

Social Support and Hope Among Egyptian Women with Breast Cancer after Mastectomy

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Abstract

Introduction: Breast cancer is the most common cancer among Egyptian women. We report the unique assessment of hope and social support outcomes of women with breast cancer after mastectomy in Egyptian community.

Patients and methods: Between July 2009 and June 2010, three hundred and one women with newly diagnosed breast cancer joined this study. Socio-demographic data including patient's age, level of education, occupation, social status, and residence were collected by means of structured interviews based on special questionnaires. These questionnaires were designed to measure hope and social support.

Results: Age ranged from 21 to 88 years (median = 45.8 years and SD \pm 13.3). A low degree of hope was reported in 103 patients (34.2%), a moderate degree in 109 patients (36.2%), and a high degree in 89 patients (29.6%). A low degree of social support was reported in 119 patients (39.5%), a moderate degree in 101 patients (33.6%), and a high degree in 81 patients (26.9%).

Conclusions: Social support is related to many psychological factors, which can be quantitatively analyzed and it can predict hope. However, there were no significant differences between the socio-demographic variables (age, educational levels, residence and marital status) and social support, hope, and their sub-components among Egyptian women with breast cancer.

Keywords: breast cancer, social support, hope, mastectomy

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Introduction

In Egypt, as in many other parts of the world, breast cancer is the most common type of cancer: it accounts for approximately 38% of reported malignancies among Egyptian women.¹

The social environment may represent a protective shield to patients from the harmful effects of discomfort associated with cancer. It has been found that the structural forms of the individual's social relations such as relation dimensions and the functional forms such as emotional support may be associated with rates of death and life in cancer patients.²

Social support plays an important role in reducing the pressure and improving health. Cancer patients who lack social support may be more pessimistic and desperate as they are constantly looking for support from others.³

Few studies have been conducted in Egypt to assess the outcomes of social support and hope among women with breast cancer after mastectomy. This study aims to investigate the relations between social support and hope among Egyptian women with breast cancer using quantitative measures, and to determine whether social support and hope vary according to socio-demographic variables or not.

Patients and Methods

This is a prospective study carried out in The Oncology Center, Mansoura University between July 2009 and June 2010. After giving their verbal and written consents, three hundred and one women with newly diagnosed breast cancer participated in this study. They were recruited postoperatively while still in the surgery department. Fifty-one women underwent sparing mastectomy with immediate autologous breast reconstruction while the others underwent modified radical mastectomy. Socio-demographic data including each patient's age, level of education, occupation, social status, and residence, were collected during structured interviews. These interviews were based on special questionnaires designed to measure social support and hope.

The hope questionnaire

The Hope Measurement Questionnaire (Table 1) is composed of 51 items describing five domains of hope: physical, emotional, spiritual, medical, and occupational. The items measuring these domains were randomly

distributed throughout the questionnaire to achieve balance, social desirability, and patient satisfaction (Table 2).

The items included were extracted from psychological frameworks and previous studies, and then modified to be logical, non-suggestive, non-duplicative in meaning, appropriate for the sample of the study, and suitable for patients' culture and for the research's objectives.⁴⁻⁸

Each item was weighed on a scale of 3 points (1 = Disagree, 2 = Not sure, 3 = I agree). The total score ranges from 51 to 153. This score indicates the range of hope: ≤ 70 = a high degree of despair, 70–99 = moderate degree of hope, and ≥ 100 = a high degree of hope and desire in life.

The social support questionnaire

The Social Support Measurement Questionnaire (Table 3) consists of 33 items including four domains; psychological, material, medical, and social. Table 4 shows the random distribution of these items. The items included in the questionnaire were extracted from some previous studies⁹⁻¹⁴ and were amended in terms of language to be appropriate to the research sample and objectives.

Each item was weighed on a scale of 3 points (1 = Disagree, 2 = Not sure, 3 = I agree). The total score ranges from 33 to 99. This score indicates the range of social support: ≤ 40 = a low degree of social support, 40–65 = moderate degree of social support, and ≥ 66 = a high degree of social support dimensions.

Research hypothesis

1. There is a relation between social support and hope among patients with breast cancer.
2. Social support of patients with breast cancer is linked to several psychological factors, which can be quantitatively analyzed.
3. Social support can predict hope in women with breast cancer.
4. Both social support and hope vary in patients with breast cancer according to the socio-demographic variables.

