



Nursing Performance Regarding Needs and Coping Strategies for Patients Post Mastectomy

Mayada Mohamed Fahmy⁽¹⁾, Nadia Mohamed Taha⁽²⁾, Amal Hemed Hamad⁽³⁾

⁽¹⁾ B.Sc. Nursing, Faculty of Nursing, Zagazig University.

⁽²⁾ Professor of Medical Surgical Nursing, Faculty of Nursing, Zagazig University.

⁽³⁾ Lecturer of Medical Surgical Nursing, Faculty of Nursing, Zagazig University

Corresponding Author: Mayada Mohamed Fahmy

Email: maioyamohamed70@gmail.com

Abstract

Background: Mastectomy is the surgical removal of one or both breasts either partially or completely. Nurses have a major role in managing women with mastectomy before and after the operation and later on at the follow-up. **Aim of the study** was to assess nurses' performance regarding needs and coping strategies for patients post mastectomy. **Setting:** The study was carried out at the Surgical Oncology Department at Zagazig University Hospitals. **Subject:** convenient sample of all available nurses (30). **Tools for data collection:** The first tool include: interview assessment questionnaire of nurse's performance regarding needs and coping strategies of patients post mastectomy. **Results:** Based on the results of the present study it could be concluded that, total nurses knowledge was satisfactory in tow fifth of the studied nurses, and three fifth was satisfactory total practices. **Conclusion:** there is no statistical significant different relation between total nurses' knowledge level about cancer breast mastectomy and their demographic characteristics and there is no statistical significant different relation between total practice level and knowledge about breast cancer and knowledge about coping among studied nurses. **Recommendation:** Development of standard of care regarding satisfying patients' needs post mastectomy and how to cope post mastectomy is mandatory and should be available at the ward.

Keywords: Coping strategies, Mastectomy, Needs, Nursing performance.

DOI Number:10.14704/nq.2022.20.8.NQ44356

NeuroQuantology 2022; 20(8): 3278: 3287

Introduction

Breast cancer is the second most common cancer overall and is the most common cancer in women worldwide (Katkuri & Gorantla., 2018). In Egypt, breast cancer is the most common malignancy in women, accounting for 38.8% of cancers in this population, with the estimated number of breast cancer cases nearly 22,700 in 2020 and forecasted to be approximately 46,000 in 2050. (Saleh et al., 2021).

There are numerous risk factors such as sex, aging, estrogen, family history, gene mutations and unhealthy lifestyle, which can increase the possibility of developing breast cancer

(Kamińska et al., 2015). Breast cancer screening has involved primarily three strategies: mammography, breast self-examination, and clinical breast examination which provide information about the size, mobility, and texture of the lump as well as the status of the surrounding tissue and under arm lymph nodes. (Ilaboya, Gibson& Musoke., 2018).

Surgical treatment is one of the most frequently used treatment options for breast cancer. Mastectomy or breast-conserving surgery is a cornerstone of disease management. (Milosevic.,2018). Unfortunately, patients after mastectomy have to face a series of postoperative complications, including seroma



formation, wound infection, hemorrhage, arm pain, stiffness, loss of strength, lymphedema and compromised range of motion of the shoulder, arm, and cervical spine, collectively recognized as upper quadrant dysfunction (**Hashem et al., 2020**). Breast cancer and its treatment result in physical, sexual, spiritual, psychological, and social needs. So, it is the responsibility of the nurse to identify the patient's needs, make an appropriate nursing diagnosis and initiate plans for care (**Taha et al., 2013**).

Nurses can recognize the needs of patients and be effective in controlling disease complications as well as enhancing the quality of life of such group of patients. The nurse as educator must continually assess the patient's understanding, which is achieved through face-to-face interactions, answering of the patient's questions and observation decision-making process (**Song et al., 2016**). After the mastectomy, the nurse should pay close attention to the patient's condition, evaluate the patient's symptoms, guide relaxation training and encourage appropriate exercise, and provide follow-up care (**Majed et al, 2020**).

