



## Analytical Study of the Role of Resilience and Life Expectancy in Psychological Well-Being of Patients with Multiple Sclerosis (M.S)

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### A B S T R A C T

Multiple sclerosis is one of the most common neurological diseases in humans and the most debilitating disease of young people whose severity is inversely related to mental health. The aim of this study was to investigate the role of resilience and life expectancy in predicting psychological well-being of patients. Designed and implemented in M.S. Considering the importance of psychological well-being in promoting the health of patients with M.S, it is important to study the variables that affect it such as resilience and life expectancy. This study was a descriptive correlational study. The statistical population of this study was all patients with M.S in Isfahan in 2019. Participants were 562 patients with M.S referred to the physiotherapy department of the M.S. Association who were selected by convenience sampling. For data collection, three questionnaires of psychological well-being "Reef", resilience "Connor and Davidson" and life expectancy of "Schneider" et al. The data were analyzed using Pearson correlation coefficient and stepwise multiple regression model. The results of this study showed a positive and significant relationship between psychological well-being and resilience ( $r = 0.386$ ) and life expectancy ( $r = 0.396$ ) in patients with M.S. Also, the regression results showed that the subscales of factor thinking and spiritual effects can predict 0.228 of the psychological well-being changes in patients with M.S. Considering the determinants of psychological well-being in this study, it is possible to increase the psychological well-being of patients with M.S and the quality of nursing care by implementing interventions such as resilience training programs and psychological therapies focused on hope.

**Keywords:** Psychological Well-Being, Resilience, Life Expectancy, Multiple Sclerosis.

## INTRODUCTION

Multiple sclerosis is an inflammatory and chronic demyelinating disease of the central nervous system known as an autoimmune disease (Bar-Or, 2008; Sospedra & Martin, 2005). It is a progressive and degenerative disease that is one of the most common acquired demyelinating diseases by affecting different parts of the myelin (Davis, 2000). M.S causes blurred vision, diplopia, muscle weakness, impaired balance and coordination, impaired perception of different senses, depression, pain, cognitive impairment, forgetfulness, poor concentration, fatigue, tremors, dizziness, intestinal dysfunction, bladder and Decreased sexual function in the patient (Lotfi, 2004; Nafisi, 1998). In fact, multiple sclerosis is a common neurological disease that manifests itself chronically and advanced and there are many complications associated

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with this disease, including the difficulty of this disease, the cause of this disease, which is precisely unknown, which is why it makes it difficult to treat (Martin, McFarland, & McFarlin, 1992). The age of onset of the disease is between 20 and 40 years, which is why it is referred to as the disease of young adults. The disease is the third leading cause of disability in the United States, with the World Health Organization estimating the number of people with the disease in 2008 at 2.5 million. According to the obtained statistics, the prevalence of this disorder is higher in women than men and the rate of this disease in Iran is higher than other countries (Shamili, Zare, & Oraki, 2013). And the new results have estimated the number of patients at about 40,000.

There is a high level of anxiety and depression in these patients, which are considered to be the most common psychiatric diagnoses in patients with multiple sclerosis compared to the general population. The recurrence of the disease increases with the onset of these disorders and prolongs the duration of treatment. Depressive and anxiety disorders are at the top of the list of mental illnesses and account for about 25% of referrals to health centers in the world. Statistics show that these disorders were the fourth most common in 1990, but in the last decade they have become the second most common psychological disorder, affecting nearly 121 million people worldwide. Depression was also the second most expensive illness in 2010 and anxiety was one of the most expensive treatments in 2013 among all mental illnesses (Polman et al., 2011). Data suggest that mood disorders start from a situation in which very large changes occur in human life.

One of the most important changes in life is having a chronic illness that brings with it anxiety and clinical excitement. Depression is often accompanied by higher levels of anxiety and can be accompanied by panic attacks and simple or complex phobias that endanger a person's quality of life. Reports indicate that about one-third of the world's population suffers from a period of depression at some point in their lives, with statistics showing that about 23 percent of adults develop a mood disorder in their lifetime and eight percent of them. They develop a major depressive disorder that, if left untreated or ineffective, can lead to maladaptive behaviors that in turn lead to more major problems.

