Archive of SID

Biquarterly Iranian Journal of Health Psychology
Vol. 2, No. 1, Serial Number 3, p. 65-78, Spring-Summer 2019

Received: 08/13/2018
Accepted: 01/15/2019

Predicting Self-Efficacy of Women with Breast Cancer Based on Quality of Life, Religious Orientation, Resilience, Death Anxiety, Psychological Hardiness and Perceived Social Support

Sara Farahbakhsh Beh[1], Abolghasem Mehrinejad[*2], Ameneh Moazedian[3]

Abstract

Objective: The purpose of the present study was to predict self-efficacy of women with breast cancer based on quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support. The research method was descriptive and regression type. The statistical population in this study included all patients with breast cancer referring to Cancer Institute of Imam Khomeini and Milad hospitals in Tehran in 2018.

Method: Purposeful sampling method was used to select the sample. After sampling procedure, 300 patients with breast cancer patients were selected based on the criteria for entering and leaving the research. The research tool was a general self-efficacy questionnaire of Sherer et al. (1982), multi-dimensional perceived social support questionnaire (Zimt et al., 1989), Allport Religious Orientation (1967), Kobasa Psychological Hardiness Questionnaire (1979), Templar's Death Anxiety Scale (1970)), The Conor-Davidson Resilience Questionnaire (2003) and the World Health Organization Quality of Life Scale (1996). Regression analysis was used to analyze the data.

Results: The results of data analysis showed that factors of quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support have 21% ability to predict self-efficacy.

Conclusion: The relationship of factors of quality of life, resilience, psychological hardiness and social support with self-efficacy is positive at 5% confidence level, and the positivity of these coefficients actually indicates that increasing these factors increases self-efficacy ($p < 0.05$). Death anxiety also has a significant negative correlation with self-efficacy ($p < 0.05$).

Keywords: Patients with breast cancer, self-efficacy, psychological hardiness, religious orientation, perceived social support, quality of life, resiliency, death anxiety.

Introduction

Today, a concern that introduces cancer as a health-care problem globally and makes it a priority for the health system is the increasing number of people infected to this disease worldwide and in Iran (Pourfeizim, Azarfam, Adampour Zare & Pooladi, 2017). In addition, this growing number is led to more than 12% of deaths, and cancer is predicted to be the first and most important cause of death in 2030. Breast cancer is the second leading cause of cancer-related deaths among women (Hoerger, Scherer & Fagerlin, 2016). Breast cancer is the result of malignant and uncontrolled proliferation of epithelial cell masses covering the ducts or lobules of breast tissue in women (and in rare cases in men) (Robinson, Hendrix & xie, 2015). In developed countries, 12% of women aged 20-34 have breast cancer (Coroiu, Körner, Burke, Meterissian & Sabiston, 2016). However, breast cancer accounts for more than 25% of cancers in Iranian women (Alizadeh Ataghour, Samavati, Nafisi, Hassani & Gholami, 2017). The highest incidence of this disease is in the age group of 35-

1. Psychology PhD Candidate, Semnan Branch, Islamic Azad University, Semnan, Iran
2. Associate Professor, Department of Clinical Psychology, Faculty of Education and Psychology, Al-Zahra University, Tehran, Iran.
3. Assistant Professor, Department of Psychology, Semnan Branch, Islamic Azad Unniversity, Iran.
*Corresponding author: Email: ab_mehrinejad@yahoo.com

www.SID.ir

Archive of SID

44 (Rottmann, Hansen, Larsen, Nicolaisen, Flyger, Johansen & Hagedoorn, 2015).

One of the concepts associated with empowerment in people with cancer is self-efficacy which emphasizes one's understanding of his skills and abilities in successful performance (Merluzzi, Philip, Heitzmann Ruhf, Liu, Yang & Conley, 2018). This concept affects the individual's level of effort and performance. Over the past years, the psychological theorists have attempted to explain human behaviors. Social cognitive theories are also among these theories (Rezaeipour, 2015). Self-efficacy, considered as the core of this theory, has a significant impact on human performance and his way of dealing with issues. Self-efficacy has not been defined and evaluated as a personal trait, but as the individual beliefs about the ability to integrate skills and capabilities to achieve goals in specific situations and conditions. It is somehow a person's judgment on his own competence (Vieno, Santinello, Pastore & Perkins, 2007). Bandura (1986) put forward this theory of human performance, highlighting the role of beliefs in recognition, motivation, affection and human behavior. Bandura disagrees with the views focusing on internal factors affecting behavior which ignore environmental factors, and criticizes the views considering human as a passive respondent to the environmental events. For Bandura, person, his environment and his behavior are interdependent and none of them can be considered apart from other components as determinants of human behavior. Bandura has called this three-way interaction "reciprocal determinism". Bandura (1997) argues that self-efficacy beliefs in individuals are influenced by different factors and cannot grow only by persuading and encouraging them. Self-efficacy is an important internal factor for long-term control of chronic diseases, and high levels of self-efficacy are associated with improving the ability to adapt in patients and can predict it. Research results show that people who believe in their abilities participate actively in health promotion programs and this participation can improve their physical and mental health (Herts, Khaled & Stanton, 2017).

In recent years, the quality of life in cancer patients has become very important. Cancer in all cases affects the quality of life of patients in various degrees. Quality of life is a powerful force in guiding, maintaining and promoting health and well-being in different societies and cultures. The World Health Organization (WHO) (2014) considers four dimensions of physical and mental health, social relationships and the environment as the quality of life. According to the definition of the World Health Organization (2014), the quality of life is the perception of individuals of their own position in life in the cultural context and value systems in which they live and is related to their understanding of their goals, expectations, standards and interests. Quality of life is a broad concept influenced by physical health, psychological status, the degree of non-dependence and social relationships of the individual, and his relationships with his environment in a complex manner (Trevizan, Miyazaki, Silva & Roque, 2017).