Significance of the study:

Mastectomy is performed in more than 80% of women with breast cancer in Egypt responsible for a range of alterations experienced by the patient who face it (**Barakat et al., 2018**). The nurse's assessment of patient's needs for care and treatment is an important part of the care process. Planning, implementation and outcome assessment of the care process are based on needs assessment data and that is why it is crucial assess those patients' needs and coping strategies (**Latifi et al., 2018**)

Needs assessment will enable the nurse to plan and deliver the most effective care to those in greatest need; apply the principles of equity and social justice in practice; ensure that scarce resources are allocated where they can give maximum health benefit; and work collaboratively with the community, other

professionals and agencies to determine which health issues cause greatest concern and plan interventions to address those issues (**Lewis et al., 2016**). There for assessing nurses' performance regarding needs and coping strategies of patients post mastectomy is very important.

Aim of the study was to assess nurses' performance regarding needs and coping strategies for patients post mastectomy.

Research Question:

- What are the needs and coping strategies of patient post mastectomy?
- What is the level of knowledge and practice of nurses regarding needs and coping strategies for patients post mastectomy?

Research design: A descriptive research design was carried out in this study.

Setting: The study was conducted in Surgical Oncology Department at Zagazig University Hospital.

Subjects: Convenient sample of all available nurses (30) working in previous setting.

Tools of data collection:

Tool 1: Interview questionnaire for assessment of nurse's performance regarding needs and coping strategies of patients post mastectomy.

Part (1): Part I: Demographic data of the studied nurses it included questions related to nurses as age, level of education, years of experience in surgical oncology department, previous training courses.

Part (2): Nurses' knowledge assessment questionnaire regarding care of patient post mastectomy. It included multiple choice questions related to the definition of breast cancer, causes, clinical manifestation, diagnosis and treatment of breast cancer, their role in

management of the patient post mastectomy, assessed nurses knowledge about needs post mastectomy and assessed nurses knowledge about coping strategies for patients post mastectomy

Scoring system: For the knowledge items, correct answer was scored (one) and the incorrect answer was scored (zero), for each area of knowledge, the scores of the items was summed up and the total divided by the number of the items, giving a mean score of the part. These scores were converted into a percent score, means and standard deviation were computed.

Part (3): An observational checklist to assess nurses' practice regarding care provided to meet needs of patient post mastectomy which was included wound care, Post mastectomy physical exercises, pain management.

Scoring system the items observed to be done were scored (1) and the items were not done (0). For each area, the scores of the items were summed up and the total divided by the number of the items, giving a mean score of this part. These scores were converted into a percent score; means and standard deviation were computed. The practice considered satisfactory if the percent score was 60% or more and unsatisfactory if less than 60% based on statistical analysis.

Administrative and ethical considerations:

An official permission for data collection in Zagazig University and Al-ahrar Hospitals was obtained from the hospital administrative personnel by the submission of a formal letter from the Dean of the faculty of Nursing Zagazig University explaining the aim of the study in order to obtain permission and help. At the interview, each subject was informed about the purpose, benefits of the study, and studied nurses were informed that participation is voluntary and they have right to withdraw from the study at any time without given any reason.

In addition, confidentiality, and anonymity of the subjects were assured through coding of all data. The researcher assured that the data collected will be confidential and would be used only to improve nurses' knowledge and practice for the purpose of the study.

Pilot study:

was carried on 15% of studied nurses (5nurses) and 10% of studied patients (5 patients) within the selected criteria to test the applicability of tools, arrangement of items, and to estimate the time needed for each tool. Then the researcher excludes unstable patients. After modification of the tools, items were then corrected as needed.

Field work:

Once the approval was granted to progress in the study, the researcher started to organize a schedule for collecting the data. The researcher visited study setting to be familiar with work process, time of work and observe nurses attending the study settings to a set schedule for data collection.

The researcher used to go to the study setting for interviewing the nurses who fulfill the criteria. The purpose of the study was explained to each nurse individually, and then the nurses were asked to participate in the study. Each nurse observed for 2 shifts at morning and afternoon for three times then she will ask to fulfill the questionnaire sheet. As the researcher was observing nurses practical skills about studied procedure. The time needed to complete the checklist varies between 30-45 minute.

The fieldwork was executed over the period from July to the end of December 2020.. Data were collected three days per week Sunday, Monday and Wednesday from Surgical Oncology Department at Zagazig University Hospital starting from 9:00 am to 1:00 pm.