Results and Statistical Analysis

Three hundred and one women with breast carcinoma were included in this study. They represent various socio-demographic levels of rural Egypt. Their ages ranged

**Table 1.** Hope measurement questionnaire.

No	Item	Agree = 3	Not sure = 2	Disagree = 1
1	I find difficulty in sleeping.			
2	I feel worried.			
3	I take part in religious ceremonies.			
4	The care I should receive is available.			
5	My income covers my needs.			
6	My friends are always ready to listen to my complaints.			
7	I always feel a continuous desire to eat.			
8	I can express my anger.			
9	I help people who may need my help.			
10	I am afraid of disease because of money troubles.			
11	I expect to reach my aims in life.			
12	My friends' care makes me feel happy (loved).			
13	I usually do not feel like eating.			
14	I can express my happiness.			
15	I follow religion teachings now more than I used to before.			
16	The treatment I receive is useful.			
17	My colleagues are keen on visiting me regularly.			
18	I feel worried when people do not visit me.			
19	I feel pain all over my body.			
20	I feel disparate and disappointed.			
21	I believe that faith in Allah would improve my condition.			
22	I think that doctors co-operate with patients.			
23	Diseases cost a lot of money.			
24	Family support relives my pains.			
25	I feel afraid of serious diseases.			
26	I feel disabled and incapable of doing anything.			
27	I expect I will be cured if I have cancer.			
28	At hospital the needs of patients are adequately complied with.			
29	Friendship box at work provides me with financial support.			
30	My relations with people deteriorated after my illness.			
31	I think that nursing care is inadequate.			
32	My illness makes me feel lonely.			
33	I help others though I have limited resources.			
34	My doctors keep me informed with changes in my condition.			
35	I am afraid if I am ill, I will not do my work efficiently again.			
36	Illness increases relations between the patient and others.			
37	I face health problems.			
38	Having hope in life is half the treatment.			
39	I will continue to do all that is good till the last minute of my life.			
40	Progress in medicine increases my hope.			
41	I hope to do all I missed in the period of my illness.			
42	I expect I will enjoy my social life.			
43	I feel energetic and enthusiastic.			
44	I feel sad most of the time.			
45	I am facing a lot of difficulties (problems).			
46	My pains are increasing.			
47	The cost of my illness increases my financial burdens.			
48	I expect death at any time.			
49	I hardly feel despair.			
50	The state of my health is getting worse.			
51	I have almost no goals in life.			



Table 2. Distribution of items of Hope domains throughout The Hope Questionnaire.

Hope domains	Item number	Total
Physical	1, 6, 11, 16, 21, 26, 31, 36, 41, 46, and 51	11
Emotional	2, 7, 12, 17, 22, 27, 32, 37, 42, and 47	10
Spiritual	3, 8, 13, 18, 23, 28, 33, 38, 43, and 48	10
Medical	4, 9, 14, 19, 24, 29, 34, 39, 44, and 49	10
Occupational	5, 10, 15, 20, 25, 30, 35, 40, 45, and 50	10
		51 items

from 21 to 88 years (median = 45.8 years and SD \pm 13.3). Table 5 shows the socio-demographic features while Table 6 shows the distribution of patients' scores on both Hope and Social Support scales.

The first assumption

There is a relation between social support and hope among patients with breast cancer.

To test the validity of this hypothesis, the data collected were analyzed in two ways:

First

The bilateral correlation coefficient of the participants' scores on the measurements of social support and hope was (43.0), which represents a positive and statistically significant value at (0.01).

Second

After controlling the demographic variables of age, education, marital status, and residence, the partial correlation coefficient of the participants' (N = 301) on the measurements of social support and hope was (44.0), which represents a positive and statistically significant value (0.01).

The second assumption

Social support of patients with breast cancer is linked to several psychological factors, which can be quantitatively analyzed.

To test the validity of this hypothesis, factor analysis (the principal component method) as well as varimax rotation method was applied to participants' responses to the items of the questionnaires used in the study.

Table 7 shows the data resulting from factor analysis after rotation. Saturation was calculated and found to be (3.0) indicating the presence of the three following factors:

The first factor (the spiritual domain of hope)

It includes a group of seven variables of a total of eleven variables representing the domains of the study. The data obtained indicate the strength of this factor which can be regarded as the most highly saturated and correlated variable. The saturation degree of this domain was (3.32) followed by that of body domain (0.883), the emotional component (0.882), the psychological domain of social support (0.875), the material domain (0.861), the total degree of social support (0.568), and then the total degree of hope (0.565).

