



Relation between Hope, Coping strategies and Social support among women with Breast Cancer

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Abstract

Background: Breast cancer is one of the deadly diseases in the world. Hope can be regarded as an effective coping strategy that gives them the courage to overcome difficulties and helps them accept the reality of the disease. Coping play an important role in increasing positive outcomes further social support has a direct effect on well-being, promoting the improvement of the psycho-emotional aspects of individuals in the health disease process. **Aim:** to assess the relation between hope, coping strategies, and social support among women with breast cancer. **Methods:** A correlational design was utilized in the current study on a sample of 228 breast cancer patients at oncology and nuclear Medicine department" at Zagazig University Hospitals. **The tools used for data collection were:** An interview questionnaire sheet, Herth Hope Index (HHI), Jalowiec Coping Scale (JCS) and Social support scale. **Results of the current study:** revealed that (53.1%) of breast cancer patients had moderate level hope, (82.0%) had moderate level of coping, while (68.4%) of them had moderate level of social support. Coping strategy had positive significant correlations with hope($r=0.190$) and with social support. ($r=0.259$). Multivariate analysis revealed that hope and social support were the statically significant independent positive predictors of patients coping score. **Conclusions:** breast cancer patients had moderate level of hope, coping strategies and social support. Increasing hope and social support will increase coping strategy among breast cancer women. **Recommendations:** Implement psycho-educational interventions to enhancement coping strategies, social support and hope, among breast cancer women.

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KeyWords: Breast cancer, Hope, Coping strategies, Social support.

DOI Number: 10.48047/NQ.2022.20.18.NQ88091

Neuroquantology 2022; 20(18): 989-998

Introduction:

Breast cancer is one of the most frequent causes of morbidity and mortality among women in the world. Being diagnosed with breast cancer is an extremely stressful and depressive experience. It has major adverse physical, psychosocial, and economic consequences. ^{1&2} Breast cancer (BC) is the second most prevalent type of cancer worldwide after lung cancer. In women, it is the most common type of tumor and the leading cause of cancer-related deaths.³

The incidence rate of breast cancer is estimated to reach 3.2 million by 2050 worldwide. ⁴ Furthermore, Breast cancer is one of the most important health problems of women in developed countries, it accounts for almost 30% of

all cancer types among women. ⁵

Cancer patients often have psychological reactions such as fear, depression, pessimism and even lead to despair. For cancer patients, hope can be regarded as an effective coping strategy that gives them the courage to overcome difficulties and helps them accept the reality of the disease, actively participate in treatment and improve the prognosis and survival. Hope is defined as "an inner power to deal with life events and help an individual safely navigate through challenges".⁶ Hope is an important factor for survival and is related to the patient's quality of life, social support, and psychological distress also hope is important to breast cancer women undergoing chemotherapy. ^{7&8}



Coping Strategies play an important role in increasing positive outcomes. Indeed, having a higher number of positive coping strategies available in the face of stress may provide the individual with more resources to deal with stress. This may allow an individual to manage stress more effectively and be more confident in their ability to deal with problems.⁹

Furthermore, coping strategies assist patients to deal with the problem that is causing the distress (problem-focused coping) and/or regulating stressful emotions (emotion-focused coping).¹⁰ For women with breast cancer, coping is a strategy through which they perceive and handle various stressors experienced during the breast cancer diagnosis and treatment process as challenges and threats, and such coping strategies are reported to influence psychosocial adjustment among breast cancer patients.^{11&12}

Social support is a major factor positively affecting patients' self-efficacy and self-management behavior. Patients who had higher social support for coping with stresses reported fewer difficulties in medical interactions.¹³ Women with breast cancer who are in support groups have significantly better psychological well-being, more posttraumatic growth, better self-image, better sexual functioning and higher sexual satisfaction, better coping and communication, and fewer physical symptoms associated with the disease.¹⁴

Social support obtained from family and friend alter the survivors to be eager to recover even the probability to completely recover is very small. The feeling of love, security and comfort give welfare that may improve breast cancer survivors' quality of life. Support from the fellow breast cancer survivors can also improve breast cancer survivors' quality of life, since they mutually understand their conditions and motivate each other that encourage them to undergo chemotherapy and visit hospital for regular checkups.¹⁵

