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Research Article

The Compare of Perceived Stress and Feeling Lonely in Breast Cancer Patients and Normal Individuals

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ABSTRACT

Objective: The purpose of this study was to examine the compare of perceived stress and feeling lonely in breast cancer patients and normal individuals. **Methods:** This research is causal-comparative. The population consist of all patients with breast cancer in hospitals of Ardebil. 60 patients and 60 normal individuals were selected with sampling method. The students answered the same questionnaire including social and emotional loneliness scale for adults (SELSA_S) and questionnaire of perceived stress scale. Data analysis included MANOVA analyses and SPSS software (package of Spss / pc + + ver18). **Results:** The results showed that there is a significant relationship between perceived stress positive, negative and feeling lonely in breast cancer patients and normal individuals. According the results the there is a significant relationship between loneliness in breast cancer patients and normal individuals and mean loneliness feeling in patients with breast cancer more than normal subjects.

Introduction

The impact of a breast cancer diagnosis and its treatment on quality of life (QoL) is well documented (e.g., Ganz et al., 1996; Holzner et al., 2001). Shapiro et al. (2001), in their review of the relationship between QoL and psychosocial variables in breast cancer patients, noted that "the biomedical model of disease, though crucial, does not take into account all of the complex factors involved in cancer ... a broader, more integrative framework, which includes psychosocial factors, is needed" (p. 502). The biobehavioral model of cancer stress and disease course offers such a framework (see Andersen, Kiecolt-Glaser, & Glaser, 1994, for a complete discussion). In this conceptual model, cancer diagnosis

and cancer treatments are defined as objective, negative events. Although negative events do not always produce stress, data from many studies document severe acute stress at cancer diagnosis and treatment (Maunsell, Brisson, & Deschenes, 1992). Even when stress declines from the peak at diagnosis (Edgar, Rosberger, & Nowlis, 1992), many QoL difficulties remain and new ones may arise during treatment and/or recovery (e.g., psychological distress; relationship, social, and occupational disruption; loss of physical stamina and fatigue; financial problems; Bleiker, Pouwer, van der Ploeg, Leer, & Ader, 2000; Holzner et al., 2001). The biobehavioral model postulates that higher initial stress levels (i.e., stress at the time of cancer diagnosis and

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treatment) can, over time, contribute to lower QoL for cancer patients.

Rather than stress, psychosocial oncology researchers have emphasized a "quality of life" framework in their studies (Aaronson, 1988; Moynour et al., 1989), with assessment focused on psychological (depression/anxiety, social support, body image/sexuality) and physical (fatigue/low energy, pain, general health) outcomes related to cancer diagnosis and treatment (Ganz et al., 1996; Maunsell, Brisson,&Deschenes, 1992). On the rare occasions the PSS has been used in adult cancer studies (de Moor et al., 2002; Sandgren, McCaul, King, O'Donnell, & Foreman, 2000), it has been as an outcome measure, much like measures of negative mood. Still, there has been interest in examining the cancer experience within a stress model (adult patients: Chernecky, 1999). In at least one model, cancer diagnosis/treatment has been conceptualized as a stressor (Andersen, Kiecolt-Glaser, &Glaser, 1994). The PSS offers one strategy to quantify stress responses among cancer patients. With it, investigators can, for example, test perceived stress as one explanatory mechanism for poorer quality of life outcomes in cancer patients. The aim of this study to was examine the compare of perceived stress and feeling lonely in breast cancer patients and normal individuals.

Research methods

This research is causal-comparative. The population consist of all patients with breast cancer in hospitals of Ardebil. 60 patients and 60 normal individuals were

selected with sampling method. The students answered the same questionnaire including social and emotional loneliness scale for adults (SELSA_S) (DiTommaso Brannen & Best, 2004) (including 15 questions) and questionnaire of perceived stress scale (Cohen et al, 1983) (including 14 questions). The cronbach's alpha that obtained from the pilot data was 0.87 for SELSA_S and 0.85 for perceived stress scale. Data analysis included MANOVA analyses and SPSS software (package of Spss / pc + + ver18).

Results

The results showed that mean age of normal subjects was 32.74 (SD= 5.44) and patients subjects was 45.60 (SD= 9.36). Also in healthy subjects was most frequent education related to diploma and patients subjects was most frequent education related to under diploma.

The results of table 3 shows the there is a significant relationship at least in terms of the dependent variables ($0.05 \geq p$, $F=26.71$). Chi Eta shows the there is a significant relationship between groups with respect to the dependent variables and this difference is 0.58 based on Wilks Lambda test. That's mean 58% of the variance is related to the difference between the groups.

According the results the there is a significant relationship between perceived stress positive, perceived stress negative and feeling lonely in breast cancer patients and normal individuals ($0.01 \geq p$). So that these variables in patients breast cancer were more than normal individuals.