The second factor

This factor included eight variables of the study. The saturation values of this factor ranged between (0.316) for the medical domain of social support, (7.97) for the social domain of social support. This makes it the most saturated variable. The saturation value of social support was (4.91) and that of the body domain of hope was (3.76). The occupational domain had a saturation value of (0.834) while the total degree of hope had a saturation value of (0.797), and the medical domain of hope a value of (0.778). The saturation value of the spiritual domain was comparatively low (0.608).

The third factor

This factor included five variables: the psychological domain of social support (8.379), the emotional domain of hope (5.15), followed by the social domain of social support (0.911) as well as the medical domain of social support (0.854), and finally the total degree of social support (0.795).

The third assumption

Social supports can predict hope for patients with breast cancer.

The regression coefficient was used to test the validity of this hypothesis. The results indicated that the *t* value mounted to (8.263) thus indicating that psychological support predicts hope. This means that social support can predict hope for patients with breast cancer. Table 8 illustrates the ability of social support to predict hope in patients with breast cancer.



Table 3. The Social Support Questionnaire.

		Agree	Not sure	Disagree
1	People's love is helping me to recover.			
2	When in need, I always find those who can help.			
3	Doctors' conduct towards me increases my hopes in recovery.			
4	My family's support increases my hope in life.			
5	My friends' appreciation increases my hope in life.			
6	I received many presents on different occasions.			
7	Doctors' care makes me optimistic.			
8	My family's care relieves my pains.			
9	I feel that my friends are my support in life.			
10	I believe in the proverb "I'm rich but I like presents."			
11	I really feel that nurses are angels of mercy.			
12	My friends' visits enhance my feeling of the meaning of life.			
13	I believe in the proverb "Best friends are the siblings Allah didn't give us."			
14	When I became ill, I found financial support.			
15	I find most of my needs available in hospital.			
16	The absence of my family makes me feel pain more keenly.			
17	I believe in the saying "People should help each other."			
18	My friends' financial support makes me optimistic.			
19	During my stay in hospital I felt that we were one family.			
20	My family does not let me down during troubles.			
21	People's visit make me optimistic.			
22	Treatment is expensive but my family's support relieves financial pressures.			
23	I feel that all the staff at hospital is very helpful.			
24	I love being alone.			
25	Being away from people is useful.			
26	I feel disappointed because my family does not give me help.			
27	I think that without doctors' help, my health will become worse.			
28	My friends visit me regularly.			
29	My friends' support gives me power to face difficulties.			
30	The absence of family support makes me feel disappointed.			
31	Nurses' ill treatment decreases my hope in recovery.			
32	The members of my family support me in hard as in good times.			
33	I feel pessimistic because of the people around me.			

The fourth assumption

Both social support and hope vary in patients with breast cancer according to the socio-demographic variables.

Table 4. Distribution of items of Social Support domains throughout the Social Support Questionnaire.

Social support domains	Item number	Total
Psychological	1, 5, 9, 13, 17, 21, 25, 29, and 33	9
Material	2, 6, 10, 14, 18, 22, 26, and 30	8
Medical	3, 7, 11, 15, 19, 23, 27, and 31	8
Social	4, 8, 12, 16, 20, 24, 28, and 32	8
		33 items

The validity of this hypothesis was tested by applying the Anova one-way analysis of variance (contrast) test to participants' responses to the measurements of social support, hope and their sub-components (domains). The results were as follows:

Age

Social support, hope and their sub-components do not vary among patients with cancer breast according to their age (Table 9).

Educational level

Table 10 shows the differences between social support, hope and their domains in relation to the educational level. There are no statistically significant differences between the different educational levels and hope or social support with the exception of the social domain of psychosocial support which has a statistically

**Table 5.** Socio-demographic features.

		Number	%
Age	<45	136	45.2
	45–65	137	45.5
	>65	28	9.3
Education level	Low or nil*	159	52.8
	Middle**	102	33.9
	High***	40	13.3
Residence	Village	144	47.8
	City	48	15.9
	Town	109	36.2
Social status	Not married	61	20.3
	Married	64	21.3
	Divorced	107	35.5
	Widow	69	22.9

Notes: *Persons with a low educational level are those who got the first 6–8 years of formal, structured education only; **Persons with middle educational level are those who completed their Secondary education comprising the formal education that occurs during adolescence and generally ends around the eighth to the tenth year of schooling; ***Persons with a high educational level are those who completed the tertiary or post secondary education. This normally includes undergraduate and postgraduate education, as well as vocational education and training.

significant difference at (0.01). Using Scheffe Test to identify which groups have differences, it was found that there were significant differences between women who had nil or low education and women who had a high level to the advantage of the first group who had an average grade of (15.6). The highly educated group, on the other hand, had an average grade of (13.7).

