Effect of Self-Management Training Program on improving of the mental health and Life Expectancy of Women with MS in Zarand City

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Abstract: *The current study aimed at investigation of the impact of self-management training program on enhancing the mental well-being and life expectancy of women with breast cancer in Yazd City. The research method was quasi-experimental with pretest and post-test and control and control groups. The statistical population of the current study included all the girls and women suffering from Multiple Sclerosis (MS) covered by the MS community of Yazd City, who were a total 300 persons in 2015. By the use of simple random sampling method, 30 persons were chosen as the samples (15 in control group and 15 in control group). The data were collected through Kies and Magiard mental well-being questionnaires and the obtained results were analyzed by regression analysis and SPSS. The results showed that self-management training program enhances the life satisfaction and mental well-being of patients with MS.*

Keywords: *self-management program, life satisfaction, mental well-being, breast cancer*

INTRODUCTION

Breast cancer is one of the most common cancers among women in Iran and 7 thousands Iranian women are diagnosed with cancer, every year. Considering the fact that 70 percent of these patients live over 5 years, we have now about 70 thousands women with this disease in our country and this is a big number, particularly since the age of breast cancer in Iran is 5 years lower than the global level. Today, the average age of developing this disease is between 45 to 55 years in Iran, while it is between 50 and 60 years in Western countries (Mouher P., 2006).

Breast cancer occurs when cells in the breast begin to grow out of control and can spread throughout the body and close to the tissues. Large collections of this out of control tissues are called tumors however some tumors are not cancer since they cannot spread or threaten the lives of other cells (these tumors are called benign tumors). The tumors that can be spread throughout the body or close to the tissues are considered as cancer and called malignant (harmful) tumors. In theory, each type of tissues in the breast can take the form of a cancer to themselves, but usually they arise through canals and glands since it takes months to years for the cells to a tumor large enough to be felt. We diagnose tumors in breast when the disease has already been established (before feeling it, the disease is established) (Mouher P., 2006).

The most important risk factors for the development of breast cancer cannot be controlled by the people. There are some risk factors that will interact with an added risk despite no clear cause and effect relationship. There is no way for strong recommendations that the same cause and effect relationship between tobacco and lungs cancer can be seen. There are several risk factors that may be described by a woman that potentially could affect the growth and development of breast cancer. If possible, a woman should avoid long-term hormone replacement therapy, has children before being 30 years old, take care of the breasts, avoid gaining weight by exercise and proper diet, and limit alcohol consumption to one drink a day or less. For women at high risk, the risk of developing breast cancer can be reduced about 50% by taking a drug called Tomaxinen for five years (Nooghabi et al., 2011). Management are purposeful, conscious, and

learned actions that one takes to sustain life and provide, maintain and promote his and his family health. Self-care is a part of the daily lives of people, including the care that spreads to children, family, friends, neighbors and local communities. In fact, self-management includes acts that people do to stay healthy, maintain their mental and physical health, meet their social and psychological needs, prevent diseases or accidents, improve ailments and chronic conditions, and also protect their health after an acute illness or discharge from hospital.

Snyder (Snyder et al., 2008), the founder of the theory of hope and treatment based on it, defines the expectation as a construct consisting of two concepts as follows: the ability to design paths toward desired goals despite the obstacles or the motif or motivating factors needed for using these paths. One of the most important human psychological needs is hope. From the monotheistic worldview, hope is a gift granted by God that motivates the life and accelerates the efforts and motivation (Brewin et al., 1998). Despite the importance of hope in physical and mental health, it has not grabbed much attention in the past, however the new movement of positive psychology has paid special attention to the subject of hope. According to Seligman, professor of psychology at the University of Pennsylvania (Pennsylvania Y., 2000), psychology during the twentieth century, has mainly dealt with mental disorders such as anxiety, depression, hopelessness and neglected paying attention to positive human emotions like hope. In his opinion, people have a positive half and a negative half, and now it is the time to. In addition to vulnerabilities, pay attention to the strengths and positive aspects of human. On the axis of this positive half is hope. Also among the fields of positive psychology are happiness, hope, creativity and wisdom (Snyder et al., 2008). MS clinical protests play an important role in person's adoptability with the disease. So psychotherapy interventions targeting these protests can contribute to the adoptability of the person with the disease (Gibson J et al., 2002). Mindfulness is commonly referred to a state of awareness and attention to what is happening at the moment (Brown K., 2003). The researchers suggest that the increased mindfulness is related with a variety of health outcomes such as pain, anxiety, depression, pathological eating, and stress. Mindfulness can release the people from spontaneous thoughts, and unhealthy behavioral habits and patterns, and thus play an important role in regulating the behavior and self-management (Ryan RM., 2000), in addition, can bring happiness ad health by adding clarity and life to the experiences. Many theories of psychopathology and psychotherapy have discussed the importance of awareness, presence and observance in mental health.

