

## Comparing Mental Health, Self-Efficacy, and System of Beliefs between Normal and MS-Sufferer Women

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### ABSTRACT

The study aimed at comparing mental health, self-efficacy, and belief organization between normal and MS-sufferer women. This was a causative-comparative investigation. Statistical population consisted of all MS-sufferer women in brain and neuronal system offices as well as normal women in Rasht, Iran. Fifty MS-sufferer women and fifty normal women were selected via convenience sampling and purposive sampling, respectively. Data collection was performed by using the Self-Efficacy Scale (Sherer and Maddux, 1982), the Mental Health Questionnaire (Goldberg and Hillier, 1979), and System of Beliefs Inventory (Holland et al., 1998). Data analysis was done through multivariate variance analysis. The results revealed that there are significant differences in mental health, self-efficacy, and system of beliefs between normal and MS-sufferer women ( $p < 0.05$ ). It was concluded that mental health, self-efficacy, and system of beliefs are important psychological factors in MS-sufferers. Improvement in these factors may enhance treatment trend in MS-sufferers.

**KEYWORDS:** MS, mental health, self-efficacy, system of beliefs.

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### 1- INTRODUCTION

Multiple sclerosis (MS) is chronic inflammatory disease targeting central nervous system. It is triggered by auto-immune manifestations and specific lymphocytes are activated against myelin. Entrance of these cells into brain plays role in immunopathology of the disease and exacerbation of brain inflammatory reactions. There three types of MS symptoms: primary symptoms, surfaced as a consequence of myelin degeneration in a given nerve; secondary symptoms, which appear due to the primary symptoms; and tertiary symptoms, which are mental and social consequences caused by primary and secondary symptoms. The most important symptoms of MS are motor paralysis, sensory loss especially optical disorders, cognitive defects, etc., causing different mental disorders such as depression and stress. The sufferers also encounter mental problems because of myelin loss in some parts of brain (Khezri et al., 2011).

Mental health is one of the most important factors of well-being. It shows our way of thinking, feeling, and doing in different situations of life and embodies our concept of self and life in a meaningful framework. Therefore, it is regarded as a science for well-being, social welfare, and logical adaptation to life events (Mahmoudi et al., 2008).

Pain in MS is common and it has been known as an important determinant in mental health and life quality of the sufferers (Haghighat et al., 2011). In this regard, Ehde et al. (2003) indicated that the MS-sufferers with chronic pain encounter lower levels of general health. Mahmoudi et al. (2008) stated that mental disorders occur in MS-sufferers. Moreover, different studies have shown that MS-sufferers face with depression and stress (Potagas, 2008; Ghafari et al., 2013). The main aim of MS treatment is to halt progressive disability caused by acute attacks of relapsing, benign, or progressive chronic MS and for this aim, different medications such as corticosteroids and interphones like avonex, betaseron, and novantrone are prescribed (Braun, 2005). However, mental consequence may be even worse than physical ones. MS-sufferers are mentally affected by their physical status and they are severely irritated (Rugliatti, 2006).

A factor influencing on the extent of the pain an MS-sufferer might experience is self-efficacy. From Bandura's viewpoint, self-efficacy is defined as one's ability in doing a certain action and getting along with a given condition. In other words, self-efficacy is considered as one's perceptions on his/her capabilities in realization of predefined performance levels (Pajares, 1997).

Self-efficacy beliefs influence on behaviors regarding human well-being in two ways, one through the effects on the behaviors pertaining to one's health and well-being and the other via their effects on his/her biological

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efficiency; in other words, such beliefs affect both probability of incidence of various disease and recovery process (John et al., 1992; translated by Javadi and Kadiver into Persian, 2003). Those with high level of self-efficacy try more to succeed and they show more perseverance and less fear than those with lower levels of self-efficacy. Bandura (1980) believes that since individuals with high self-efficacy have more control over various affairs, they have higher level of confidence. People with higher levels of self-efficacy are not afraid of the events on which they have no control as much as are those with lesser self-efficacy (Hergenhahn and Olson, 2005). McGillion et al. (2008) proved that there is a considerable relationship between self-efficacy and management behaviors in MS-sufferers. They also indicate that because management *per se* is related to positive consequences of the disease, improvement of management by enhancing self-efficacy can lead to long-term benefits for them (Marks et al., 2005). Previous studies have shown that higher level of self-efficacy has a positive role in healthcare behaviors and general wellbeing (Lorig et al., 2001; McMurray et al., 2002).