Residence

Table 11 shows the differences between participants' scores on The Social Support and Hope questionnaires together with their domains in relation to residence.

Table 6. Distribution of patients' scores of hope and social support scales.

	Scale	Number	%
Hope	≤70 (low degree of hope)	103	34.2
	70–99 (moderate degree of hope)	109	36.2
	≥100 (high degree of hope)	89	29.6
Social support	≤40 (low degree of social support)	119	39.5
	40–65 (moderate degree of social support)	101	33.6
	≥66 (high degree of social support)	81	26.9

Table 7. Rotated component matrix.

Measurement	Factors		
	1	2	3
Hope (total)	0.565	0.797	
Body	0.883	3.76	
Emotional	0.882		5.15
Spiritual	3.32	0.608	
Medical		0.778	
Occupational		0.843	
Social support (total)	0.568	4.91	0.795
Psychological	0.875		8.379
Material	0.861		
Medical		0.316	0.854
Social		7.971	0.911

There were no statistically significant differences between residence and the total score of hope including its emotional, medical, occupational domains. However, there were statistically significant differences between the physical and the spiritual domains of hope and residence at (0.01) level of significance. Using Scheffe Test to identify which groups had differences, it was found that differences in the physical domain of hope were between city residents who had an average grade of (13.9) and the village residents who had an average grade of (11.7). There were also differences in the average grades between town residents (13.5) and village residents (11.7). In regards to the spiritual component, there were differences between town and village as well as between city and village towards village with an average of (17.4), (14.7), and (15.4) respectively.

Results related to social support also indicate that there are no statistically significant differences between the different places of residence and the total score of social support together with its components with the exception of the material component as there were significant differences in this variable at (0.05) between town and village towards town where the average grades were (9.3) against (8.2) for village.

Marital status

Table 12 shows the differences between social support, hope and their domains in relation to marital status. There were no statistically significant differences between marital status and the total degree of hope with its domains or of social support and its components. However there were statistically significant differences

**Table 8.** Ability of Social Support to predict hope.

Model	Unstandardized coefficients	Std. error	Standardized coefficients	t	Significance
	Beta		Beta		
Constant	45.996	3.731	0.431	12.329	0.000
Social support	0.614	0.074		8.263	0.000

between the components of hope criterion and marital status at (0.01) level. Using Scheffe test to identify which groups have differences, it was found that there were differences between married women, divorcees and widows: the average grades were (15), (17.3), and (17.4) respectively.

Discussion

When women are subjected to psychological stress or emotions they cannot face either because of the strength of situation or because of their personalities, they become vulnerable to many diseases including cancer. At present, women are subjected to too much pressure because of the burden of working in different fields in addition to the commitments of their roles as mothers and housewives. These pressures

have naturally affected women's physical structure and exposing them to disease and reducing their sense of hope. This reduced feeling of hope in life is affected by many factors such as: family, friends (social support) and religious beliefs which all are important in giving the individual the feeling of hope.¹⁵⁻¹⁷

Dekeyser et al. (1998) conducted a prospective, descriptive and relational study which aimed to investigate the relationship between psychological stress and the pressures that women face as well as the effects of hope loss (despair) on the function of the immune system. The study sample included (n = 35) women, six of them were suffering from malignant tumors and 29 of them did not suffer from any organic disease. The variables of the study were psychological pressure, psychological stress symptoms, and hope.

Table 9. Differences between Social Support, Hope and their domains according to age.

Variables		Sum of squares	df	Mean square	F	Significance
Hope	Between groups	296.979	2	148.490	0.731	0.482
	Within groups	60538.250	298	203.148		
Body	Between groups	106.294	2	53.147	1.778	0.171
	Within groups	8906.264	298	29.887		
Emotional	Between groups	49.144	2	24.572	0.923	0.399
	Within groups	7934.969	298	26.627		
Spiritual	Between groups	26.967	2	13.484	0.600	0.550
	Within groups	6699.717	298	22.482		
Medical	Between groups	9.562	2	4.781	0.217	0.805
	Within groups	6559.966	298	22.013		
Occupational	Between groups	47.496	2	23.748	0.987	0.374
	Within groups	7173.102	298	24.071		
Social support	Between groups	62.614	2	31.307	0.312	0.732
	Within groups	29938.615	298	100.465		
Psychological	Between groups	51.758	2	25.879	1.596	0.204
	Within groups	4831.066	298	16.212		
Social	Between groups	20.134	2	10.067	0.745	0.476
	Within groups	4028.025	298	13.517		
Material	Between groups	33.447	2	16.724	1.454	0.235
	Within groups	3428.646	298	11.506		
Medical	Between groups	46.464	2	23.232	1.013	0.364
	Within groups	6832.466	298	22.928		

Table 10. Differences between Social Support, Hope and their domains according to the Educational level.