Self-management training leads to active participation of patient in self-care and increase their accountability to manage their symptoms and complications and helps one to largely maintain his independence and increase the effectiveness of the individual (Nolte, 2007). This reduces the dependency of patients on the medical staff and other members of the family. Also, the high costs of readmission of patients to the hospital will be reduced and the unnecessary occupation of hospital beds will be prevented, so the individual can continue his/her activities in the society and family as a young labor force (Holman H. et al., 2004). The effects of self-management on self-efficacy, mood, adaptive behaviors, and psychological well-being have been proven in numerous studies among which Kendall et al (2007) and Inouye (2001) can be noted, however in Kendall's study, the intervening factors (level of disability and functionality) were not matched in the two groups and in Inouye's study, there were no follow-up period after intervention. By the criticism made by him on self-management in his study, Inouye argues that the future studies should be experimental with larger samples and follow-up period. Therefore, further studies with more precise plan and methodology for approving the hypotheses, have been emphasized by most of researchers. In addition, self-care is an easy and supportive method which has not been conducted for the Iranian population so far, especially for the patients with MS. Therefore, the current study aimed to investigate, besides considering the correct points in methodology of self-management mentioned above, the effects of self-management training program on enhancement of life satisfaction, mental well-being, and life expectancy of the patients with MS in Yazd Province.

Research Hypotheses

Main hypothesis

Self-management training program affects the enhancement of mental well-being and life expectancy in the patients suffering from MS.

Secondary Hypotheses

Self-management training program affects the enhancement of mental well-being in the patients suffering from MS.

Self-management training program affects the enhancement of life expectancy in the patients suffering from MS.

Theoretical Framework

Self-management: Self-management program is one of the methods of rehabilitation. All the care and treatment activities focus on the patients and they have a pivotal role. The purpose of such activities is achieving the maximum independence and decision-making, improving the individual's health based on lifestyle and capabilities, as well as enhancing the quality of life.

Mental Well-being: mental well-being is one of the components of quality of life and refers to the evaluation of individuals from their life (Rampllo A et al., 2007).

Expectancy: the ability of planning the paths toward desired goals despite obstacles and the needed motivation for using these paths (Snyder et al., 2008).

Operational Definitions of Words

Self-management Program: In the present study, by self-management training we mean 6 sessions of training for the patients with multiple sclerosis.

Mental well-being: in the current study, we mean the score obtained by the subject in Kies and Magyar Mo (SWS) questionnaires.

Expectancy: we mean the subjects score in Miller's Expectancy questionnaire.

Review or Related Literature:

Kafami et al, in a study (Kafami, 2012), aimed at determination of the effects of self-management on the health status of patients with breast cancer, concluded that this program leads to improvement in several dimensions of health such as the patients well-being.

Agha bagheri et al in a study (Agha bagheri, 2011), aimed at determination of the effects of self-management on enhancement of mental well-being and expectancy, argued that regarding the effectiveness of self-management on the life expectancy of patients suffering from breast cancer, it seems that inclusion of self-management program in treatment of patients suffering from chronic diseases such as breast cancer, leads to enhancement of this type of patients' mental health.

Freeman et al (Freeman JA et al., 1999) showed that rehabilitation interventions which is a part of self-management program remain stable for 6 months. Also, improvement in the mental and psychological well-being as well as the spiritual aspects of life satisfaction lasted for 7 months and life quality related to health lasted for 10 months.

The results of Hass et all's study (Hass M. et al., 2005), titled "a study on investigation of self-management training on 109 elders suffering chronic backache" also indicated the increase in well-being dimensions and life satisfaction in experiment group, after intervention however this increase was not as much to show a significant difference in subscales wellbeing, energy, and feeling good, between the two control and experiment group.

A study conducted by Masoudi (Masoudi. 2011) on 70 patients suffering from breast cancer indicated that self-care (as the practical aspect of self-management) affects all the aspects of life quality in a way that after intervention, there was significant difference between the control and experiment group in terms of subscales of mental well-being, role playing, playing a role in the mental and physical problems, feeling good, and perception of health.

Methodology

The current study is an intervention in terms of objective and quasi-experimental in terms of method with pretest and post-test and control group. The self-management program was taken as the independent variable and the expectancy and mental well-being were taken as the dependent variables.

The statistical population of the current study included all the girls and women suffering from Multiple Sclerosis (MS) covered by the MS community of Yazd City, who were a total 300 persons in 2015. Among these patients, 30 patients were chosen randomly and divided into two groups of control and experiment (15 in each group). Then, the questionnaires were distributed to the two groups and the experiment group were trained in terms of self-control management in 8 sessions (the control group didn't undergo any trainings). Afterwards, the data obtained from the both groups were analyzed by SPSS.

In analyzing the data, descriptive statistics such as mean and standard deviation were used and covariance analysis was also used to compare groups.

Findings

In this chapter, the results of the effects of self-management program on life satisfaction and mental well-being are provided.

Description of Mental Well-being Variable:

First Hypothesis: Self-management training program affects the enhancement of mental well-being in the patients suffering from MS.

H0: the mean score of well-being is not different between the two control and experiment groups.

H1: the mean score of well-being is different between the two control and experiment groups.