Among the concepts seemingly related to self-efficacy is religion (Warren, Van Eck, Townley & Kloos, 2015). Religious orientation defines the structure of human relationships and interactions in its all dimensions in the light of human relationship with God. It is also religious belief or belief dimension that includes ideas and attitudes expected to be believed by the followers of a religion, such as belief in God, Paradise and Hell (Lahsayizadeh, Azargoun & Moradi, 2006). Religion is a reality with serious and significant presence in all aspects and dimensions of human life. Allport's views on the intrinsic and extrinsic religious orientation have significantly contributed to the psychology of religion. The intrinsic religious orientation is used to define and distinguish those who truly and

www.SID.ir

Archive of SID

sincerely surrender to a kind of belief and faith in something. A person with intrinsic religious orientation lives with his religion, has less prejudice and uses religious education to understand his daily interactions with others. The extrinsic religious orientation is, in fact, the religion of people who use their faith and religious beliefs to meet their personal needs and interests. In fact, religion is a means to their selfish goals (Wen, 2010). The results of a study by Fakour et al. (2017) showed that there was a significant relationship between extrinsic religious orientation and self-efficacy, in that self-efficacy decreased in individuals with more extrinsic religious dispositions.

Studies have indicated that the ability to adapt to the disease in cancer patients is strongly influenced by resilience (Gan, Zheng, Wang & Li, 2018). Resilience refers to the ability to adapt successfully to challenging and threatening conditions as well as the development of competence under the difficult circumstances. So resilience can be described as positive growth or adaptation following periods of disturbance of individual balance (Richardson, 2002). Current theories views resilience as a multidimensional construct consisting of constitutional variables such as temperament and personality, along with specific skills such as problem-solving skills (Campbell-Sills, Cohan & Stein, 2006). An individual’s traits and status can determine resilience processes if they lead to healthy outcomes after stressful conditions. Research has also shown that some resilient people, once confronted with difficult situations in their life, return to their normal level, and even the performance of some improves after the confronting with failures, calamities and difficulties compared to the past. Those with high resilience are more resistant to the inevitable injuries and stresses, more likely to find a positive meaning in the stresses they experience (Moskowitz, 2016) to effectively deal with stresses of their life and flexibly adapt to them (Liu, Wang & Li, 2012). The factors causing people to be resilient to stress are not fully understood. However, when people are in the context of life stresses, they try to regulate their emotions in different ways. Troy and Mauss (2011) believe that since stressful events are inherently highly emotional, individuals’ ability to regulate their emotions can be a very important factor in determining their resilience. The results of the study by Shariatzadeh Bami and Tajali (2016) showed a positive and significant relationship between resilience and self-efficacy.

Rregardless of the prognosis, people who are diagnosed with cancer are faced with the fact that they are horribly at risk. The diagnosis of cancer is a kind of reckless reminder that mankind is mortal and like other organisms, his body is at risk of death and destruction (Sirota, Kostopoulou, Round & Samaranayaka, 2017). Hence, for cancer patients, the most prominent psychological feature of the diagnosis of cancer is beingh a threat to life and results in the fear of death (Otto, Szczesny, Soriano, Laurenceau, & Siegel, 2016). Death anxiety is a complex concept that cannot be easily explained, and generally, includes the concepts of fear of one’s own and others’ death. Death is not an alien phenomenon exceeding the realm of life from outside. Death is not an accident, but it is a law that coexists with life from the very beginning of life. In this regard, mankind does not escape from thinking about death and his efforts to understand it does not stop, but this thought about the death has a cost to be paid by human and it is living a life with fear of death. Death is an inevitable reality and anyone can take his/her own understanding of and response to it. There are many various factors and attributes associated with the phenomenon of death that can set the stage for accepting this inevitable reality or, on the contrary, cause anxiety and deny the reality (Mansournejad & Kajbaf, 2012). Experiencing some anxiety about death is natural. But if this anxiety is so severe, it can undermine effective adaptation (Keng, Smoski

www.SID.ir

Archive of SID

& Robins, 2011). Death is an inevitable reality thought which is a strong motivation behind many of the philosophical remarks and search of life and because of its ambiguous nature, it is considered threatening to many people. Death anxiety can affect the existential health and especially the mental health of individuals. Death anxiety and fear of death are commonplace in all cultures, and various groups and religions deal with it in different ways. Death is an integral part of human existence, so it is obvious that in some stages of our life it is a subject for sorrow and worry. Death anxiety is a feeling of fear, horror, or concern when one supposes the process of dying as the end of the future, or the events after death (Folk et al., 2018). Belskey (1999) considers death anxiety as the thoughts, fears, and emotions associated with the ultimate reality of life and beyond the normal way of life. Jones, Simon, Greenberg, Pyszczynski and Solomon (1997) define death anxiety as a conscious and unconscious fear of death or dying. Death anxiety is a complex concept that cannot be easily explained, and generally includes the concepts of fear of one's own and others' death (Ghasempour, Sureh & Seyyed Tazehkand, 2012).

