Table 5:** Changes in flexibility and strength scores before and after intervention and rates of improvement

Variables	Before		after		Differences		T	Sig	Improvem ent
	M	SD	M	SD	M	SD			
The flexibility injured arm (degrees)	112.46	6.50	176.33	1.52	-63.88	5.02	-85.35	0.00	56.80%
The flexibility non-injured arm (degrees)	173.19	2.39	178.62	1.36	-5.43	1.11	-32.81	0.00	3.14%
The strength injured arm (w kg)	15.27	1.64	24.31	1.95	-9.04	0.64	-95.09	0.00	59.24%
The strength non-injured arm strength (w kg)	19.20	1.72	24.36	2.27	-5.16	0.77	-44.64	0.00	26.85%

Table 5. The changes in flexibility and strength scores before and after the intervention and rates of improvement, shown that flexibility and strength were improved after the intervention with statistically significant difference in all physical variables ranged from (23.81 : 95.09), ( $P = 0.00$ ). This table demonstrates that all the physical variables improved different rates ranging between (3.14%: 59.24%) was the order of improvement, the better improved to at least as follows: The strength injured arm; the flexibility injured arm; the strength non-injured arm strength; the flexibility non-injured arm.

## 5. Discussion

The present study findings showed that the homogeneity the sample variables age, height, and weight this from all Skewness values and Kurtosis confined between add/subtract three. The result of the current study, findings had represented the positive, statistically significant correlation between age and psychological pressures and post-traumatic for the diagnosis of breast cancer; patients with breast cancer in the first forty until the mid-forty of the most affected age groups with post-traumatic and psychological pressures.

The finding of this study is similar to that of the **American Cancer Society [8]** which mentioned that the age of breast cancer incidence and death rates generally increase with age.

Ninety-five percent of new cases and 97% of breast cancer deaths occurred in women 40 years of age and older.

In the general population, the prevalence of sufficiently severe posttraumatic stresses symptoms (PTSS to warrant a diagnosis of PTSD is usually lower among older individuals compared with younger [9]. Likewise, younger cancer patients are generally more died after receiving their cancer diagnosis than older patients [10].

The present study results showed that highly statistically significant association between a married woman and psychological pressures and post traumatic related to breast cancer, this may be due to marital strain, as the husband needs and children need especially young children, and financial strain for the family and the cost of disease treatment.

As regards, the sources of distress include premature treatment-induced menopause, infertility, alterations in body image, fear of starting a new relationship, marital strain, financial loss, child care difficulties, feelings of alienation from healthy peers, and the constant threat of recurrence and death (the latter prospect being particularly terrifying for mothers of young children). Younger breast cancer patients are also more likely to test positive for a BRCA mutation, a situation that involves additional difficult decisions [11, 12]. This result goes online with, **Northouse et al.** [7] found that lower marital satisfaction.

The current study findings demonstrated that the negative statistically significant association between housewives and psychological pressures and post traumatic related to breast cancer, which confirms that the psychological pressures and post-traumatic was lower in housewives. In my opinion may be the housewives are less obligations than working women, because worker women who have the obligations of a working at home, children and spouse, an addition to the workloads and their responsibilities. The breast cancer woman had an impairment, emotional and physical function due to her psychological status related to her disease.

Approximately one-third of breast cancer patients experience significant distress and/or impairment of function [13] and symptoms of distress [14]. Emotional and physical function impairment was also found for the PTSD subsample, although the degree was not as pronounced as for the depressed patients [15].

The present study findings showed that improved after the intervention with statistically significant difference in body image; the inability to carry out daily activities; social adjustment; marital adjustment; the fear of death; the side effects of treatment; fear of the spread of the disease; psychological adjustment (as ordered psychological program), this indicated that the effectiveness of the psychological program. In our opinion, this result the patient with breast cancer need to who hear their feeling and to express her emotion and problem, especially the people in our society they are emotional effected.

In line with previous findings, **Compas and Luecken** [16] who revealed that psychosocial interventions for cancer patients have shown that such interventions are effective for patients with various kinds of cancer, including breast cancer. Psychosocial interventions consistently show beneficial effects on emotional adjustment, functional adjustment, and treatment- and disease-related symptoms.

This result goes online with, **Mustafa et al.** [17] found that psychological interventions appear to be effective in improving survival at 12 months but not at long-term follow-up, and they are effective in reducing psychological symptoms only in some of the outcomes assessed in women with metastatic breast cancer. However, the findings of the review should be interpreted with caution as there is a relative lack of data in this field, and the included trials had reporting or methodological weaknesses and were heterogeneous in terms of interventions and outcome measures.

The current study showed that flexibility and strength (motor program) were improved after the intervention with statistically significant difference in all physical variables. This result demonstrates that all the physical variables improved, the better improved to at least as follows: The strength injured arm; the flexibility injured arm; the strength non-injured arm strength; the flexibility non-injured arm. Physical activity:

An educational program may increase the awareness through lifestyle modifications. A study of 136 breast cancer survivors demonstrated that patients who reported significantly fewer symptoms and more practice of risk-reduction measures than those who did not [18].

Our program is the first of its kind in Egypt to provide counseling psycho-motor program to life adaptation for breast cancer women "before and after mastectomy". The program was created by an interdisciplinary steering committee with representation from medical oncology, psychiatric nursing, and physiotherapy.

This program goes in line with **Ali and Warner (2013)**, who founded that the program was created by an interdisciplinary steering committee with representatives from medical, radiation, and surgical oncology; nursing, psychology, and social work; and young breast cancer survivors. The steering committee meets monthly to monitor the patient accrual and data entry, to strategize about fundraising, to monitor the progress of ongoing projects, and to implement new research and education initiatives. In addition, a large advisory board provides expertise in fertility, gynecology, epidemiology, physiotherapy, nutrition, psychiatry, and medical imaging.

## 6. Conclusion

Based on the findings of the present study, it can be concluded that, the highest statistically significant association was between psycho-motor program and life adaptation for breast cancer women "before and after mastectomy".

## 7. Recommendation

The study recommended that,

- 1) The researchers recommend using the psycho-motor program which prepared by the researchers, it appeared effectiveness in improving the strength and flexibility of the injured and non-injured arm and reduce the psychological pressure to breast cancer patients and to adapt to life.
- 2) Activating the role of the health professional to inform the women, the importance of self-exam of their breasts, how using self-exam of their breasts and they should be aware of how their breasts normally look and feel and report any new breast changes to a health professional as soon as they are found, finding a breast change does not necessarily mean there is a cancer.
- 3) Our breast cancer's patient need for psychological interventions that facilitate emotional expression and support, as well as those that build coping skills, have yielded beneficial effects, interest in the psychological aspect of breast cancer before and after excision agent to reduce the psychological pressures and post-traumatic

## 8. Conflict of interest

The authors declare no conflict of interest.

## 9. Authors' Contributions

All authors drafted, read and approved the final version of the manuscript.

## 10. Acknowledgements

The author would like to thank projects funding and Granting unit, Beni Suf University frothier financial support and gratefully extend their appreciation to the professors in our fields and the directorates of oncology department and University Hospital of Beni Suf in the Beni Suf Governorate and patients with breast cancer, as it would not have been possible to complete this work without their full co-operation and support.

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