Content validity& Reliability:

The tools were tested by five jury of expertise which included one professor, 3 assistant professors in medical surgical nursing from faculty of nursing , Zagazig University and one medical professors of surgical oncology Faculty of Medicine, Zagazig University for clarity, relevance, comprehensiveness, understandable and applicable. The recommended modifications were done. Content reliability was used to examine reliability by using Cronbach alpha test and retest. It was used to examine whether the questionnaire had internal consistency or not. The knowledge and practice tools had good internal consistency or not, the test was done. Cronbach's Alpha that used to measure the internal consistency (reliability of used tool) was 0.832 for knowledge, 0.797 for Observational Chick list for nurses practice.

Statistical analysis:

All data were collected, tabulated and statistically analyzed using SPSS IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp). Quantitative data were expressed as the mean \pm SD & median (range), and qualitative data were expressed as absolute frequencies (number) & relative frequencies (percentage). Percent of categorical variables were compared using Chi-square test or fisher exact test when appropriate. Spearman's correlation coefficient was calculated to assess relationship between various study variables, (+) sign indicate direct correlation & (-) sign indicate inverse correlation, also values near to 1 indicate strong correlation & values near 0 indicate weak correlation. All tests were two sided. P value < 0.05 was considered statistically significant (S), and p-value \geq 0.05 was considered statistically insignificant (NS).

Results:

As regard nurse's age ranged from 22-45 years old with mean \pm SD 34.16 \pm 5.39 about three quarters (73.3%) of studied nurses over 30 years. 76.7% of studied nurses education level had a diploma degree and more than ten years of experience in field. In addition 40% of nurses had experience on Oncology Department more than ten years. As regard to attending training course, only one fifth (20.0) of nurses attended training course about post mastectomy care. **(Table 1).**

According to level of studied nurses' knowledge of regarding nursing care for patients post mastectomy and coping strategy, ranged from 11 to 29 with Mean \pm SD 19.73 \pm 5.22. Knowledge level was satisfactory among 40.0% of studied nurses. **(Table 2).**

As regard practice of studied nurses regarding care of patients post mastectomy ranged from 17 to 40 with Mean \pm SD 28 \pm 5.89 practice level was satisfactory among 60.0% of studied nurses. **(table 3).**

The study finding revealed that there is no statistical significant different relation between total nurses' knowledge level about cancer breast mastectomy and their demographic characteristics. **(table 4).**

According to the current study there was no statistical significant different relation between total practice level and knowledge about breast cancer and knowledge about coping among studied nurses. **(table 5).**

The present study demonstrated that that, there was statistically significant correlation between nurses' knowledge score, nurses' practices score ($r= 0.481$) and experience at department with ($r= 0.057$ and 0.094 respectively). Statistical significant -ve correlation between nurses' age, experience and total nurses knowledge and practices ($r= -0.068$ and -0.122 respectively) (-0.144 and -0.175 respectively). **(table 6).**

Table 1 Demographic Characteristics Data of Studied Nurses (n=30)

Demographic characteristics of nurses	No	%
Nurses age		
≤30 years		
>30 years	8	26.7
Mean ±SD	22	73.3
Median(range)	34.16±5.39	
	35(22-45)	
Education		
Diploma	23	76.7
technical institute	7	23.3
Experience in nursing field		
≤10 years	7	23.3
>10 years	23	76.7
Mean ±SD	15.9±6.4	
Median(range)	17(3-27)	
Experience on oncology department		
≤10 years	18	60.0
>10 years	12	40.0
Mean ±SD	10.63±5.29	
Median(range)	10(3-23)	
Received Training courses		
Yes	6	20.0
No	24	80.0

Table 2 Mean, standard deviation and range of total nurses' knowledge about nursing care for patients post mastectomy and coping strategy (n = 30).