Variables		Sum of squares	df	Mean square	F	Significance
Hope	Between groups	421.508	2	210.754	1,040	0.355
	Within groups	60413.721	298	202.731		
Body	Between groups	153.114	2	76.557	2.575	0.078
	Within groups	8859.444	298	29.730		
Emotional	Between groups	117.141	2	58.570	2.219	0.111
	Within groups	7866.972	298	2.399		
Spiritual	Between groups	157.371	2	78.686	3.569	0.029
	Within groups	6569.313	298	22.045		
Medical	Between groups	68.880	2	34.440	1,579	0.208
	Within groups	6500.649	298	21.814		
Occupational	Between groups	9.478	2	4.739	0.196	0.822
	Within groups	7211.120	298	24.198		
Social support	Between groups	169.904	2	84.952	0.849	0.429
	Within groups	29831.325	298	100.105		
Psychological	Between groups	13.844	2	6.922	0.424	0.655
	Within groups	4868.980	298	16.339		
Social	Between groups	127.058	2	63.529	4,828	0.009
	Within groups	3921.102	298	13.158		
Material	Between groups	10.706	2	5.353	0.462	0.630
	Within groups	3451.387	298	11.582		
Medical	Between groups	42.633	2	21.317	0.929	0.396
	Within groups	6836.297	298	22.941		

Hope was measured by a scale designed to suit the sample of the study, psychological pressure by a short list of symptoms and the function of the immune system by the level of cytokine in the blood serum. The results of the study showed that there was a strong influence of the process of cancer diagnosis

on psychological stress, hopelessness, and the loss of hope: these factors had negative effects on the function of the immune system. It was also found that psychological pressure experienced by women in their lives before the diagnosis of breast cancer was of a very strong effect causing the collapse of the immune

Table 11. Differences between Social support, Hope and their domains according to Residence.

Variables		Sum of squares	df	Mean square	F	Significance
Hope	Between groups	177.373	2	88.686	0.436	0.647
	Within groups	60657	298	203.550		
Body	Between groups	285.190	2	142.595	4.869	0.008
	Within groups	8727.368	298	29.286		
Emotional	Between groups	142.590	2	710295	2.709	0.068
	Within groups	7841.523	298	26.314		
Spiritual	Between groups	379.677	2	189.839	8.913	0.000
	Within groups	6347.007	298	21.299		
Medical	Between groups	66.911	2	33.455	10533	0.218
	Within groups	6502.617	298	21.821		
Occupational	Between groups	41.055	2	20.527	0.852	0.428
	Within groups	7179.543	298	24.092		
Social support	Between groups	30.179	2	15.090	0.150	0.861
	Within groups	29971.050	298	100.574		
Psychological	Between groups	83.376	2	41.688	2.588	0.077
	Within groups	4799.448	298	16.106		
Social	Between groups	26.200	2	13.100	0.971	0.380
	Within groups	4021.959	298	13.4497		
Material	Between groups	82.893	2	41.446	3.655	0.027
	Within groups	3379.200	298	11.340		
Medical	Between groups	79.849	2	39.924	1.750	0.176
	Within groups	6799.082	298	22.816		