Social support creates a positive self-image leading to the development of hope, love and satisfaction, self-acceptance and reduced anxiety, which increases the person's adjustment and adaptability to the disease, providing her with an opportunity for self-development and progression.¹⁶

Significance of the study:

Breast cancer is the most commonly diagnosed cancer. In 2018, it accounted for 30% of total new diagnoses of cancers in the United States and was the most common type of cancer in American women¹⁷. In Egypt, cancer breast represents 18.9% of total cancer cases (32.04% in women and 2.2% in men) with an adjusted rate of 49.6 per 100 000 population^{18 &19} The relationship between social support among breast cancer patients has been identified as an important strategy in adapting to the disease. It can increase the effectiveness of treatments because it helps women to have positive attitudes towards their health condition and cope with their illness.²⁰ Furthermore, people with good social support become more active and hopeful to conquer or coexist with cancer. There is a direct relationship between social support and hope. When social support increases, hope will elevate accordingly²¹. So that this study was conducted to assess relation between hope, coping strategies, and social support among women with breast cancer.

Aim of the study:

The aim of the study was:

The aim of this study was to assess the relationship between hope, coping strategies and social support among women with Breast Cancer.

Research questions:

1-what is the level of hope, coping strategies and social support among breast cancer women?

1- Is there a relation between coping strategies, social support, and hope among women with breast cancer?

Subjects and methods:

Research design:

A correctional study design was utilized in the current study.

Study setting:

This study was conducted at oncology and nuclear Medicine department at sednawy hospital, Zagazig University hospitals in Sharkia Governorate, Egypt.

Study subjects:

A purposive sample of 228 women with breast cancer who met the following inclusion criteria;

Age: from 30 to 60 years old, being diagnosed with breast cancer for at least six months, currently receiving chemotherapy treatment, all stages of breast cancer



Exclusion criteria; Patient with mental disorder or other medical problem, Patient who refused to share in this study.

Tools for data collection:

In order to achieve the present study four tools were used to fulfill the necessary data.

Tool I: An interview questionnaire sheet: It was developed by the researcher, it divided into two parts:-**Part 1:** Demographic characteristics as: age, marital status, educational level, occupation and monthly income. **Part II:** Patient's medical history: it includes family history of breast cancer and stage of cancer, type of treatment and disease duration.

Tool II:Jalowiec Coping Scale (JCS): This scale was developed by Jalowiec (1987) it consists of 60 items to assessing the specific coping behavior by assessing the degree of use and the perceived effectiveness of cognitive and behavioral coping strategy in stressful situations.

Scoring system:

Each item is rated into 4 points likert scale ranging from 0 (never used)to 3 (often used).The total score of the items of each subscale and total scale were summed up by simple summation

The level of total coping is categorized as follow:

- High coping level > 66.7% (121-160)
- >33.3%-66.7 % Moderate coping (61-120).
- ≤ Low behavior coping level 33.3% (0- 60).

Tool III:Herth Hope Index (HHI):

This scale was developed by Herth (1992) to evaluate the level of hope. It consists of 12 items

Scoring system:

Each item is rated on 4 points likert scale ranging from1 (strongly disagree) to 4(strongly agree). The total score is ranged from 12- 48 with higher score indicates a higher level of hope

Level of hope is categorized as follow:

- 66.7% (High hope level 35-48).
- >33.3% - 66.7% (Moderate hope level 25-34).
- ≤ 33.3% (Low hope level 12- 24).

Tool IV: Social support scale:

This scale was developed by **xiao Shui-yuan (1994)** to evaluate social support. The scale contains 10 questions divided into three dimensions: subjective support (questions 1, 3-

5), objective support (questions 2, 6-7) and utilization of support (questions 8-10).

Scoring system:

The responses to questions 1-4 and 8-10 rated into 4 points ranging from 1 to 4 points. As for question 5 according to the support degree of the a-d options, each option is counted as 1-4 points. The answers to questions 6 and 7 received 0-9 points, depending on the source of support. The total score of the total scale is the sum of the three dimensions. The higher score indicate higher level of social support.