Items	No	%
Total Knowledge Level(84)*		
Satisfactory	12	40.0
Unsatisfactory	18	60.0
Mean ±SD	19.73±5.22	
Range	19(11-29)	

Table 3 Number and Percentage Distribution of Total Nurses' Practices Regarding Care of Patients with Fluid and Electrolytes Imbalance Undergoing Urinary Diversion (n=50)

Items	No	%
Total Practice Level(110)*		
Satisfactory	18	60.0
Un Satisfactory	12	40.0
Mean ±SD	28±5.89	
Range	28(17-40)	

Table 4 Relation between nurses' knowledge level about cancer breast mastectomy and their demographic characteristics (n=30).

Items	Nurses 'knowledge				N	fp-value
	Satisfactory		Unsatisfactory			
	No.	%	No.	%		
Nurses age						
≤30 years	3	37.5	5	62.5	8	0.99
>30 years	9	40.9	13	59.1	22	
Education						
Diploma	9	39.1	14	60.9	23	0.99
technical institute	3	42.9	4	57.1	7	
Experience in nursing field						
≤10 years	4	57.1	3	42.9	7	.392
>10 years	8	34.8	15	65.2	23	
Experience on oncology department						
≤10 years	5	27.8	13	72.2	18	.136
>10 years	7	58.3	5	41.7	12	
Received Training course						
Yes	1	16.7	5	83.3	6	.358
No	11	45.8	13	54.2	24	

F=Fisher Exact test p>0.05 nonsignificant

Table 5 Relation between total nurses' practice level regard care of post mastectomy cancer breast and their items of knowledge dimension (n=30).

Items of knowledge	Total Nurses 'practice				No	χ ²	p-value
	Satisfactory		unsatisfactory				
	No.	%	No.	%			
Knowledge breast cancer							
Satisfactory	10	55.6	5	41.7	15	0.56	0.46
Unsatisfactory	8	44.4	7	58.3	15		
Coping							
Satisfactory	11	61.1	6	50.0	17	0.36	0.55
Unsatisfactory	7	38.9	6	50.0	13		

F=Fisher Exact test (S) p<0.05 significant



Table 6: Correlation matrix between, total nurses' knowledge score, total nurses' practices score and demographic characteristics (n=30).

Parameters	Nurses' knowledge score		Nurses' practice score	
	(r)	P	(r)	P
Practice score	.481**	0.007	1	0.522
Age	-0.068	0.72	-0.122	0.356
Experience	-0.144	0.449	-0.175	0.621
Experience at .department	0.057	0.763	0.094	

(r) correlation coefficient **p<0.05= significant

Not related to education and training courses.

Discussion:

Regarding the demographic characteristics of the studied nurses, the nurse's age in current study ranged from 22 to 45 years old, and about three quarters of the studied nurses over 30 years. These findings were correspondent with **Lemlem et al., (2013)** who reported that, nurse's age was between 21 and 58 years (mean age 29.8). While **Elshamy & Shoma., (2010)** mentioned that, nurses' age ranged from 30-48 years, and majority of studied nurses were 35 or younger. However, the majority of studies on the postoperative care didn't focus on the age of nurses responsible for mastectomy patients. They had just investigated the age range of patients undergoing mastectomy as in researches by **Taha et al., (2013), Soliman et al., (2018), Hashem et al., (2020)**. The present study sheds the light on nurses' education, as more than three quarters had a diploma degree compared to only about quarter graduated from technical institute and had more than ten years of experience in field, this finding might be related to decrease number of high graduated nurses attached and working at Zagazig University Hospitals. Nearly similar results were revealed by **Elshamy & Shoma., (2010)** who stated that, about quarter of the studied nurses

had 11 years' or less clinical experience, but they reported that majority of nurses had three-year diplomas from a nursing, technical and health institute, while minority of studied nurses had baccalaureate degrees in nursing.

Also, current study revealed that the total knowledge level of studied nurses regarding nursing care for patients post mastectomy and coping strategy was satisfactory among tow fifth of studied nurses. These findings were in accordance with **Lovelac et al., (2019)** who declared that, after mastectomy, nurses should pay close attention to the patient's condition, evaluate the patient's symptoms, emotional and psychological status, guide relaxation training and encourage appropriate exercise, and provide follow-up care. Furthermore, **Gold et al., (2016)** suggested that, nurses need to evaluate the degree of anxiety and depression of patients before the operation, identify high-risk patients, and take preventive or postoperative intervention measures.