Breast cancer appears to be related to psychological hardiness due to causing fear, disappointment, and inadequacy in people with cancer. Today, psychological hardiness is considered as a personality trait making people resistant in coping with psychological pressures (Stoppelbein, McRae & Greening, 2017). Kobasa et al. (1982, quoted by Azeem, 2010) described the personality hardiness as a source of resistance mediating the negative consequences of high-level stress. Indeed, hardiness refers to the performance of the individual based on cognitive assessment. Hard people struggle less with the negative aspects of themselves and their lives (Sandvik, Hansen, Hystad, Johnsen & Bartone, 2015). Kobasa (1979), using existing theories of personality, defined hardiness as a combination of beliefs about oneself and the world stemming from the integrated and coordinated action of commitment, control, and challenge. Committed people believe in their ability to change their life experiences in an interesting and meaningful direction (Mobasheri & Kafi, 2016). People, strong in the component of control, consider life events predictable and controllable and believe that they are able to influence what is happening around them by their own effort. The performance of those who have full control shows that they deal with stressful events and accepts their responsibilities for their life and are able to perform independently. Persons at high level of the component of challenge focus on creating changes and adaptation to the conditions instead of relying on the fixed aspects of life (Tarimoradi, 2014).

Another variable related to the self-efficacy of cancer patients is perceived social support (Bright & Stanton, 2018). Social support sources can play a decisive role in the process of compromise with life crises such as adaptation to cancer disease (Koch-Gallenkamp et al., 2016). Social support is studied as received (objective) and perceived (subjective) social support (Hesam et al., 2011). In perceived social support, individual's evaluations of the availability of support when needed are investigated. In other words, individual's perception or experience of others' care for loving, respecting, and valuing him as a part of a social network with contributions and commitments is important (Taylor et al., 2006). Numerous studies have shown that the higher the level of social support, the health level increases, and vice versa. From this perspective, being health depends on having social support (Ghodsi, 2003). In their study, Dehle & Landers (2005) found that there is a positive and significant relationship between family support and intimacy and mental health. People who experience loneliness better cope with problems when they are socially supported, and their mental health is more easily possible. In adition, the quality of perceived social support increases the sense of cohesion

www.SID.ir

Archive of SID

among individuals by improving their mental health.

Research on self-efficacy in cancer patients is important in several apects. First, the present study is theoretically a fundamental research that contributes to the expansion of existing knowledge and understanding the health and medical sciences, especially psychology and counseling. From this point of view, one can test hypotheses rooted in psychological theories and thus explain the self-efficacy of patients with breast cancer. Another aspect making the present study important is its practical dimension. Studying how people, especially patients, live is one of the most important tools for governmental decision-making. Over the last twenty years, some programs have been developed in developing countries to assess individuals' psychological variables. These programs examine health, physical environment, income, housing, and other quantitative and observable indicators on the one hand, and subjectively assess individual's own condition, namely psychological variables, on the other hand. In such countries, governments strongly support the regular implementation of such research and draw on its findings and results in policymaking, planning and social planning. To a lesser extent, health care organizations can use its results for policy making. When health practitioners adopt new policies, it will be important for them to examine the impact of changing their policies on the improvement of patients' psychological characteristics. Research on variables such as self-efficacy can lead to discovering ways to improve the well-being and quality of life of cancer patients. It also helps to enrich the theoretical and practical foundations of the subject. Therefore, it is necessary to apply those types of analytical methods in order to identify the factors affecting the self-efficacy and contribution of each of the factors of quality of life, religious orientation, perceived social support, resilience, death anxiety, and psychological hardiness. Therefore, considering the high number of women with breast cancer in Iran and their numerous problems as well as the importance of the concepts of these variables and the role of each of these variables in self-efficacy, the researcher decided to conduct research on this issue. Since there is no research on the relationship between the mentioned variables simultaneously, a research gap is felt in this area. So the question of the present study is to investigate whether the self-efficacy of women with breast cancer is predicted based on quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support.

Methodology

This research is applied in terms of purpose and is descriptive-correlational study in terms of data collection and analysis.

The statistical population in this study included all women with breast cancer referred to Cancer Institute of Imam Khomeini and Milad hospitals in Tehran in 2018. Given the type of study and the number of predictor variables in structural equation analysis, as recommended by researchers (Tabachnik & Fidel, 2001), the sample size should be at least 10 times the number of variables plus 50. In the present study, there are a total of 21 observed variables (21*10+50=280). Therefore at least 280 samples were required. In the present study, the number of subjects increased to 300 to reduce sampling error and prevent subject loss.

Purposive sampling method was used to select the sample. To this end, 300 patients with breast cancer were selected as particcipants based on the inclusion and exclusion criteria of research.

In order to control the mediating variables, the following inclusion and exclusion criteria were observed:

The inclusion criteria included being in the age group of 40-60, having at least diploma education,

www.SID.ir

Archive of SID

having breast cancer, having a minimum of 6-month disease period and being in the process of treatment. And the exclusion criteria included the history of acute psychiatric disorders (such as psychotic disorders, bipolar disorder and major depression, neuro-cognitive disorders and substance abuse) over the past year, lack of marital conflicts with a spouse, and not referring to the court over the past five years.

The following tools were used to collect data.

Ethical considerations

The main goal of any research should be to promote the health of human beings along with their dignity and rights.

The selection of potential subjects from the patient population or any other population group should be fair, so that the distribution of burdens (risks or costs) and the benefits of participating in the research, in that population and in the community as a whole, are not discriminatory.

Informed consent is freely required in any research on a human subject. This consent must be in writing. In cases where written informed consent is impossible or neglected, the matter should be referred to the Ethics Committee for reasons. If approved by the Ethics Committee, obtaining written consent may be postponed or converted to oral or implied consent.

The researcher must ensure that the satisfaction obtained is free. Behaviors that in any way entail threat, seduction, deception, or coercion will cause the subject's consent to be revoked. The person should be given ample opportunity to consult with people who are willing - such as family members or family physicians. Also, in studies where the researcher has a higher organizational position than the subject, the reasons for this method of recruitment must be confirmed by the Ethics Committee, in which case the third party and the trustee must obtain consent.