**Table 12.** Differences between Social support, Hope and their domains according to the Martial status.

Variables		Sum of squares	df	Mean square	F	Significance
Hope	Between groups	473.791	3	157.930	0.777	0.508
	Within groups	60361.439	297	203.237		
Body	Between groups	67.336	3	22.445	0.745	0.526
	Within groups	8945.223	297	30.119		
Emotional	Between groups	90.930	3	30.310	1.140	0.333
	Within groups	7893.183	297	26.576		
Spiritual	Between groups	323.702	3	107.901	5.005	0.002
	Within groups	6402.982	297	21.559		
Medical	Between groups	15.070	3	5.023	0.228	0.877
	Within groups	6554.458	297	22.069		
Occupational	Between groups	88.707	3	29.569	1.231	0.298
	Within groups	7131.891	297	24.013		
Social support	Between groups	214.816	3	71.605	0.714	0.544
	Within groups	29786.413	297	100.291		
Psychological	Between groups	20.108	3	6.703	0.409	0.746
	Within groups	4862.716	297	16.373		
Social	Between groups	25.712	3	8.571	0.633	0.594
	Within groups	4022.447	297	13.544		
Material	Between groups	17.872	3	5.957	0.514	0.673
	Within groups	3444.221	297	11.597		
Medical	Between groups	66.307	3	22.102	0.964	0.410
	Within groups	6812.623	297	22.938		

system and making women more vulnerable to breast cancer. The immune system of women, who were not subjected to any organic disease, has the ability to cope with any disease through the increase in white blood cells. They usually cope with psychological pressures because of the immune system activity and its good performance.¹⁸

Social support may even affect the outcome of breast cancer therapy; Spiegel et al. (1989) published what would become a landmark study showing that women with metastatic breast cancer who participated in an expressive supportive group therapy intervention lived about twice as long as women who had a similar condition.¹⁹

The comprehensive understanding of patients' healthy psychological reactions towards breast cancer is a necessary matter to determine standards of care and treatment vectors for women with breast cancer who are psychologically healthy and others who suffer from psychological disorders which may significantly delay or complicate treatment.²⁰

Some studies confirmed and agreed with the results of the current study as to the presence of a strong relationship between social support together with its dimensions and hope and its domains.²¹⁻²³

Many studies confirmed that hope varies according to demographic variables like education, age, and the patient's previous experience of cancer.²⁴⁻³³ These studies have stated that education has a role in the development of a sense of hope³⁴ and demonstrated that whenever the individual is educationally developed, the feeling and awareness of hope increases.³⁵

However, in this study, social support, hope and their sub-components do not vary among Egyptian women with breast cancer according to their educational levels. This may be attributed to many interacting factors: some of these factors are related to habits and traditions which are the main constituents of culture among Egyptians especially women regardless of their educational levels. Other factors are related to the quality of education they receive.

Some previous studies concluded that patients who have a rural cultural background; live far away from pollution, congestion; and whose lifestyle is characterized by religiosity and spirituality, will feel hope more than their peers who live in city.³⁶ The present study, however, showed that there were no statistically significant differences between the different places of residence and the total degree of hope, social support, and their domains. This may be attributed to the



unplanned urbanization of rural areas in Egypt which resulted in the migration of large rural population to urban towns during the last decades. This has, in turn, resulted in a mix of many socio-demographic features between Egyptian villages, cities and towns.

Apparently, hope correlation with demographic variables is not absolute: variability and differences in these variables are not a certainty and the issue is still controversial. The sense of hope is not related to the educational level since it represents a response to a certain situation or to a stimulant that the individual experienced.³⁷

The type of treatment has no effect on the sense of hope. Patients particularly those suffering from breast cancer often feel desperate because of the extreme seriousness of this disease and the sterility of its treatment.³⁸ Other studies also concluded that subculture and age have no effect on the sense of hope.^{39,40}

In regards to marital status in the present study, it was found out that there were no statistically significant differences between the marital status and the total degree of hope and its domains or between marital status and social support and its domains. This may be explained by the similarity of problems among members of all groups as reflected in the questionnaires of hope and social support, eg, delayed age of marriage together with its attendant concern for the future; family problems and the absence of husbands either due to travel or overtime work or lack of husband support; divorcing along with the Egyptian Society's melancholy view of divorced women; and the widowhood together with the concomitant burden of having additional responsibilities towards raising children in the absence of a comprehensive system of social solidarity.

The present study proved that both social support and hope do not vary in Egyptian patients with breast cancer according to any of the socio-demographic variables investigated.

Conclusions

Social support is related to many psychological factors, which can be quantitatively analyzed. These factors represent the domains or dimensions of hope; therefore, there is a strong relation between social support and hope. In addition, social support can predict hope among Egyptian women with breast cancer, but there are no significant differences between the

socio-demographic variables (age, educational levels, residence and marital status) and social support, hope and their sub-components.

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Disclosure

This manuscript has been read and approved by all authors. This paper is unique and is not under consideration by any other publication and has not been published elsewhere. The authors and peer reviewers of this paper report no conflicts of interest. The authors confirm that they have permission to reproduce any copyrighted material.

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