Consequently, the present study revealed that, total nursing practice level regarding care of post mastectomy patients was satisfactory among three fifth of the studied nurses. These findings agreed with **Seah & Tan., (2007)** who reported that, breast self-examination practice was more than half of the registered nurses with Singapore



Nursing Board. In addition, **Elshamy & Shoma., (2010)** observed that, more than half of the studied nurses received information about breast self-examination during undergraduate studies. On the other hand, higher percentages were recorded by **Akhigbe & Omuemu., (2009)** as they noticed that, more than three quarters of nurses had practiced Breast Self-Examination. Also, **Lemlem et al., (2013)** found that about three quarters of nurses were aware of Breast Self-Examination during as an early detection measure for breast cancer.

Concerning the relation between nurses' knowledge level about breast cancer, mastectomy and their demographic characteristics, the result showed that there was a statistically insignificant difference relation between total knowledge level about breast cancer, mastectomy of the studied nurses and their demographic characteristics. These findings disagreed with **El-Feqi et al., (2020)**, who recorded that, there was statistically significant difference between the knowledge of the studied patients and their educational level, and attributed that to the fact that educated patients could acquire knowledge through reading, media, or internet.

The current study result investigated the relationship between total nurses' practice level regard care of post mastectomy and their items of knowledge dimension, and revealed that there was statistically non-significant relation between total practice level and knowledge among the studied nurses. These findings were in the same line with **Cho et al., (2013)**, who suggested increasing the knowledge of nurse practitioners and other healthcare professionals of the specific needs about post-mastectomy patients.

The present study emphasized the correlation matrix between, total nurses'

knowledge score, total nurses' practices score and demographic characteristics. It was illustrated that there was statistically significant correlation between nurses' knowledge score and nurses' practices score. On the contrary **Akhigbe & Omuemu, (2009)** clarified that, there was no consistent relationship between the health workers knowledge and their duration of practice.

Conclusion:

Based on the results of the present study it could be concluded that, total nurses knowledge was satisfactory in tow fifth of the studied nurses, and three fifth was satisfactory total practices. In relation to patients' needs the most of patients were total needs (physical, psychological, and social). About three quarters of the studied patients able to cope with the disease. There was no statistical significance different relation between nurses total knowledge about breast cancer and coping strategies and there practices. There was statistical significance different relation between patients' needs, patients' coping score, nurse's total knowledge and total practices score.

Recommendations:

The study recommended that, in-service training programs for updating the knowledge and practice, Continuous health educational programs for nurses working with patient post mastectomy about disease, care of needs, stressors resulting from disease, chemotherapeutic side effects, and also how to satisfy it. Development of standard of care regarding satisfying patients' needs post mastectomy and how to cope post mastectomy is mandatory and should be available at the ward. A simple booklet for discharge instructions should be available in Surgical Oncology department as a reference for patients and families.