The researcher is responsible for observing the confidentiality of the subjects and taking appropriate measures to prevent them from being published. The researcher is also required to ensure that the subjects' privacy is respected during the research. Any dissemination of data or information obtained from patients should be based on informed consent.

At the end of the study, everyone who entered the study as a subject has the right to be informed about the results of the study and to benefit from interventions or methods that have shown usefulness in the study.

Researchers are required to publish their research results honestly, accurately, and thoroughly. The results, whether negative or positive, as well as the sources of funding, organizational affiliation, and conflicts of interest - if any - should be fully disclosed. Researchers should not accept any condition when concluding a research contract that there are no or unpublished findings that are not desirable to support the research.

The manner in which the results of the research are reported must guarantee the material and intellectual rights of all persons involved in the research, including the researcher or researchers themselves, the subjects and the research support institution. The method of research should not be inconsistent with the social, cultural and religious values of society.

Self-Efficacy Scale

In this r esearch, Scherer's et al. (1982) general self-eff i cacy scale was used. Because this scale measures general self-efficacy, it does not have specific conditions for implementation and its implementation has no limitation in different ages, and amon g the tools available for self-efficacy, it is a g ood tool that has been used by many research e rs. In a study conducted by Scherer et al. (198 2) to test development, 376 psychology students had to complete a self-efficacy scale and several personality measures. Subjects also had to

www.SID.ir

Archive of SID

specify their degree of agreement with each item of self-efficacy by selecting one choice (Keramati, 2001). The scale consists of 17 items measuring the general self-efficacy that had the mean of 57.99 and standard deviation of 12.08. The scoring method is in a way that each item is scored from 1 to 5 (likert scale). The reliability coefficient obtained through Cronbach's alpha formula for the general self-efficacy subscale and social self-efficacy subscale were 0.86 and 0.71, respectively. Barati (1997) used split-half method to test the reliability of the scale. The reliability of the scale obtained through Gattman's split-half method was 0.76. Cronbach's alpha was 0.79 which was desirable.

Quality of Life Scale

Data on quality of life were collected using the World Health Organization's quality of life scale with 26 items. Since 1996, the reliability and reliability of this scale has been studied by the World Health Organization in different countries and cultures. In his research, Bonomi declared that the scale's internal reliability was 0.95, and in 2000, the scale was simultaneously designed and translated in 15 countries. The standardization, translation and psychometric evaluation of the Iranian version of this scale were done by Nejat and his colleagues in 2005, and the internal correlation coefficients of Cronbach alpha in all domains obtained above 0.7. For content validity, the scale was first translated into Farsi twice, then a pilot study was confirmed its face validity with high confidence (Nejat, Montazeri, Halakouei Nayini, Mohammad & Majdzadeh, 2006). This scale consists of 26 items and is scored based on Likert scale. "At all" equals to 1 and "very much" equals 5.

Religious Orientation Scale

Allport's religious orientation scale contains 21 sentences that are provided to the subjects and after assuring them the confidentiality of the responses, they are asked to be honest and express their feelings and attitudes towards these sentences by ticking and selecting one of the options. The scale items are multiple choice: a. completely disagree, b. almost disagree, c. almost agree, d. completely agree. The scale is scored based on a 4-point Likert scale of 1 to 4. This scale does not have a cutoff, and the more subjects get scores in an attribute, the more they have that attribute. The scale has no time limitation and is performed in a group. This scale has no age limitation as well and can be implemented from the age of 16. This scale was translated and standardized in Iran in 1998, whose validity and reliability were obtained by Janbozorgi (1999). Its internal consistency obtained by Cronbach's alpha was 0.71 and its test-retest reliability was 0.74. On this scale, the items 1-12 measure extrinsic religious orientations and items 13-21 assesses intrinsic religious orientation. Allport and Ross developed this scale in 1967 to measure intrinsic and extrinsic religious orientations. In earlier studies, the correlation between extrinsic and intrinsic orientation was obtained 0.21.

Connor-Davidson Resilience Scale

This scale has 25 items measuring resilience variable on a 5-point Likert scale. Each statement is scored on a Likert scale between 0 (completely false) and 4 (always true) and its score range is between 0-100. The results of the preliminary study regarding the psychometric properties of this scale in the normal and patient samples confirmed its reliability and validity (Connor & Davidson, 2003). Mohammadi (2005) used the scale for 248 people and obtained 0.89 for its reliability with the internal consistency through Cronbach's alpha formula and 0.84 for its validity through factor analysis method and adjusted it for applying in Iran. Reliability of this scale, in addition to the initial normalization, was calculated 0.90 by Nikouzadeh (2009) again with a total alpha coefficient.

www.SID.ir

Archive of SID

Death Anxiety Scale

Templer's (1970) death anxiety scale is the most widely used tool for measuring death-related anxiety in its own right. This scale is a self-report one consisting of 15 True-False items, in which True represents anxiety in individual. Score range is in 0-15, and a high score (above the mean score i.e. 8) represents a high degree of death anxiety. This scale was translated by Rajabi & Bahrani (2001) to Farsi.

Reliability and validity of the death anxiety scale: The studies conducted on the validity of the death anxiety scale show that this scale has an acceptable validity. Sayino & Kalaien (1996) reported the Cronbach's alpha coefficients for the three factors obtained by the factor analysis and the Italian version of this scale were 0.68, 0.49, and 0.60, respectively. Templer (1970) obtained 0.83 for the re-test coefficient of the scale.