Level of support is categorized as follow:

- 66.7% (High social support 11-15)
- >33.3% - 66.7% (Moderate social support 6-10)
- ≤ 33.3% (Low social support 0-5)

Validity & Reliability:

The tools were translated into Arabic and presented to experts for reviewing face and content validation; they include five experts from the faculty of the nursing Zagazig University, (three experts from medical surgical nursing and two experts from psychiatric and mental health nursing) who revised the tool for applicability, clarity, relevance and ease for implementation. Their recommendation and suggestion were taken into consideration.

Reliability of the tools was assessed by Cronbach's Alpha & test in SPSS v. 20 for windows (SPSS Inc., Chicago, Illinios, USA 2011) they show good level of reliability as follow:

| Tool | Cronbach's Alpha | N of Items |
|--------------------|------------------|------------|
| hope score | .86 | 12 |
| Total coping score | .824 | 60 |
| Cognitive coping | 0.67 | 30 |
| Behavior coping | 0.693 | 30 |
| Social support | .647 | 5 |

Field work:

Once permission was granted to proceed with the study, the researcher introduced herself to the patient with breast cancer at oncology department who fulfilled the inclusion criteria and explained the purposes. Voluntary participation and confidentiality of the collected data were ensured. The researcher started the interview with the patients individually using the data collection tools. The questionnaire was read and explained to each



patient. Instructions were given to them to fill in the questionnaire. The researcher clarified any question to breast cancer women if needed. The filled sheets were revised to check their completeness to avoid any missing data.

Data was collected three days per week (Sunday, Monday and Wednesday). The questionnaire sheet was distributed before taking chemotherapy or radiotherapy session or after taking treatment session or follow up. Every day about 20 to 25 patients are admitted to oncology department. Data collection period continued for about 3 months from the mid of September till the mid of November 2020.

Pilot study:

A pilot study was conducted on 30 women with breast cancer at oncology department, constituting about 10% of total study sample. It was carried out to assess the clarity and applicability of the study tools, and estimated time needed to fill in the data collection sheet. It was found that the average time to complete the data sheet ranged from 25-30 minutes. There were no modifications in the study tool after the pilot study was served. Therefore, those who participated in the pilot study were included in the main study sample.

Administrative and Ethical consideration:

On the basis of letters issued from the dean of the nursing college, Zagazig University, an official permission was obtained from the oncology and nuclear medicine department director, dean of the faculty of medicine Zagazig University after explaining the nature and aim of this study to get the permission for data collection and facilitate the role of researcher.

Ethical considerations:

The ethical issues were taken into consideration during the study. The study was approved by the pertinent authority of research ethics committee of faculty of nursing Zagazig University. Oral consent was obtained from each woman in order to participate in the study. Each woman was informed that participation is voluntary, and withdrawal is permissible. The questionnaire did not include any harmful and did not touch any religious and traditional issues among the study sample. Confidentiality was ensured throughout the study process, where personal data were not disclosed, and they were assured that all data are used only for the research purpose.

Statistical analysis:

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and means and standard deviations and medians and interquartile ranges for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the tools through their internal consistency. Quantitative continuous data were compared using the non-parametric Mann-Whitney for two categories or Kruskal-Wallis tests for three or more categories.

Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of Coping, Hope and Social support regression analysis was used and analysis of variance for the full regression models was done. Statistical significance was considered at p-value <0.001.

Results:

Table (1) demonstrates that less than half of studied patients (46.1%) age ranged from 45 to < 55 years old. More than one half of them (53.9%) were illiterate. Slightly less than three quarters of studied patients were married and had insufficient income (72.4% & 70.6%) respectively. Regarding Occupational status, majority of them were housewives (96.1%) and only (10.1%) of them have family history of breast cancer.

Table (2): shows that, more than one half of the studied women (51.3%) had breast cancer for more than one year and (80.3%) of them were in the third & fourth stage of cancer. Regarding treatment methods, 83.8% of studied patients were currently receiving chemotherapy treatment, (43.4%) of them were treated by surgery, (27.2%) treated by radiotherapy and (22.8%) of them were treated by hormonal therapy.