Table 1: Levine's test with the assumption of homogeneity of variances

Variable	F	Degree of freedom 1	Degree of freedom 2	Sig
Mental well-being	0/298	1	28	0/357

Table 1 shows the Levine's test results to verify the hypothesis of homogeneity of variances between the two groups. As it is shown, the value obtained for mental well-being variable is higher than 0.05 which is the significance level, therefore, the error variances of the groups are equal and there is no difference between them.

Table 2: Analysis of covariance self-management training program on mental well-being of patients with MS in both control and experimental groups

Source of change	Sum of squares	Degree of freedom	Sum of squares	Test statistics	P	Eta	Test ability
Pretest effect	326/587	1	326/587	22/240	0/0	0/452	0/995

Effect of independent variable	230/609	1	230/609	15/704	0/000	0/368	0/968
Error	396/479	27	14/684				
Adjusted total	831/367	29					

As it is shown in table 2, the value of the test statistic F = 15/704 and sonce p <0/01, the value is significant at the one percent level. Therefore, the H0 hypothesis is rejected (and H1 is accepted). Thus, there is a significant difference between the control and experiment groups in terms of mental well-being and self-management program affects the mental well-being of the patients with MS.

Second Hypothesis: Self-management training program affects the enhancement of expectancy in the patients suffering from MS.

H0: the mean score of expectancy is not different between the two control and experiment groups.

H1: the mean score of expectancy is different between the two control and experiment groups.

Table 3: Levine's test with the assumption of homogeneity of variances

Variable	F	Degree of freedom 1	Degree of freedom 2	Sig
Expectancy	0/298	1	28	0/468

Table 3 shows the Levine's test results to verify the hypothesis of homogeneity of variances between the two groups. As it is shown, the value obtained for expectancy variable is higher than 0.05 which is the significance level, therefore, the error variances of the groups are equal and there is no difference between them.

Table 4: Analysis of covariance self-management training program on expectancy of patients with MS in both control and experimental groups

Source of change	Sum of squares	Degree of freedom	Sum of squares	Test statistics	P	اتا	Test ability
Pretest effect	30/217	1	30/217	8/656	0/07	0/241	0/805
Effect of independent variable	32/812	1	32/812	9/301	0/005	0/256	0/836
Error	95/250	27	3/528				

Adjusted total	168/667	29					

As it is shown in table 4, the value of the test statistic F = 9.301 and since p <0/01, the value is significant at the one percent level. Therefore, the H0 hypothesis is rejected (and H1 is accepted). Thus, there is a significant difference between the control and experiment groups in terms of expectancy and self-management program affects the expectancy of the patients with MS.

Discussion and Conclusion

First Hypothesis: Self-management training program affects the enhancement of mental well-being in the patients suffering from MS.

Since the value of the test statistic F = 15/704 and since p <0/01, the value is significant at the one percent level, there is a significant difference between the control and experiment groups in terms of mental well-being in post-test. Therefore, the self-management program significantly affects the mental well-being of the patients with MS at one percent level.

Generally, the results of the current study indicated that self-management programs affects different aspects of the individual's well-being and his ability to perform activities and improves them. For explaining these findings, it can be said that self-management is an effective measure to increase the ability of patients to have control over their situation since this strategy has special features such as Self-Monitoring (slef-observation) and learning it facilitates recognizing the progress made in the designed purposes. As a result, this method leads to a kind of direct feedback to the person that can increase life satisfaction of patients. The results of the current study are in lines with those of Masoudi (Masoudi. 2011), Morfi et al (Morfi S. 2001), and Kafami et al (Kafami, 2012).

Second Hypothesis: Self-management training program affects the enhancement of expectancy in the patients suffering from MS.

Since the value of the test statistic F = 9.301 and since p <0/01, the value is significant at the one percent level, there is a significant difference between the control and experiment groups in terms of expectancy in post-test. Therefore, the self-management program significantly affects the expectancy of the patients with MS at one percent level.

Regardless of how much the treatment of MS are effective for a patient suffering from it, the patients, their families and the professionals agree that living with this disease can be physically and mentally difficult, frustrating, and painful right from the time of diagnosis of the disease (Bishop. 2003). For explaining this assumption, it can be said that improvement in signs and symptoms of anxiety can increase the willingness of the patient to participate in social interactions and reinforce hope in him. Increasing the hope and ability in management of anxiety and its symptoms, reduces the patient's avoidance of social interaction and this will increase the enjoyment and relaxation in the patient's life. However, when patients, by self-management program, try to find the best solution, and thus by learning self-control ability, try to clear obstacles with good feeling and hope, choose the appropriate ways to achieve their goal.

Noseworthy study (Noseworthy J. et al., 2006) shows that psychological stress, frustration and depression can affect the recurrence and severity of MS. In this regard, the analysis of self-management treatment program can be useful for mentioned items.

Hoseini (Hoseini, 2006) in a study argued that treatment with self-management strengthens the positive relationship with others through reinforcing such factors as positive attitude to life in which the individual experiences hope, altruism, and relaxation.

It was also true for the patients with MS in the current study, so the results of this study are in lines with those of Noseworthy (Noseworthy J. et al., 2006).

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