Psychological Hardiness Scale

This sclae was developed by Kobasa (1979). Personal perspective survey is a self-report questionnaire measuring the degree of psychological hardiness of individuals. The subject must response by commenting on a 4-point Likert scale (not at all correct, almost correct, often correct and completely correct). Scale scoring is from 0 to 3. This scale was translated by Ghorbani and Dejkam (1994) and its face and content validity was calculated. A study by Jamhari (2001) indicates that the reliability coefficient of hardiness components, namely commitment, control and challenge, is 70%, 52% and 52%, respectively, and these coefficients are calculated 75% for the total hardness trait.

Multidimensional Scale of Perceived Social Support (MSPSS)

This scale was developed by Zimet et al. in 1988. The multidimensional scale of perceived social support is a 12-item tool designed to evaluate perceived social support from three sources of family, friends and important people in life. This scale measures the level of perceived social support in each of the three mentioned domains on a 7-point scale of "totally disagree" to "totally agree". The validity and reliability of this scale have been reported to be optimal by Zimet et al. The scoring method is such that each item is on the 7-point scale of "totally disagree"=1 to "totally agree"=7. To get points for each sub-scale, the scores of individual items are summed up. Also, in order to obtain the general score of the scale, we summed up the scores of items 1-12 to determine the perceived social support. This score will range from 12 to 84. Obviously, the higher the score is, the higher the level of perceived social support will be. Conversely, in Shokri's study (2009), the Cronbach's alpha coefficient for the general factor of perceived social support and the triple dimensions of family, friends and important people in life in the Iranian sample was obtained 0.89, 0.84, 0.85, respectively.

Findings

The variables of quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support are considered as predictive variables, whose relationship with self-efficacy was measured. The descriptive findings of the research scales are represented in Table 1.

In the statistical method, initially the normality of data was tested and confirmed using the Kolmogorov-Smirnov test.

One of the regression hypothesis is the lack of colinearity between independent variables. Indices of variance tolerance and variance inflation check this hypothesis. In the present study, all values indicate that there is no strong colinearity between predictive variables. Another hypothesis of the regression was the independence of errors and rejecting the hypothesis of the existence of correlation between errors. Durbin–Watson statistic can be used to check this assumption. To confirm

www.SID.ir

Archive of SID

Table 1. Descriptive findings of the research scales

Statistic measure **Scale**	**Mean**	**Standard deviation**
Quality of life	91.89	46.14
Extrinsic religious orientation	19.27	13.7
Intrinsic religious orientation	57.27	21.7
Resilience	03.48	38.7
Death anxiety	80.12	19.5
Psychological hardiness	12.97	48.11
Social support	59.40	61.10
Self-efficacy	91.89	46.14

this hypothesis, this statistic should be in the range of 1.5 to 2.5. In this study, this statistic is 1.97, showing that this hypothesis is true.

The first test is a general model test. In fact, if at least one of the predictive variables has a significant effect on the criterion variable, the researcher's model is confirmed. The null hypothesis is as follows:

$$\begin{cases} H_0 : \beta_1 = \beta_2 = ... = \beta_5 = 0 \\ H_1 : \beta_i \neq 0 \qquad \forall \, one \;\; i \;\; for \;\; i = 1,2,3,4,5 \end{cases}$$

As seen in the table, the significance value is less than 0.05, indicating the significance of the regression model and means that at least one of the predictive variables has a significant effect on the dependent variable.

R^2 index (coefficient of multiple determination): This index specifies the percentage of variation in the criterion variable that can be explained by the predictive variables; i.e., the percentage of the ability of predictive variables to fit the dependent variable. In this research, the R^2 value was 0.21, indicating that the factors of quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support have 21% ability to predict self-efficacy and the residual of 79% is for other factors.

R^2_{adj} index (adjusted coefficient of determination): This index measures the ability of predictive variables to predict the dependent variable in the community. In fact, with a little modification, it generalizes the sample to the whole community.

The value of this coefficient in this study was 0.19. In other words, the factors of quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support have 19% ability to predict self-efficacy.

Given the significance of the whole model, we now have to examine which one of the coefficients is not zero, or which variables have a significant effect on the model. For this purpose, *t*-test is used.

As seen in the table, the factors of quality of life, resilience, psychological hardiness and social support have a significant positive relationship with self-efficacy at 5% level, indicating that increasing these factors increases self-efficacy. There is also a negative relationship between death anxiety and self-efficacy.

Table 2. Regression results of research variables

Model	Sum of squares	Degree of freedom	Mean squares	F	R	R^2	R^2_{adj}	sig
Regression	4195.506	7	599.658	11.154	.459	.211	.192	0.001
Residual	15691.160	292	53.737					
Total	19886.667	299						

www.SID.ir

Archive of SID

Table 3. Standardized and non-standardized coefficients, and t statistic of the variables included in the regression equation

	Regression coefficients				
Predictive variable	**Non-standardized**	**Standardized**	**t-statistic**	**sig**	**The acceptable significance level**
Constant value	24.47		5.25	0.001	0.05
Quality of Life	0.06	0.11	1.56	0.12	0.05
Extrinsic religious orientation	0.04	0.03	0.50	0.62	0.05
Intrinsic religious orientation	-0.02	-0.01	-0.23	0.82	0.05
Resilience	0.18	0.16	2.35	0.02	0.05
death anxiety	-0.23	-0.15	-2.39	0.02	0.05
Psychological Hardiness	0.08	0.11	2.01	0.04	0.05
social support	0.29	0.38	6.20	0.001	0.05