References

1. **Akhighbe, A. O., & Omuemu, V. O. (2009):** Knowledge, attitudes and practice of breast cancer screening among female health workers in a Nigerian urban city. *BMC cancer*, 9(1), 1-9.
2. **Barakat, A. H. A., Abdel-Aziz, A. E., & Kandeel, H. A., (2018):** Psychological reactions among women with breast cancer after mastectomy: a qualitative study. *IOSR Journal of Nursing and Health Sciences*, 7, 48-55.
3. **Cho, H. S. M., Davis, G. C., Paek, J. E., Rao, R., Zhao, H., Xie, X. J & Leitch, M. (2013):** A randomised trial of nursing interventions supporting recovery of the postmastectomy patient. *Journal of clinical nursing*, 22(7-8), 919-929.
4. **El-Feqi, B.E, El-Aziz, A., Salah Hassan, M., & Mohamed Mohamed, Y. (2020):** Knowledge and Self Care Practices for Women with Breast Cancer Related Lymphedema. *Egyptian Journal of Health Care*, 11(2), 46-65.
5. **Elshamy, K. F., & Shoma, A. M. (2010):** Knowledge and practice of breast cancer screening among Egyptian nurses. *African Journal Of Haematology And Oncology*, 1(4).
6. **Gold, M., Dunn, L. B., Phoenix, B., Paul, S. M., Hamolsky, D., Levine, J. D., & Miaskowski, C. (2016):** Co-occurrence of anxiety and depressive symptoms following breast cancer surgery and its impact on quality of life. *European journal of oncology nursing*, 20(1), 97–105
7. **Hashem, E., Mohammed, A. E. L., Youssef Sayed, S., & Thabet Ayoub, M. (2020):** Effect of Educational Nursing Program on Performance and Self-efficacy of Females Undergoing Mastectomy. *Assiut Scientific Nursing Journal*, 8(21), 74-83.
8. **Ilaboya, D., Gibson, L., & Musoke, D. (2018):** Perceived barriers to early detection of breast cancer in Wakiso District, Uganda using a sociological approach. *Globalization and health*, 14(1), 1-10.
9. **Kamińska, M., Ciszewski, T., Łopacka-Szatan, K., Miotła, P., & Starostawska, E. (2015):** Breast cancer risk factors. *Przegląd menopauzalny= Menopause review*, 14(3), 196.
10. **Katkuri S & Gorantla M., (2018):** Awareness about breast cancer among women aged 15 years and above in urban slums: a cross-sectional study, *International Journal Of Community Medicine And Public Health*. 5(3), pp.929-932
11. **Latifi, M., Salimi, S., Barahmand, N., Fahimnia, F., & Farsani, L. A. (2018):** Postmastectomy information needs and information-seeking motives for women with breast cancer. *Advanced biomedical research*, 7(75), 1-9.
12. **Lemlem, S. B., Sinishaw, W., Hailu, M., Abebe, M., & Aregay, A. (2013):** Assessment of knowledge of breast cancer and screening methods among nurses in university hospitals in Addis Ababa, Ethiopia, 2011. *International Scholarly Research Notices*. Available at: <https://downloads.hindawi.com/archive/2013/470981.pdf> Accessed on June 12, 2021 at 3pm.
13. **Lewis, S. L., Bucher, L., Heitkemper, M. M., Harding, M. M., Kwong, J., & Roberts, D. (2016):** *Medical-Surgical Nursing-E-Book: Assessment and Management of Clinical Problems, Single Volume*. Elsevier Health Sciences, 1 (10), 1204-1226.
14. **Lovelace, D. L., McDaniel, L. R., & Golden, D. (2019):** Long-Term Effects of Breast Cancer Surgery, Treatment, and Survivor Care. *Journal of midwifery & women's health*, 64(6), 713–724.



15. **Majed, M., Neimi, C. A., Youssef, S. M., Takey, K. A., & Badr, L. K. (2020):** The Impact of Therapeutic Exercises on the Quality of Life and Shoulder Range of Motion in Women After a Mastectomy, an RCT. *Journal of Cancer Education*, 1-9.
16. **Milosevic. M & Jankovic D.(2018):** ‘Early Diagnosis and Detection of Breast Cancer’. *Technology and Health Care* : 26, 729 – 759.
17. **Saleh, H., Rageh, T., Alhassanin, S., & Megahed, M. (2018):** Upper limb lymphedema related to breast cancer therapy: incidence, risk factors, diagnostic techniques, risk reduction and optimal management. *International Surgery Journal*;5(11), 3633-3639.
18. **Seah, M., & Tan, S. M. (2007):** Am I breast cancer smart? Assessing breast cancer knowledge among healthcare professionals. *Singapore Med J*, 48(2), 158-162.
19. **Soliman G., El Gahsh N., & Shehata O., (2018):** Effect of a planned educational program regarding post-mastectomy exercises on living activities among breast cancer patients, *National Journal of Advanced Research*, 4(1), 1-11.
20. **Song, Y., Lv, X., Liu, J., Huang, D., Hong, J., Wang, W., & Wang, W. (2016):** Experience of nursing support from the perspective of patients with cancer in mainland China. *Nursing & Health Sciences*, 18(4), 510-518.
21. **Taha N., Azeaz M., Hassan A & Shaban A. (2013):** Effect of Educational Program Regarding Therapeutic Exercises on Women's Pain, Fatigue and Shoulder Function Undergoing Mastectomy, *Journal of American Science*, 9(3), 412-425.