Although some confusions and distractions can be attributed to self-deceptive and self-defeating thoughts and beliefs, self-deceptive motives, behaviors, and performances should not be neglected. No matter mental distractions are rooted in one of cognitive, emotional, motivational, or behavioral systems, they have a close relationship with psychological functions (Yilmaz et al., 2009). Monitoring, controlling, and evaluating cognitions, thoughts, and beliefs continuously can not only prevent it from mental damages but also enhance mental health. Research have chiefly focused on effectiveness of pharmaceutical treatment in MS-sufferers whereas psychological aspects have received less attention. Extensive investigations should be performed on distribution of this disease in society. The results of the present study may be effective in treating MS-sufferers where psychological factors can also be considered along with pharmaceutical treatments. In this regard, the present study was designed to find whether there were any differences in mental health, self-efficacy, and system of beliefs between normal and MS-sufferer women.

## 2- METHODOLOGY

The present study aimed at comparing mental health, self-efficacy, and system of beliefs between normal and MS-sufferer women. The study was a causative-comparative one. Statistical population was all MS-sufferer women in brain and neuronal system offices as well as normal women in Rasht, Iran. Fifty MS-sufferer women and fifty normal women were selected via convenience sampling and purposive sampling, respectively. The MS-sufferer women had same demographic information in terms of age, gender, education, and place of residence.

Data collection was performed by using the Self-Efficacy Scale (Sherer and Maddux, 1982), the Mental Health Questionnaire (Goldberg and Hillier, 1979), and System of Beliefs Inventory (Holland et al., 1998). Data analysis was done through multivariate variance analysis.

The Self-Efficacy Scale (Sherer and Maddux, 1982) consists of 17 statements. Each statement is scored from 1 to 5 with 1 being absolutely disagree and 5 being absolutely agree. In all the statements except 3, 8, 9, 13, and 15, higher scores indicate higher level of self-efficacy. Cronbach's Alpha for general self-efficacy, the first factor, the second factor, and the third factor were estimated to be 0.83, 0.76, 0.68, and 0.56, respectively.

The Mental Health Questionnaire (Goldberg and Hillier, 1979) includes 4 secondary indices where each index consists of 7 questions. The indices are: (1) physical symptoms; (2) stress symptoms and insomnia; (3) social function; and (4) depression symptoms. Scoring was performed by assigning 0, 1, 2, and 3 to "not at all", "moderately", "severe", and "very severe", respectively. The scores 6 in each index and 22 in the questionnaire indicate disease signs. Validity and reliability of this questionnaire have been confirmed (Fathi Ashtiani, 2009).

System of Beliefs Inventory (Holland et al., 1998) includes 15 statements with two sub-indices, i.e. religious beliefs and actions and social support. High score in this inventory indicates that the person is religious. Holland et al. (1998) reported that Cronbach's Alpha for this inventory is 0.93 and for the religious beliefs and actions sub-index and social support sub-index, it was 0.92 and 0.89, respectively. In the present study, the inventory was found to be reliable because Cronbach's alpha was 0.76.

## 3- RESULTS

Multivariate variance analysis was adopted in order to test the study hypothesis. First, homogeneity of variances were analyzed by using Levene's test (Table 1).

**Table 1: Levene's test to assess homogeneity of variances of mental health, self-efficacy, and system of beliefs**

| Variable          | F    | df <sub>1</sub> | df <sub>2</sub> | Sig  |
|-------------------|------|-----------------|-----------------|------|
| Mental health     | 2.30 | 1               | 98              | 0.14 |
| Self-efficacy     | 2.06 | 1               | 98              | 0.18 |
| System of beliefs | 2.76 | 1               | 98              | 0.10 |

As evidenced from Table 1, F is not significant for all the variables ( $p>0.05$ ) and therefore, the variances can be considered homogenous. So, the results of multivariate variance analysis were reported.