Figure (1): reveals that (46.9%) of the studied women had high level of hope and (53.1%) had moderate level with mean \pm SD (34.76 \pm 4.07)

Figure (2): illustrates that (18.0%) of the studied women had high total level of coping, while (82.0%) of them had moderate level of coping

Figure (3): illustrates that (23.2%) of the studied patients had high level of social support, (68.4%) of them had moderate level of social support. While only 8.4% of them had low social support level.

Table (3): demonstrates that there was a statistically significant relationship between studied women hope and their age, educational



level, income at (p=0. 0001) and family history (p=0. 0006).This mean that young age women who had intermediate educational level, employed ,had sufficient income and had family history of breast cancer had high level of hope.

Table (4): displays that total coping level had a statistically significant relationship with chemotherapy p=0.001 and hormonal therapy p=0.0001. This means that patients not received chemotherapy and received hormonal therapy had high level of coping strategies.

Table (5): displays that there was a statistically significant relationship between social support and patients age, marital Statues, and educational level p=0.0001. This mean that high level of social support was found among women < 35 years old, married and those who had intermediate and university educational level.

Table (6): shows that there were high statistically significant positive correlation between hope and Cognitive coping, total coping and Social support among studied patients it also reveals a high statistical positive correlation between cognitive coping and behavior coping, total coping score and Social support among studied patients. Finally, there was a high statistically significant positive correlation between total coping strategy and social support.

Table (7): displays that social support and hope were statistically significant independent positive predictors of coping. The model explains 7.8% of the variation in coping score.

Table (1): Demographic characteristics of breast cancer patients (n=228):

| Variables | NO | % |
|----------------------------------------|-----|------|
| Age per years | | |
| < 35 years old | 13 | 5.7 |
| 35 - < 45 | 56 | 24.6 |
| 45 - < 55 | 105 | 46.1 |
| > 55 | 54 | 23.7 |
| Marital status | | |
| Married | 165 | 72.4 |
| Divorced | 9 | 3.9 |
| Widowed | 54 | 23.7 |
| Educational level | | |
| Illiterate | 123 | 53.9 |
| Basic education | 53 | 23.2 |
| Intermediate education | 31 | 13.6 |
| High education | 21 | 9.2 |
| Occupation | | |
| Housewife | 219 | 96.1 |
| Employed | 9 | 3.9 |
| Family history of breast cancer | | |
| Yes | 23 | 10.1 |
| No | 205 | 89.9 |
| Income | | |
| sufficient | 67 | 29.4 |
| Insufficient | 161 | 70.6 |

Table (2): Medical Characteristics of breast cancer patients (n=228):

| Variables | NO | % |
|---------------------------|-----|------|
| Disease duration | | |
| ≤1years | 111 | 48.7 |
| > 1years | 117 | 51.3 |
| Cancer stage | | |
| The first/second stages | 45 | 19.7 |
| The third/ fourth stages | 183 | 80.3 |
| Treatment methods | | |
| chemotherapy | | |
| Currently receiving | 191 | 83.8 |
| have received | 37 | 16.2 |
| Radiotherapy | | |
| yes | 62 | 27.2 |
| no | 166 | 72.8 |
| Hormonal therapy | | |
| yes | 52 | 22.8 |
| no | 176 | 77.2 |
| Surgical Treatment | | |
| -yes | 99 | 43.4 |
| -no | 129 | 56.6 |

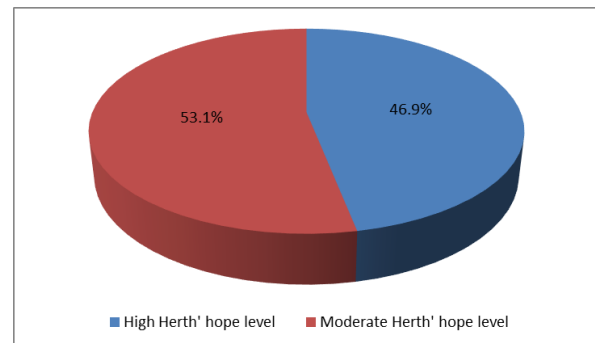


Figure (1): hope level among studied patients(n=228)