Discussion and Conclusion

Findings of the research showed a significant relationship between hardiness and self-efficacy. According to Bandura, hard people adapt to problems and set high goals in difficult situations because they know how to use problem-solving skills and strategy. They are able to fully meet their challenges, because they have learned how to look at individual doubts, and find hard-working and stable individuals by embodying their own existing capabilities to succeed. They have found the skills giving them sense of trust, perseverance, and being not satisfied with the trivial results. They have the ability of decision-making, that is, ability to choose between ways of dealing with events, have cognitive control, i.e. ability to interpret and evaluate stressful events to progressive plans and to neutralize their adverse effects, and have adaptive skills, that is, having a larger repository of appropriate responses in all situations caused by a particular stimulus (Herts, Khaled & Stanton, 2017). On the one hand, this finding reinforces Kobasa's (1989) theory. According to this theory, hardiness is born from knowledge by which one has access to more resources to respond to the stressful situations. In other words, it is a fundamental sense of control allowing the hard person to draw and access to a list of useful strategies. Hard people find difficult situations as challenging than threatening. They have a greater sense of commitment to themselves and their work, experience a greater sense of control over their lives, and see stressors as potential opportunities for change and thus maintain their mental health. A significant relationship between social support and self-efficacy reinforces the direct social support theory. According to this theory, the effect of social support on health is direct and in itself beneficial for health and well-being. This pattern is also known as the general model of social support. According to this model, the shortage or lack of social support is stressful itself, so social support is always beneficial, whether under tense conditions or not. According to this model, social support increases personal resistance in various ways. In fact, the health of people is affected by their social support. By increasing the levels of positive emotions, resilience improves self-esteem and successful coping with negative experiences. Accordingly, resilience as a mediating mechanism through improving self-esteem leads to positive adaptability and psychological well-being and hope. People with higher psychological well-being and hope have the ability to adapt to problems more than those who do not have this advantage (Moskowitz, 2016).

In parallel with previous findings, the relationship between religiosity with the incidence, exacerbation, or improvement of disease has been demonstrated in a wide range of medical

www.SID.ir

Archive of SID

conditions, and the benefits of religious treatment have been also highlighted. Researchers have been able to establish a positive relationship between high levels of religious beliefs and better health, and some have emphasized the existence of a causal relationship, with no definitive evidence yet to support this position . On the other hand, some review research have found the instability of the results of evaluations related to religiosity to one's subjective view of self health. Recent results may be attributed to the lack of control over other variables associated with health, or to the hypothesis that religiosity and health are the outcome of another variable such as one's active state, or may ultimately be attributed to the lack of attention to the distinction between religiosity and spirituality. Here the fundamental aspects of distinguishing and operating the two structures of religiosity and spirituality are highlighted. Doctors have accepted that spiritual well-being is very important for maintaining health, and half of them believe that they should consider spiritual concerns.

On the other hand, the more a person is resilient in coping with life's problems and stresses, he is less exposed to emotional disturbances and has a higher self-efficacy and psychological well-being. Resilient people seem to look at problems creatively and flexibly, plan for solving them, and if needed, they do not hesitate to ask for help from the elderly and have complete resources to deal with problems. These factors make the person have a high level of mental health and self-efficacy.

Anxiety is one of the most important causes of voluntary disability, which with its chronic and progressive course can affect the health of individuals in different aspects (Folk et al., 2018). In this regard, the ontological theorists believe that the generalized panic and disorders are due to the anxiety of being. They argue that we experience the anxiety of our being, because we know that our life is limited and we are afraid of the death that awaits us. Death horrifies all of us, and we cry for those who die, and we are overwhelmed by the fact that we will die one day. Many people refuse to face death and choose ways such as repression, denial, and avoidance, and avoid places that may remind them of death, and this is the same irrational and uneasy encounter with death that decreases self-efficacy (Yalom, 2011; quoted by Sirota, Kostopoulou, Round & Samaranayaka, 2017). On the one hand, according to Bandura's theory, one who is highly self-efficacy believes that he can effectively deal with the events and situations that he is facing. Because he expects to succeed in overcoming the problems, he endures tasks and often performs at a high level.

The present study investigated the relationship of quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support with self-efficacy and showed that individual's characteristics such as quality of life, religious orientation, resilience, death anxiety, psychological hardiness and perceived social support influence self-efficacy. But the explained variance was 21%. This shows that other factors at different levels such as social, cultural and economic factors affect this variable, which needs to be identified and studied in future research. Also, due to the complexity of the concept of self-efficacy in cancer patients, the qualitative research on the effect of variables on self-efficacy in cancer patients is suggested. Managers and authorities dealing with the issues of patients with breast cancer and their families should note that interventions and training based on strengthening psychological hardiness and increasing the resilience and quality of life can play an important role in improving self-efficacy in cancer patients.

Acknowledgment

In the end, I would like to express my deepest appreciation to all patients, as well as the staff of Imam Khomeini and Milad hospitals in Tehran for their cooperation in this research.

www.SID.ir

Archive of SID

References

Alinia, R. (2003). The Relationship between General Self-Efficacy and Mental Health of Third-High School Students in Babol City in the Year of 2002-2003. Master Thesis, Allameh Tabataba'i University.

Alizadeh Ataghour, H., Samavati, S., Nafisi, N., Hassani, M. & Gholami, S. (2017). The prevalence of pathologies of breast mass in a teaching hospital in Iran. *Razi Journal of Medical Sciences*, 158, 23-17.

Azeem, S. M. (2010). Personality hardiness, job involvement and job burnout among teachers. *International Journal of Vocational and Technical Education*, *2*(3), 36-40.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.

Bandura, A.(1986). *Social foundations of though and action: Asocial cognitive theory*. Englewood cliffs, NJ: Prentic Hall.

Barati, S. (1997). Investigation of relationship between self-efficacy, self-esteem and self-monitoring among third-grade high school students. Master thesis, Shahid Chamran University of Ahvaz.

Blesky, J. (1999). *The Psychology of Aging*. Brooks/Cole Publication Company. Dehle, C and Landers, J.E (2005), You can,t always get what you want but can you get what you need? Personality traits and social support in marriage. *Journal of social and clinical psychology*,7)24), Pp1051-1076.