**Table 2: Mutual correlations between mental health, self-efficacy, and system of beliefs**

| Variable          | Mental health | Self-efficacy | System of beliefs |
|-------------------|---------------|---------------|-------------------|
| Mental health     | -             | 0.35**        | 0.25**            |
| Self-efficacy     | 0.35**        | -             | 0.23**            |
| System of beliefs | 0.25**        | 0.23**        | -                 |

\*\*  $p<0.01$

According to Table 2, correlation values between mental health, self-efficacy, and system of beliefs are significant ( $p<0.01$ ).

**Table 3: Wilks' lambda test to assess the differences between combination of mental health, self-efficacy, and system of beliefs**

| Wilks' lambda | Value | F     | df <sub>1</sub> | df <sub>2</sub> | Sig  |
|---------------|-------|-------|-----------------|-----------------|------|
|               | 0.631 | 18.48 | 3               | 95              | 0.01 |

According to table 3, combination of mental health, self-efficacy, and system of beliefs showed a significant difference (Wilks' lambda = 0.631,  $F(95, 3) = 18.48$ ;  $p<0.01$ ). Moreover, one-way variance analysis revealed that each of the variables, i.e. mental health ( $F(98, 1) = 2.30$ ), self-efficacy ( $F(98, 1) = 2.06$ ), and system of beliefs ( $F(1, 98) = 2.76$ ), plays a significant role in model significance.

#### 4- DISCUSSION

The present study was formulated in order to compare mental health, self-efficacy, and system of beliefs in normal and MS-sufferer women. As the results showed, there was a significant difference between mental health, self-efficacy, and system of beliefs. In other words, mental health, self-efficacy, and system of beliefs in normal and MS-sufferer women was significantly different. No similar research to make comparison was found. However, the findings of the present study are implicitly consistent with those of Ehde et al. (2003), Ghafari et al. (2013), and Mahmoudi et al. (2008).

Mental consequences might even be more severe than physical ones in MS-sufferers. The mental status of an MS-sufferer is influenced by his/her physical status and it may annoy him/her very severely (Mahmoudi et al., 2008).

Mental health is one of the most important health issues, which reflects our thoughts, feelings, and functions in facing with various life situations. It defines our understanding of ourselves and our lives and by definition, is a science aiming at wellbeing, social welfare, and rational adaptation to life events (Rugliatti et al., 2007). MS-sufferers cannot enjoy their normal life. Since the MS-sufferers in doctor offices or even MS society centers do not want others to know about their problem, they do not tend to socialize with other people and therefore, their social problems will be more pronounced (Mahmoudi et al., 2009; Ghafari et al., 2013). This seclusion will lead to lower levels of self-confidence and self-image leading to reduced self-efficacy.

On the other hand, as there is no definite treatment for MS, the sufferers take up recourse to spirituality and spiritual therapy. In other words, it can be claimed that religious beliefs in MS-sufferers are stronger than those in normal people and therefore, MS-sufferers will have higher levels of social support. Religious confrontation is based on religious beliefs and actions and helps people control their emotional stresses and physical discomforts. Having intellectuality and purpose in life, the feeling of belonging to a valuable source, hopefulness for God's help in tough conditions, social and spiritual supports are among the resources of religious people by which they undergo less damage in facing with difficult situations of life. Generally, religion can have positive effect in managing stress, for example in evaluating the condition, cognitive assessment of the person, confrontational actions, and supportive sources (Fathi, 2006). Poloma and Pendelton (2002) also reported the positive effect of religion and spirituality on mental health, and reduction of disease symptoms and discomfort.

#### REFERENCES

Braun, W.E. (2005). Harrison's principles of internal medicine. (16th edition), New York: McGraw Hill.