The prevalence of depression has led to the presentation and study of various treatments for it, including medication and psychotherapy. However, although research supports the effectiveness of existing therapies, this effectiveness is relative and there is still no cure that can be considered a definitive solution to the problem of depression because on the one hand, drug therapy has several side effects. (Including dry mouth and various physical disorders) and on the other hand, despite the fact that many psychotherapies have been effective in treating depression, we still face a high recurrence rate of depressive symptoms (Alavi, Modarres Gharavi, Amin Yazdi, & Salehi Fadardi, 2011; Jamilian, Malekiran, Farhadi, Habibi, & Zamani, 2014).

In fact, although the goal of depression treatment should be complete recovery, many patients fail to achieve or maintain asymptomatic status. These results indicate the inadequacy of current treatments and the need for more effective treatments for this disorder. In this regard, third wave therapies were used to evaluate its effectiveness. Considering that according to the results of previous studies, depressive and anxiety disorders in patients with chronic physical

diseases such as cancer, HIV, M.S and diabetes lead to suicide(Zamani, Farhadi, & Jamilian, 2012).

Reef considers psychological well-being as a multidimensional structure consisting of two areas of positive functioning. According to him, mental performance should be in terms of self-acceptance (having a positive attitude towards self), personal growth (feeling of continuous growth), purposefulness in life (having a purpose and meaning in life), positive communication with others (establishing intimate relationships with others and ability Empathy), environmental control (individual ability to manage the environment) and autonomy (feeling of independence and ability to withstand social pressures) should be evaluated. Research results indicate that people with psychological well-being have many positive characteristics, including more engagement with meaningful activities, self-efficacy, optimistic explanatory style, reporting daily positive emotions, deep interpersonal relationships, life satisfaction, Openness to experiences, positive emotions, independence and extraversion. Also, there is a lot of research evidence that adverse life events such as autoimmune diseases can affect psychological well-being(Bekelman et al., 2007). M.S patients are under high psychological pressures and stresses due to their illness. Their mental well-being is at risk(Alilo & Sharifi, 2012).

And the implementation of interventions to promote psychological well-being, especially with an emphasis on meaning and peace, reduces the depressed mood of these patients(Mills et al., 2015). Successful coping with stressors and difficult life situations in addition to psychological well-being requires another ability called resilience(Ong, Bergeman, Bisconti, & Wallace, 2006).

Resilience is the dynamic process of positive adaptation to the bitter and unpleasant experiences of life that helps to calm down in stressful situations and to experience positive emotions in the face of difficulties and flexibility in the face of life's obstacles(Rideout & Montemuro, 1986). According to research, the variable of resilience as a dynamic process causes people to properly deal with stressful situations such as illness(Patterson, 2002).

Another variable related to psychological well-being is life expectancy. Hope is one of the concepts very close to optimism and one of the characteristics of life that makes people search for a better tomorrow. Hope means expecting success and a better future and a reason to live. Hope is a multidimensional and potentially powerful factor in the recovery of patients with M.S that helps the patient in terms of tolerating the symptoms of the disease and emotional problems in disease crises and is able to improve their psychological well-being(Hekmatpou, Mohammadi, Ahmadi, & Arefi, 2010).

Given the importance of resilience and life expectancy in the psychological well-being of patients with M.S and the fact that few studies have been conducted in this area, the present study aimed to investigate the role of resilience and life expectancy in predicting psychological well-being. Patients with M.S were designed and administered. The hypotheses of the present study were that there is a relationship between resilience and psychological well-being in patients with M.S. There is a relationship between life expectancy and psychological well-being in patients with M.S, and psychological well-being based on resilience and hope. Life in M.S

patients is predictable.

## METHODOLOGY

The present study is a descriptive correlational study. The statistical population of the study consisted of patients with M.S in Isfahan in 2019. 270 patients with M.S referred to the physiotherapy department of the association, M.S were selected by available sampling method. Inclusion criteria included M.S based on a physician's diagnosis, at least six months after the onset of the disease, memory and alertness, and literacy. The Reef Psychological Well-Being Scale, Connor & Davidson Resilience Scale, and the Schneider et al. Life Scale were used to collect data. The short form of the psychological well-being scale was designed by Reef in 1989 and revised in 2002. The tool includes 18 questions in six sub-scales of self-acceptance, positive relationships with others, autonomy, mastery of the environment, purposeful living and personal growth, based on a seven-point Likert scale from "totally against" with a score of 1 to "strongly agree" "Scored with a score of 7. Van Dierendonck (2004), reported the internal consistency of the subscales as appropriate and reported Cronbach's alpha between 0.77 and 0.90. In the present study, the reliability of this questionnaire was obtained by Cronbach's alpha method for the total score of psychological well-being 0.78.