Table 1: The mean and standard deviation of the variables in the study groups

| Variable | | Group | Mean | Standard deviation |
|------------------|------------------------------|---------|-------|--------------------|
| Perceived Stress | perceived stress of negative | Healthy | 17.08 | 4.58 |
| | | Patient | 18.98 | 3.54 |
| | perceived stress of positive | Healthy | 20.76 | 3.38 |
| | | Patient | 15.14 | 4.72 |
| Feeling lonely | | Healthy | 30.06 | 8.17 |
| | | Patient | 43.86 | 8.68 |

Table 2: The results of Levine test to determine the equality of variances

| Variable | F | Degrees of freedom 1 | Degrees of freedom 2 | Significance level |
|------------------------------|-------|----------------------|----------------------|--------------------|
| Perceived stress of negative | 1.868 | 1 | 98 | 0.136 |
| Perceived stress of positive | 1.482 | 1 | 98 | 0.155 |
| Feeling lonely | 2.320 | 1 | 98 | 0.131 |

Table 3: The results of multivariate analysis of variance

| | Test | Value | F | df of hypothesis | df of error | P | Chi Eta |
|-------|-------------------------------|---------|----------|------------------|-------------|-------|---------|
| Model | Pillai's Trace | 0.993 | 2785.265 | 5.000 | 94.000 | 0.000 | 0.993 |
| | wilks lambda test | 0.007 | 2785.265 | 5.000 | 94.000 | 0.000 | 0.993 |
| | Hotelling effect | 148.152 | 2785.265 | 5.000 | 94.000 | 0.000 | 0.993 |
| | The largest root of the error | 148.152 | 2785.265 | 5.000 | 94.000 | .000 | 0.993 |
| Group | Pillai's Trace | 0.587 | 26.713 | 5.000 | 94.000 | 0.000 | 0.993 |
| | wilks lambda test | 0.413 | 26.713 | 5.000 | 94.000 | 0.000 | 0.993 |
| | Hotelling effect | 1.421 | 26.713 | 5.000 | 94.000 | 0.000 | 0.993 |
| | The largest root of the error | 1.421 | 26.713 | 5.000 | 94.000 | 0.000 | 0.993 |

Table 4: The results of MANOVA (MANOVA) on the variables studied

| Variable | Dependent variable | Sum of squares | df | Mean of squares | F | P | Chi Eta |
|----------|------------------------------|----------------|----|-----------------|----------|-------|---------|
| Model | Perceived stress of positive | 32508.090 | 1 | 32508.090 | 1939.411 | 0.000 | 0.952 |
| | Perceived stress of negative | 32220.250 | 1 | 32220.250 | 1905.442 | 0.000 | 0.951 |
| | Feeling lonely | 136604.160 | 1 | 136604.160 | 1921.009 | 0.000 | 0.951 |
| Group | Perceived stress of positive | 90.250 | 1 | 90.250 | 5.384 | 0.022 | 0.052 |
| | Perceived stress of negative | 789.610 | 1 | 789.610 | 46.696 | 0.000 | 0.323 |
| | Feeling lonely | 4761.000 | 1 | 4761.000 | 66.952 | 0.000 | 0.406 |

Discussion

The purpose of this study was to examine the comparison of perceived stress and feeling lonely in breast cancer patients and normal individuals. The results showed that there is a significant relationship between perceived stress positive, and negative and feeling lonely in breast cancer patients and normal individuals. So that these variables in patients with breast cancer were more than normal individuals. These results are in good agreement with the results of Bakhtiari et al (2003), Ebrahimi et al (2009), Haddad et al (2010), and Potagas et al (2013).

Haddad et al (2010) reports that the number of high-risk events (Stressful and worrying) in patients with breast cancer was significantly higher than the healthy group. Ebrahimi et al (2009) showed that there is a significant relationship between disease history physical or mental of spouse or child, the number of adverse events (stressful and worrying) and unemployment children with breast cancer. The findings show that patients with breast cancer were suffering of psychological symptoms such as depression, anxiety, perceived stress, feelings of helplessness (Howlett et al, 2009). Most people who are diagnosed with cancer will experience a period of mental stress, which reduces the daily functioning (Molavi and Fattahi, 2010). There is a close relationship between psychological states and cancer. According to new

research, stress is a major cause of cancer in humans (Howlett et al, 2009). Mental stress, anxiety and stress affects the immune system and this exacerbates the field of cancer in humans. The cancer patients due to worry and anxiety are negative assessment of stress. But unlike the negatively perceived stress, people who consider stress as an opportunity for challenge and proper planning (positive perceived stress) causing behaviors and physiological responses are appropriate, that cancer is a prevent perceptual and this factor causes that people with cancer receive lower scores in perceived stress positive.

According to the results there is a significant relationship between loneliness in breast cancer patients and normal individuals and the mean loneliness feeling in patients with breast cancer more than normal subjects. These results are in good agreement with the results of Heiman & Margalit (2008), Mohammadi Fard (2012), Margaret et al (2012), and Rotenberg & Makdonald (2013).

Heiman & Margalit (2008) reports that people with cancer disease have little correlation to the relatives and acquaintances and these factors can lead to loneliness feeling in them. Mohammadi fard (2012) showed that cancer patients have high rates of depression, anxiety and loneliness, compared to normal subjects. Margaret et al (2012) reports the high levels of pessimism, introversion, solitary, withdrawn, expect too much from

others, lack of accept the responsibility are considered of the emotional states incurable illness (cancer, etc.). About explanation of the result can be expressed the patients consider diagnosis of cancer one of the most painful and most revolting events (Mohaghegh). Because the disease created too many problems in work, education or personal and social relations and generally leads to economic disability and social for patients and their family members. The factors causing the disease have little correlation to the relatives and acquaintances and this factor leads to loneliness feeling in them. In addition, people with cancer have fear and worry about themselves and this fear is more visible in women. Finally it can be stated perceived stress and loneliness such negative factors affecting on breast cancer patients and requires the attention families, authorities and associations cancer patients to help increase the positive perception of stress, reducing stress negative and loneliness in these patients. Because the data is collected through a questionnaire and like other self-report research results may be making the possibility of abuse.

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