Bright, E. E., & Stanton, A. L. (2018). Prospective investigation of social support, coping, and depressive symptoms: A model of adherence to endocrine therapy among women with breast cancer. *Journal of Consulting and Clinical Psychology, 86*(3), 242-253.

Campbell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Acceptability and suppression of negative emotion in anxiety and mood disorders. *Emotion*, 6(4), 587.

Coroiu, A., Körner, A., Burke, S., Meterissian, S., & Sabiston, C. M. (2016). Stress and posttraumatic growth among survivors of breast cancer: A test of curvilinear effects. *International Journal of Stress Management, 23*(1), 84-97.

Fakour, E., Safavi, Z., Rostami, B., Faqihzadeh, S., Ayatollahi, F. & Sarabi, K. (2017). Relationship between extrinsic religious orientation and self-efficacy and general health in students of Zanjan University of Medical Sciences. *Developmental education in medical sciences,* 10 (26): 59-49.

Folk, J. B., Loya, J. M., Alexoudis, E. A., Tangney, J. P., Wilson, J. S., & Barboza, S. E. (2018). Differences between inmates who attempt suicide and who die by suicide: Staff-identified psychological and treatment-related risk factors. *Psychological Services, 15*(3), 349-356.

Gan, Y., Zheng, L., Wang, Y., & Li, W. (2018). An extension of the meaning making model using data from Chinese cancer patients: The moderating effect of resilience. *Psychological Trauma: Theory, Research, Practice, and Policy, 10*(5), 594-601.

Ghasempour, A., Sureh, J., & Seyyed Tazehkand, M. (2012). Death anxiety prediction based on emotional cognitive regulation strategies. *Knowledge and research in applied psychology*, 13 (2), 12-1.

Ghodsi, A. (2003). Sociological study of the relationship between social support and depression. Ph.D. Thesis in Sociology, Tarbiat Modarres University.

Ghorbani, N. & Dejkam, M. (1994). Relationship between Hardiness, Type A Behavioral Pattern and Coronary Disease (Type 2). Journal of Shahid Beheshti University of Medical Sciences. 18(3).

Herts, K. L., Khaled, M. M., & Stanton, A. L. (2017). Correlates of self-efficacy for disease management in adolescent/young adult cancer survivors: A systematic review. *Health Psychology, 36*(3), 192-205.

Hesam, M., Asayesh, H., Ghorbani, M., Shariati, A., & Nasiri, H. (2011). Relationship between Perceived Social Support, Mental Health and Life Satisfaction in Students in State Universities of Gorgan. *Journal of Bioscience and Nursing Faculty of Gorgan*. 1 (8): 41-34.

Hoerger, M., Scherer, L. D., & Fagerlin, A. (2016). Affective forecasting and medication decision making in breast-cancer prevention. *Health Psychology, 35*(6), 594-603.

Jamhari, F. (2001). The study of the relationship between hardiness and tendency to depression and anxiety among female and male students of Tehran

www.SID.ir

Archive of SID

universities. Master Thesis, Allameh Tabataba'i University.

Janbozorgi, M. (1996). Evaluating the effectiveness of short-term psychotherapy with and without religious orientation on the control of anxiety and tension. Ph.D. Thesis, University of Tarbiat Modarres.

Jones. E., Simon, L., Greenberg, J., Pyszczynski, T., Solomons, S., (1997). Terror management theory and self-esteem: Evidence that increased self-esteem reduces morality salience effects. *Personality Social Psychology*, 72(1), 24-36.

Keng SL, Smoski MJ, Robins CJ (2011). Effects of mindfulness on psychological health: a review of empirical studies. *Clin Psychol*;31(6):1041-56 .

Keramati, H. (2001). Studying the Relationship between Perceived Self-Efficacy of Third-Grade Students and Their Attitudes toward Maths with Their Advancement. Master thesis, Tehran Tarbiat Moallem University.

Kiyamarsi, A. & Abolghasemi, A. (2012). The Study of the Relationship between Metacognitive Beliefs and Ineffective Personality Patterns of Group B. *New Findings in Psychology*, 7 (24), 84-71.

Kobasa, S. C. (1979). Stressful life events. Personality and health: An inquiry in To hardiness. *Journal of personality and social psychology*, 36: 1-11.

Koch-Gallenkamp, L., Bertram, H., Eberle, A., Holleczek, B., Schmid-Höpfner, S., Waldmann, A., . . . Arndt, V. (2016). Fear of recurrence in long-term cancer survivors—Do cancer type, sex, time since diagnosis, and social support matter? *Health Psychology, 35*(12), 1329-1333.

Lahsayizadeh, A., Azargoon, Z. & Moradi, G. (2006). Study of Religious Orientation and Mental Health of Immigrants Based on Allport & Ross' Model: Case Study of Ghasre Shirin. Journal of Social Sciences, 8, 169-149.

Liu, Y., Wang, Z., & Li, Z. (2012). *Affective mediators of the influence of neuroticism and resilience on life satisfaction. Personality and individual differences*, 52(7), 833-838.

Mansournejad, Z. & Kajbaf, M. (2012). Relationship of religious orientation (extrinsic-intrinsic) and gender with death anxiety among students. Research Journal of Cognitive-Behavioral Sciences, 2 (1), 55-64.

Merluzzi, T. V., Philip, E. J., Heitzmann Ruhf, C. A., Liu, H., Yang, M., & Conley, C. C. (2018). Self-efficacy for coping with cancer: Revision of the Cancer Behavior Inventory (Version 3.0). *Psychological Assessment, 30*(4), 486-499.