Connor and Davidson designed their resilience scale in 2003 by reviewing research resources in the field of resilience from 1979 to 1991. This scale has 25 questions and is able to distinguish resilient people from non-resilient people in clinical and non-clinical groups and evaluates resilience in the areas of competence, trust in instincts, and acceptance of change, control and spiritual effects. The range of answers to the questions is of the Likert type of 5 degrees and from "completely incorrect" (score 1) to "completely correct" (score 5). Scale scores range from 25 to 100. And a higher score indicates greater resilience (Connor and David Sean, 2003). In the present study, the reliability of this questionnaire was obtained by Cronbach's alpha method for the total resilience score of 0.82.

The Life Examination Questionnaire, developed by Schneider et al. In 1991, is a self-report scale with 12 questions and two subscales of strategic thinking and factor thinking? The questions are answered in an 8-point continuum "totally opposite" with a score of 1 to "totally opposite" with a score of 8. The reliability of the tool in Iran was reported to be 0.86 for the whole scale, 0.77 for the strategic thinking subscale and 0.79 for the factor thinking subscale using Cronbach's alpha. In the present study, the reliability of the life expectancy questionnaire was calculated to be 0.9 by Cronbach's alpha method, which indicates the optimal reliability of this tool in the present study. Descriptive and inferential statistics were used to analyze the data in SPSS software version 22.

## RESULTS

In this study, the findings of 265 patients with multiple sclerosis who completed the questionnaires without defects were reviewed. The mean age of patients was 55.89 years with a standard deviation of 15.14. Some demographic characteristics of patients with M.S are listed in

Table 1. Table 2 shows the mean and standard deviation of resilience, life expectancy and psychological well-being scores.

**Table 1.** Frequency distribution of some demographic characteristics of patients with M.S

Variable	Number (percent)
<b>Gender</b>	
Man	(54)143
Female	(46)122
<b>marital status</b>	
Single	(12.8) 34
Married	(87.2)231
<b>Employment status</b>	
Employed	(45.7)122
Unemployed	(54.3)143

As can be seen in Table 2, the values of skewness and elongation between +2 to 2 - indicate that the distribution of research variables among the subjects is normal, and therefore, parametric statistics were used to test the research hypotheses. To test the first and second hypotheses of the study, Pearson correlation coefficient was used, the results of which are presented in Table 3. Table 3 shows that with increasing resilience and life expectancy, the psychological well-being of patients with M.S increases; And life expectancy is more strongly related to psychological well-being than resilience (r = 0.396). In addition, resilience and life expectancy are positively and significantly related to the subscales of purpose in life, personal growth and autonomy. . There is also a positive and significant relationship between resilience and relationships with others and between life expectancy and self-acceptance.

**Table 2.** Some indicators of resilience, life expectancy, and psychological well-being and its subscales in patients with M.S

Variable	Mean (standard deviation)	skewness	coefficient of kurtosis
Resilience	(16.40)63.62	-0.52	-0.15
Life expectancy	(7.24)51.43	-0.80	-1.37
Psychological well-being	(7.46)51.43	-0.47	-0.17
Accept yourself	(1.48)89.38	-0.15	-0.09
Purpose in life	(2.30)14.50	-0.20	-0.13
Mastery of the environment	(2.06)12.58	-0.10	-0.04
Relationships with others	(3.11)15.77	-0.04	-1.53
Personal growth	(1.72)13.40	-0.06	-0.69
Autonomy	(2.13)18.12	-0.53	-0.29

**Table 3.** Correlation between resilience and life expectancy with psychological well-being and its subscales

Variable	Self-Acceptance	Purpose in life	Mastery of the environment	Relationships with others	Personal growth	Autonomy	Total
Resilience	0.087	0.307**	0.075	0.161**	0.323**	0.387**	0.386**
Life expectancy	0.123*	0.405**	0.055	0.097	0.291**	0.430**	0.396**

**Table 4.** Stepwise regression model for predicting psychological well-being in patients with M.S based on resilience and life expectancy

Step	Variable	F	R	R <sup>2</sup>	β	B
1	Factor thinking	58.029	0.425	0.181	0.425	
2	Factor thinking	38.667	0.477	0.228	0.383	0.596
	Spiritual effects				0.221	1.49