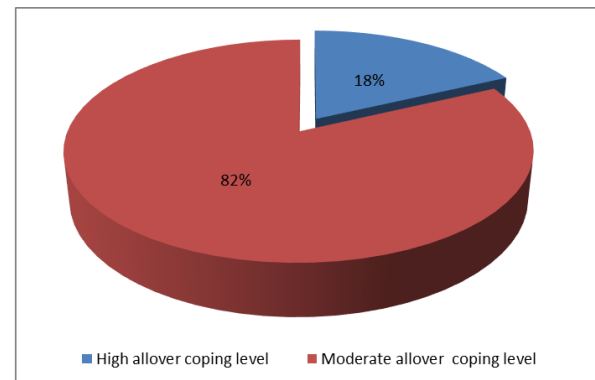


Figure (2): level of total coping strategies among studied patients (n=228)

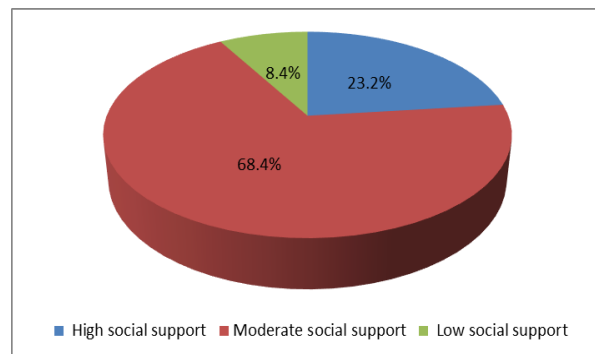


Figure (3): level of social support among studied patients (n=228)



Table (3): Relation between the hope and sociodemographic of studied patients (n.228).

| Variables | Hope level | | | | No. | χ^2 | p |
|----------------------------------------|------------|-------------|----------------|------|-----|----------|----------|
| | High level | | Moderate level | | | | |
| | No. | % | No. | % | | | |
| Age per years | | | | | | | |
| • < 35 | 11 | 84.6 | 2 | 15.4 | 13 | 21.03 | 0.0001** |
| • 35 - < 45 | 26 | 46.4 | 30 | 53.6 | 56 | | |
| • 45- < 55 | 57 | 54.3 | 48 | 45.7 | 105 | | |
| • > 55 | 13 | 24.1 | 41 | 75.9 | 54 | | |
| Marital status | | | | | | 5.7 | 0.057 |
| • married | 80 | 48.5 | 85 | 51.5 | 165 | | |
| • Divorced | 7 | 77.8 | 2 | 22.2 | 9 | | |
| • Widowed | 20 | 37.0 | 34 | 63.0 | 54 | | |
| Educational level | | | | | | 62.9 | 0.0001* |
| • Illiterate | 36 | 29.3 | 87 | 70.7 | 123 | | |
| • basic education | 22 | 41.5 | 31 | 58.5 | 53 | | |
| • intermediate education | 30 | 96.8 | 1 | 3.2 | 31 | | |
| • High education | 19 | 90.5 | 2 | 9.5 | 21 | | |
| Occupation | | | | | | f | 0.087 |
| • Housewife | 100 | 45.7 | 119 | 54.3 | 219 | | |
| • Employer | 7 | 77.8 | 2 | 22.2 | 9 | | |
| Family history of breast cancer | | | | | | 7.5 | 0.006* |
| • Yes | 17 | 73.9 | 6 | 26.1 | 23 | | |
| • No | 90 | 43.9 | 115 | 56.1 | 205 | | |
| Income | | | | | | 17.9 | 0.0001** |
| • sufficient | 46 | 68.7 | 21 | 31.3 | 67 | | |
| • in sufficient | 61 | 37.9 | 100 | 62.1 | 161 | | |

χ^2 = Chi square test: f= Fisher exact test: *Significant $p < 0.05$ **highly Significant $p < 0.001$: non- significant $p > 0.05$

Table (4): Relation between total coping strategies level and sociodemographic characteristic of studied patients (n.228).