- Ehde, D.M., Gibbons, L.E., Chwastiak, L., Bombardier, C.H., Sullivan, M.D., Kraft, G.H. (2003). Chronic pain in a large community sample of persons with multiple sclerosis. *Journal Mult Sclerosis*, 9: 605–611.
- Fathi Ashtiani, A., Dastani, M. (2009). Psychological tests. Besat, Tehran, in Persian.
- Fathi, M. (2006). Intimate talks with MS-sufferers. Shahidpour, Tehran, in Persian.
- Ghafari, S., Ahmadi, F., Nabavi, S.M., Memarian, R. (2009). Determination of muscular progressive relaxation training on depression, stress, and anxiety in MS-sufferers. *Iranian Journal of Research in Medicine*, 32(1): 45-53.
- Haghighat, F., Zadhoush, S., Rasoulzadeh, S.K., Etemadifar, M. (2011). Determination of the relationship between self-efficacy related to pain and pain severity in MS-sufferers. *Iranian Journal of Behavioral Sciences*, 1(5): 47-54, in Persian.
- John, O.P., Robins, R.W., Pervin, L.A. (1992). *Personality psychology theory and research*. Translated to Persian by Javadi, M.J., Kadivar, P. (2003). Ayeezh, Tehran.
- KhezriMoghadam, N., Ghorbani, N., Bahrami, H., Rostami, R. (2012). Effectiveness of group therapy to alleviate psychological symptoms in MS-sufferers. *Iranian Journal of Clinical Psychology*, 4(13): 13-22, in Persian.
- Lorig, K., Sobel, D., Ritter, P. (2001). Effect of a self-management program on patients with chronic disease. *Journal of Effective Clinical Practice*, 4: 256-62.
- Mahmoudi, G., Nasiri E., Niaz-Azari, K. (2008). Determination of mental health in MS-sufferers in Mazandaran Province, *Journal of University of Medical Sciences, Mazandaran, Iran*, 18(68): 70-73, in Persian.
- Olson, M.H., Hergenhahn, B.R. (2005). *An introduction to theories of learning*. Translated to Persian by Seif, A.A. (2006). Dowran, Tehran.
- Pajares, F. (1997). Current Directions in Self- Efficacy Research. *Advances in Motivation & Achievement*, volume 10, edited by Martin I. Maehr& Paul R. Pintrich. Greenwich, CT, USA: Journal AI Press.
- Polma, M.B., Pendelton, R. (2002). The emotional impact of fundamentalist religious participation. *Journal of spiritual therapy*, 17: 59-63.
- Potagas, C., Mitsonis, C., Watier, L., Dellatolas, G., Retziou, A., Mitropoulos, P.A. (2008). Influence of anxiety and reported stressful life events on relapses in multiple sclerosis: a prospective study. *Int MS Journal*, 14(9): 1262–1268.
- Marks, R, Allegrante, J.P., Lorig, K. (2005). A review and synthesis of research evidence for self-efficacy enhancing interventions for reducing chronic disability: implications for health education practice (Part II). *Health Promot Pract*, 6:148-156.
- McGillion, M., Watt-Watson, J., Stevens, B., LeFort, S.M., Coyte, P., Graham, A. (2008). Randomized controlled trial of a psycho-education program for the self-management of chronic cardiac pain. *Journal Pain and Symptom Management*, 14:45-57.
- McMurray, S.D., Johnson, G., Davis, S. (2002). Diabetes education and care management significantly improve patient outcomes in the dialysis unit. *Am J Kidney Dis*, 40:566-575.
- Rugliatti, M., Rosati, G., Carton H, Riise, T., Drulovic, J., Vecsei, L., Milanov, I. (2006). The epidemiology of multiple sclerosis in Europe. *Eur J Neurol*, 13(7): 700-702.
- Sherer, M., Maddux, J.E. (1982). The self- efficacy scale: construction and validation. *Psychological report*, 51: 671-663.
- Yilmaz, K., Tasdan, M.,Oguz, E. (2009). Supervision beliefs of primary school supervisors in Turkey. *Educational Studies*, 35(1): 9–20.