To test the third hypothesis of the study, namely predicting psychological well-being based on resilience (competence, trust in instincts, acceptance of change, control and spiritual change) and life expectancy (factor thinking and strategic thinking) in patients with M.S, resilience and Life expectancy as predictor variables and psychological well-being as criterion variables were entered into the stepwise multiple regression equation. The general regression model in two steps was significant at the level of 0.0001. According to the data in the table, the explanation coefficient is obtained in the first step of 0.181, i.e. the subscale of life expectancy factor thinking alone predicts 18% of the psychological well-being variable. Next, resilience subscales were entered into the model. Among the five subscales, spiritual influences were able to predict psychological well-being. The coefficient of explanation in the second step is 0.228. Based on these findings, it can be said that resilience and life expectancy are able to predict the psychological well-being of M.S patients.

## CONCLUSION

In this study, the role of resilience and life expectancy in predicting psychological well-being of patients with M.S was investigated. The results showed that there is a significant relationship between resilience and psychological well-being of these patients; This means that the higher the level of resilience, the greater the psychological well-being of patients. Also, resilience was able to predict the psychological well-being of patients with M.S. This research finding is consistent with the results of previous studies(Liu, Chang, Wu, & Tsai, 2015). In these studies, resilience in patients with M.S has been defined as a multidimensional concept related to patients' psychological health; Because resilience is a kind of immunity to life's problems that leads to successful coping with negative experiences by increasing positive emotions. Thus, in people with chronic diseases such as autoimmune diseases, resilience, problem-solving ability and spirituality lead to improved patient psychological well-being and better coping and adaptation to autoimmunity. Explaining this finding, it can be said that patients with M.S experience major physical, emotional, family and social changes, and having resilience and psychological well-being helps patients respond to stimuli. Show the best interaction and avoid anxiety and conflict and have better psychological adaptation to the problems caused by their disease(Harper, Joseph, & Graven, 2016; McGee, Hevey, & Horgan, 1999).

Another finding of this study was the positive relationship between life expectancy and psychological well-being of M.S patients and the positive role of life expectancy in predicting psychological well-being of patients. A similar study that examined the relationship between hope and psychological well-being in M.S patients was not found to compare with the findings of the present study. This result is consistent with studies that have examined the relationship between hope and psychological health or psychological well-being in cancer patients. One of the factors that create hope in people is the existence of meaning for life. Psycho-cognitive well-being is also having a sense of proper connection with others, having meaning and purpose in life and believing in a transcendental force. When psychological well-being is compromised, a person will experience psychological problems such as loss of hope and meaning in life, feelings of loneliness and depression(Mahdian & Ghaffari, 2016).

Explaining this finding in this particular group of patients, it can be stated that patients with M.S due to the devastating consequences of the disease such as frequent hospitalizations and disability, a wide range of negative emotions such as depression, anxiety and fragility affect They experience quality of life and psycho-cognitive well-being, especially when these negative consequences are accompanied by changes in the patient's roles, activities, and social relationships. In such a situation, the patient feels that there is no future ahead, while life expectancy enables patients to see a perspective beyond their current suffering and illness and to seek meaning for their lives. In this way, life expectancy acts as a powerful factor in promoting the patient's mental and emotional state, which leads to psychological well-being in such a situation that the patient feels that there is no future, while life expectancy enables patients to See a vision beyond your current suffering and illness and seek meaning in your life. In this way, life expectancy acts as a powerful factor in promoting the patient's mental and emotional state that contributes to his psychological well-being and, consequently, adaptation to the disease. Given that resilience is effective in the psychological well-being of M.S patients, health team members and mental health professionals should pay more attention to the level of resilience of patients and identify patients with low levels of resilience and implement interventions such as resilience training programs. Help to strengthen patients' psychological well-being. In addition, given the role of life expectancy in the psychological well-being of patients with M.S, it is necessary for the patient and his family to undergo a type of psychological therapy with a focus on hope. Due to the numerous psychological problems in M.S, in developed countries, psychological interventions such as cognitive-behavioral therapy and other psychological interventions to promote psychological well-being have been considered as part of patients' treatment for years(Pyne-Daly et al., 2003). It is suggested that by establishing counseling centers and performing psychological treatments in hospitals, help promote psychological well-being and better adaptation of patients to the disease.

In this study, it was found that resilience and life expectancy have a positive and significant relationship with psychological well-being of patients with M.S and resilience and life expectancy predict the psychological well-being of these patients. Nurses can consider the results of this study in the care program for patients with M.S.

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