| Variables | Total coping level | | | | No. | χ^2 | p |
|----------------------------------------|--------------------|------|----------------|-------|-----|----------|----------|
| | High level | | Moderate level | | | | |
| | No. | % | No. | % | | | |
| Age per years | | | | | | | |
| < 35 | 8 | 61.5 | 5 | 38.5 | 13 | 18.01 | 0.0001** |
| 35 to< 45 | 9 | 16.1 | 47 | 83.9 | 56 | | |
| 45 to< 55 | 17 | 16.2 | 88 | 83.8 | 105 | | |
| > 55 | 7 | 13.0 | 47 | 87.0 | 54 | | |
| Marital status | | | | | | 2.6 | 0.26 |
| Married | 29 | 17.6 | 136 | 82.4 | 165 | | |
| Divorced | 0 | .0 | 9 | 100.0 | 9 | | |
| Widowed | 12 | 22.2 | 42 | 77.8 | 54 | | |
| Educational level | | | | | | 24.9 | 0.0001** |
| Illiterate | 17 | 13.8 | 106 | 86.2 | 123 | | |
| basic education | 6 | 11.3 | 47 | 88.7 | 53 | | |
| Intermediate education | 6 | 19.4 | 25 | 80.6 | 31 | | |
| High education | 12 | 57.1 | 9 | 42.9 | 21 | | |
| Occupation | | | | | | f | 0.37 |
| housewife | 41 | 18.7 | 178 | 81.3 | 219 | | |
| Employer | 0 | .0 | 9 | 100.0 | 9 | | |
| Family history of breast cancer | | | | | | f | 0.002* |
| Yes | 10 | 43.5 | 13 | 56.5 | 23 | | |
| No | 31 | 15.1 | 174 | 84.9 | 205 | | |
| Income | | | | | | 46.18 | 0.0001** |
| sufficient | 30 | 44.8 | 37 | 55.2 | 67 | | |
| insufficient | 11 | 6.8 | 150 | 93.2 | 161 | | |

χ^2 = Chi square test: f= Fisher exact test: *Significant $p < 0.05$: **highly Significant $p < 0.001$: non- significant $p > 0.05$

Table (5): Relation between the Social support and sociodemographic characteristic of studied patients (n.228).



| Variables | Level of social support | | | | | | n. | χ ² | P |
|--------------------------|----------------------------|------|------------------|------|------------|------|-----|----------------|----------|
| | high social support (n.53) | | Moderate (n.156) | | Low (n.19) | | | | |
| | No. | % | No. | % | No. | % | | | |
| Age | | | | | | | | | |
| < 35 | 9 | 69.2 | 3 | 23.1 | 1 | 7.7 | 13 | 44.6 | 0.0001** |
| 35 to< 45 | 23 | 41.1 | 33 | 58.9 | 0 | .0 | 56 | | |
| 45 to< 55 | 20 | 19.0 | 73 | 69.5 | 12 | 11.4 | 105 | | |
| > 55 | 1 | 1.9 | 47 | 87.0 | 6 | 11.1 | 54 | | |
| Marital Statues | | | | | | | | | |
| Married | 53 | 32.1 | 109 | 66.1 | 3 | 1.8 | 165 | 54.02 | 0.0001** |
| Divorced | 0 | .0 | 8 | 88.9 | 1 | 11.1 | 9 | | |
| Widowed | 0 | .0 | 39 | 72.2 | 15 | 27.8 | 54 | | |
| Educational level | | | | | | | | | |
| Illiterate | 10 | 8.1 | 102 | 82.9 | 11 | 8.9 | 123 | 53.22 | 0.0001** |
| Primary education | 13 | 24.3 | 33 | 62.3 | 7 | 13.2 | 53 | | |
| Secondary education | 18 | 58.1 | 13 | 41.9 | 0 | .0 | 31 | | |
| High education | 12 | 57.1 | 8 | 38.1 | 1 | 4.8 | 21 | | |
| occupation | | | | | | | | | |
| Housewife | 53 | 24.2 | 148 | 67.6 | 18 | 8.2 | 219 | 2.84 | 0.24 |
| Employer | 0 | .0 | 8 | 88.9 | 1 | 11.1 | 9 | | |
| Income | | | | | | | | | |
| Sufficient | 15 | 22.4 | 50 | 74.6 | 2 | 3.0 | 67 | 3.82 | 0.15 |
| insufficient | 38 | 23.6 | 106 | 65.8 | 17 | 10.6 | 161 | | |