Mobasheri, F. & Kafi, M. (2016). The Relationship between Personality Characteristics and Psychological Hardiness of Surgery Room Staff in Alzahra Hospital of Isfahan in 2014. Razi Journal of Medical Sciences, 23 (143), 56-47.

Moskowitz, D. S.(2016). Depression symptoms moderate the association between emotion and communal behavior. *Journal of Counseling Psychology, 64*(3), 269-279.

Nejat, S., Montazeri, A., Halakouei Nayini, K., Mohammad K. & Majdzadeh, R. (2006). Standardization of World Health Organization's Quality of Life Scale (WHOQOL-BREF): Translation and Psychometrics of the Iranian Version. Journal of Public Health School and Health Research Institute, 4 (4), 12-1.

Otto, A. K., Szczesny, E. C., Soriano, E. C., Laurenceau, J.-P., & Siegel, S. D. (2016). Effects of a randomized gratitude intervention on death-related fear of recurrence in breast cancer survivors. *Health Psychology, 35*(12), 1320-1328.

Pourfeizi, H., Ali, M., Azarfam, P., Adampour Zare, M., & Pooladi, N. (2017). The incidence of breast cancer in Azarbaijane Sharghi from September 2006 to September 2009 in comparison with September 2009 to September 2012. *Medical journal of Tabriz University of Medical Sciences and Health Services, Tabriz,* 130, 36.

Rajabi, G. & Bahrani, M. (2001). Factor Analysis of Items of Death Anxiety Scale. *Journal of Psychology,* 5 (4), 344-331.

Rezaeipour, K. (2015). *The motivation of progress with student self-efficac*y. Tehran: Elham Noor.

Richardson GE (2002). The metatheory of resilience and resiliency. *J Clin Psychol*; 58:307-21.

Robinson, L.S., Hendrix, A., Xie, X.J., 2015. Prediction of Cancer Prevention: from mammogram, screening to identification of BRCA1/2 mutation carriers in underserved populations. *EBioMedicine 2 (11), 1827–1833*.

www.SID.ir

Archive of SID

Rottmann, N., Hansen, D. G., Larsen, P. V., Nicolaisen, A., Flyger, H., Johansen, C., & Hagedoorn, M. (2015). Dyadic coping within couples dealing with breast cancer: A longitudinal, population-based study. *Health Psychology, 34*(5), 486-495.

Sandvik, A. M., Hansen, A. L., Hystad, S. W., Johnsen, B. H., & Bartone, P. T. (2015). Psychopathy, anxiety, and resiliency–Psychological hardiness as a mediator of the psychopathy–anxiety relationship in a prison setting. *Personality and Individual Differences*, *72*, 30-34.

Sanford, K., Backer-Fulghum, L. M., & Carson, C. (2016). Couple Resilience Inventory: Two dimensions of naturally occurring relationship behavior during stressful life events. *Psychological Assessment, 28*(10), 1243-1254.

Sayini, B.,& Kelaien, S. (1996). Suicidal Behavior in Patients Diagnosed with Cancer of the Cervix. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 24*(4), 168-172.

Shariatzadeh Bami, R., & Tajali, P. (2016). Relationship between self-efficacy and resilience of students with visual disorder. Third National Conference on Strategies for the Development and Promotion of Education Sciences, Psychology, Consulting and Education in Iran.

Sherer M, Maddux JE, Mercandante B, Prentice-dunn S, Jacobs B, Rogers RW. (1982). The Self-efficacy Scale: Construction and validation. Psychological Reports;51(2):663-71.

Sirota, M., Kostopoulou, O., Round, T., & Samaranayaka, S. (2017). Prevalence and alternative explanations influence cancer diagnosis: An experimental study with physicians. *Health Psychology, 36*(5), 477-485.

Stoppelbein, L., McRae, E., & Greening, L. (2017). A longitudinal study of hardiness as a buffer for posttraumatic stress symptoms in mothers of children with cancer. *Clinical Practice in Pediatric Psychology, 5*(2), 149-160.

Tarimoradi, A. (2014). Compares the Degree of Hardiness and Public Health between Iranian and English Women University Students. *Procedia-Social and Behavioral Sciences*, *116*, 101-105.

Taylor, S. E., Sherman, D., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M, S. (2007). Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology*, 87, 3.

Templer D.(1970). Construction of a death anxiety scale-extended. Journal of Death and Dying;53(3):209-26.

Trevizan, F.B., Miyazaki, M., Silva, Y.,& Roque, C. (2017). Quality of Life, Depression, Anxiety and Coping Strategies after Heart Transplantation. *Brazilian Journal of Cardiovascular Surgery,* 32(3).

Troy A, Mauss I. (2011). *Resilience in the face of stress: Emotion regulation as a protective factor.* Cambridge Cambridge University Press.

Vieno, A., Santinello, M., Pastore, M., & Perkins, D.D.(2007). Social support, sense of community in school, and self-efficacy as resources during early adolescence: an integrative model. *Am J Community Psychol*, 39,177–190.

Warren, P., Van Eck, K., Townley, G., & Kloos, B. (2015). Relationships among religious coping, optimism, and outcomes for persons with psychiatric disabilities. *Psychology of Religion and Spirituality, 7*(2), 91-99.

Wen, Y-H. (2010). Religiosity and death anxiety. *The Journal of Human Resource and Adult Learning,* 9(1), 05-07.

World Health Organization. (2014). Facts on ageing and the life course. *World Health Organization, Geneva, Switzerland Retrieved from (http://www. who. int/features/factfiles/ageing/en/)*.

Zimet, G, Dahlem, N, Zimet S & Farley, G, (1988). The multidimensional scale of perceived social support, *Journal of Personality Assessment*, 52, 30-41.

www.SID.ir