χ² =Chi square test **Significant p<0.001 non- significant p>0.05

Table (6): Correlation matrix of hope, cognitive coping,behavior coping,total coping and social support among studied patients.

| | | Hope | Cognitive Coping | Behavior Coping. | Total coping | Social support |
|----------------------------------|---|--------|------------------|------------------|--------------|----------------|
| Hope | r | 1 | | | | |
| | P | | | | | |
| Cognitive Coping strategy | r | .253** | 1 | | | |
| | P | 0.0001 | | | | |
| Behavior Coping strategy | r | .084 | .493** | 1 | | |
| | P | .205 | .0001 | | | |
| Total coping strategy | r | .190** | .850** | .877** | 1 | |
| | P | 0.004 | 0.0001 | 0.0001 | | |
| Social support level | r | .214** | .180** | .263** | .259** | 1 |
| | P | 0.001 | 0.006 | 0.0001 | 0.0001 | |

(r) Correlation coefficient ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table (7): Multiple linear regression model for predict coping strategies among studied patients (n.228):

| | Unstandardized Coefficients | | t | Sig. | r | R ² |
|----------------------|-----------------------------|------------|-------|------|-------|----------------|
| | B | Std. Error | | | | |
| (Constant) | 35.369 | 3.390 | | | | |
| Social support score | .312 | .154 | 2.026 | .044 | 0.293 | 0.078 |
| Herth hope index | .334 | .097 | 3.426 | .001 | | |

R square = 7.8% of predictors Model ANOVA: F=10.6 , p=0.0001

Discussion:

Worldwide, breast cancer is one of the most



common female malignant tumors, which seriously affects people's quality of life and harms their health. It has become a major public health problem in the current society.¹⁷

The present study findings showed that more than half of them had a moderate level of hope. This is might due to this disease is very dangerous, complicated and the chance of cure from cancer may be impossible or weak. This is consistent a study with **Abdollahi et al**²² who study about the relationship between self-esteem and hope and mental health in breast cancer patients after mastectomy, showed that only little percent of the patients with cancer had high levels of hope most of them had moderate levels of hope and one third of them had low hope level. Similarly, **Lee et al**²³ who study the effects of perceived stress on hope in women with breast cancer and the role of psychological hardiness assumed that women with breast cancer with high levels of stress are more likely to experience low levels of hope than those with low levels of perceived stress.

The present study findings showed that majority of studied women had moderate level of coping. This may be due patients haven't enough concerns and knowledge about coping with disease.

In the same line a study conducted by **Ghanem et al**²⁴ who discussed symptom distress and coping in young Korean breast cancer survivors, showed medium coping strategy among their studied sample. On congruence with **Al-Shannaq et al**²⁵ who examined depression, coping skills, and quality of life among Jordanian adults with breast cancer, stated that half of those patients had moderate ability to cope effectively with their situation.

As regards social support, the present study findings revealed that more than half of them had a moderate level of social support. A possible explanation is life concerns make survivors unable to communicate and share their psychological stress and feeling about social support need.

On the same line, Shen et al⁸ previous study about quality of life among breast cancer survivors, clarified that young breast cancer survivors with low social support or a weak social network have been found to be less likely to receive proper help and social support was at a moderate level.

The present study findings indicated that there was a statistically significant relationship between hope and age educational level, income and family history of breast cancer. This mean that young age women who had intermediate educational level, employed and had sufficient income had high level of hope.

A possible explanation is the younger age has children who are the cause for life continuity and receive treatment and patients who had intermediate educational level have health awareness which enables them to react positively and help to increase their level of hope This results consistent with, **palgi et al**²⁶ who assessed effect of age on subjective well-being and psychological distress among gastric cancer patients, showed that older cancer patients were reported to feel more hopeless and psychologically distressed compared to their younger counterparts.

Also, **DeMartini**,²⁷ showed that patients in the youngest quartile age were statistically significantly more likely to express hopes for cure than older age.

In the same context **Afrooze et al**²⁸ who studied nature of hope among Iranian cancer patients, found that patients who were illiterate and less educated were less likely to experience hope. On contrary **Soylu et al**²⁹ found that patients with advanced breast cancer with less education had higher levels of hope.

The current study showed that there was a statistically significant relation between total coping strategy and women's age, education level. Where women aged less than 35 years' old and had sufficient income experienced high level of coping. This is due to highly educated individuals are more adaptive to the disease process and more responsive to health education messages, more understandable of their condition, management, and able to find many ways of coping with stressful situations.

This results is agree with, **Faraci&Bottaro**³⁰ who discussed relationship between socio-demographics and coping styles in a group of cancer patients, showed that the use of effective ways of coping with stressful events was found higher in patients who had higher educational level and age. It was observed that as the educational level increased, the use of effective coping ways increased. Also, it was observed that as the age of the participants increased, their levels of effective coping with stress decreased. Also, **Liamputtong & Suwankhong**³¹ discussed that family income is another variable that significantly influences



coping a substantial family income which is required to ease the financial burden for both breast cancer patients and caregivers.

On the other hand, **Valente et al**³² study about relationship dynamics among couples dealing with breast cancer revealed that patients with genetic history and heredity disposition report higher levels of adaptation to the disease and psychological adjustment

The current study finding revealed that the high level of social support was found among women who were less than 35 years old, married and had intermediate educational level. This indicated that these women in this period of age established more relationships as marriage which lead to more sources of support and have their family that consider the most source of support.

This goes in line with, **Ozdemir, D., & Tas Arslan**³³ who explained an investigate relationship between social support and coping with stress in women with breast cancer, determined that increasing in age lead to more use of social resources that lead to higher social support and older women had lower use of social support

Similarly, **Bi et al**³⁴ who study breast cancer survivals showed that patients with higher education and income levels have relatively richer social activities, thus have more social support.

Regarding to the relation between coping strategies, social support, and hope among women with breast cancer. The current study showed that there was a statistically significant positive correlation between hope and total coping strategy and social support among studied patients. This might be due to social support and hope among women with breast cancer play an instructive and illuminating role for enabling women to apply positive strategies in order to obtain promotion in cancer coping

The results coincided with a study of **Waghmare S, Mahavdyalaya**³⁵ Who studied social support and psychological wellbeing of cancer patients, found that the perceived social support from family was effective in the use of effective ways of coping with stress. Added to that there are effective strategies for patients with cancer to cope with stress and perceived social support is one of these effective strategies

This is goes in line with, **Berg et al**³⁶ who studied

hope-based intervention and quality of life among young adult cancer survivors, demonstrated that higher level of hope indicated more effective coping responses and adjustment in breast cancer patients. Moreover, hope is positively associated with better coping

In the same context, **Bener et al**³⁷ who examined depression, hopelessness and social support among Asian breast cancer patients, demonstrated that social support is an important variable in increasing lifespan, emotional well-being as well as decreasing hopelessness in lifelong diseases such as breast cancer. Therefore, care for the patients diagnosed with breast cancer should include social support, which is a key factor in increasing hope

The same results findings agree with **Kim et al**³⁸ who revealed that the highest score in the social support dimensions belongs to family sub-dimension indicates that the participants are hopeful and have high level of social support.

Moreover, social support and hope were statistically significant positive predictors of coping as indicated by the study results. This is consistent with **Nierop-van Baalen**³⁹ who studied associated factors of hope in cancer patients during treatment, showed that social support was the most influential factor on the strength of hope found. And the patients had a stronger sense of hope when they received treatment and care and were able to share their experiences with others.

Conclusion:

Breast cancer patients had moderate level of hope, coping strategies and social support. Increasing hope and social support will increase coping strategy among breast cancer women.

Recommendations:

- 1- Counseling session to provide emotional support and positive illness perception.
- 2- Implement psycho-educational interventions to enhancement coping strategies, social support and hope, among breast cancer women.
- 3- Cognitive behavioral strategies which include stress management technique to help improve their mental wellbeing.
- 4- Hope therapy that buffer against depression and enhancing personal strategy and positive changes.

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