Original article

Relationship between spiritual well-being and quality of life in multiple sclerosis patients

Davood Nasiry Zarrin Ghabaee[1], Masoumeh Bagheri-Nesami[2], Majid Malekzadeh Shafaroudi[3*]

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Abstract

Background and Purpose: Spiritual health is one of the most critical health dimensions with remarkable influence on the life of individuals. Religion and spirituality play a pivotal role incoping with stressful events in life. This study aimed to evaluate the relationship between spiritual health and quality of life in patients with multiple sclerosis (MS).

Methods: This cross-sectional study was conducted on 223 patients at Mazandaran Multiple Sclerosis Association (MMSA), Iran in 2015.Participantswere selected via convenience sampling. Data collection tools included Paloutzian's spiritual well-being questionnaire and Multiple Sclerosis Quality of Life (MSQOL-54) scale. Data analysis was performed in SPSS V.18 using ANOVA, T-test, and Pearson's correlation-coefficient.

Results: In this study, the majority of MS patients (71.7%, n=160) had average spiritual health, and mean score of quality of life was 50.2±12. Moreover, significant correlationswere observed between the total score of quality of life with dimensions of existential health (P<0.0001, r=0.97), religious health (P<0.0001, r=0.95), and total score ofspiritual health (P<0.0001, r=0.97).

Conclusion: According to the results of this study, spiritual health and religious beliefs could improve the quality of life in MS patients. Spiritual health is inherent to the quality of life of patients suffering from chronic diseases, such as MS. In Iran, ideational and religious doctrines remarkably influence people's lives. Therefore, provision of culture-based and meaning-orientated care and adopting a wholesome attitude towards different aspects of MS could help medical professionals to offer the required services for these patients.

Keywords: Iran, Mazandaran province, Multiple sclerosis, Quality of life, Spiritual health

Introduction

Multiple sclerosis (MS) is a chronic and potentially debilitating disease affecting the main organs in the central nervous system, including the brain and spinal cord (1). MS is normally diagnosed in patients within the age range of 20-40 years and is known to be more prevalent among women (2). The global prevalence rate of MS has been estimated at two million cases, and this rate has been reported to be 400,000 cases per year in the United States (3). In Iran, the prevalence of MS has been estimated at 56 cases per 100,000 people, and the total population of these patients has been calculated at 44,800 cases (4). This rate is 23 times higher than the average global prevalence of MS, which is suggestive of the susceptibility of the Iranian population to this disease.

According to statistics, MS is most prevalent among individuals with high educational and socio-

[1] Student of Anatomical Sciences, Student Research Committee, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran
[2] Department of Medical-Surgical Nursing, Infectious Research Center with Focus on Nosocomial Infection, Mazandaran University of Medical Sciences, Sari, Iran
[3,*] Corresponding author: Department of Anatomy and Cell Biology, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran. Email: malek1344@gmail.com

economic status (5). Researchers have confirmed the pivotal role of stress in the development, progression, relapse, and durability of MS (2, 3). In Iran, the highest prevalence for MS has been reported in regions such as Isfahan (FouladShahr city), Tehran, Guilan, and Mazandaran (more than 3,000 cases) (5). MS patients are faced with numerous challenges that limit their health-promoting activities and increase the side effects of the disease, adversely affecting the independence and quality of life of these individuals (6).

In the literature, several concepts have been proposed as effective approaches to cope with the stress and complications caused by MS; such example is spiritual well-being (7). As an inherent aspect of human health, spirituality is defined as the awareness of the existence of the force beyond material dimensions that creates a deep impression of unity or connection with the nature (8).

Spiritual healthconsists of two main dimensions: the verticaldimension,whichencompassesone'sassociation with the supernatural, and the horizontal dimension, which involves one's relationship with the environment and other individuals. Previous studies have implied that without spiritual health, other existential, psychological, and social dimensions of human life are disrupted failing to reach their maximum capacity. Consequently, living without spirituality hinders an individual from achieving the highest level of quality of life (9). During the past 30 years, many scholars have emphasized the significant relationship between spirituality and quality of life, with numerous studies confirming the direct association between these two parameters (10, 11).

In comparison with other chronic diseases (e.g., arthritis and chronic obstructive pulmonary disease), MS has more severe adverse effects on the quality of life and functional role of the patients in social, familial, and maritalrelations. Moreover, the side effects and complications associated with MS are known to weaken the professional performance of the patients. Since MS negatively impacts the quality of life and overall health status, it createsa vicious circle for the patients (8). Therefore, evaluation of the quality of life in MS patients is of paramount importance in order topromotetheir physical, mental, and social performance (9). These dimensions could be evaluated independently or concomitantly.

According to the World Health Organization (WHO), quality of life is defined as the perception of an individual towards their living conditions, which is influenced by one'sculturalbeliefs and values (10). Today, quality of life is a major concern for hygienists and medical researchers (11).

Several studies have emphasized the necessity of enhancing spiritual health in MS patients since this factor is directly correlated with the quality of life (12). For instance, in Mcnulty et al study (13) in this regard reported spiritual beliefs and faith to be significant predictors of coping with the disease and improvement of the quality of life in MS patients.

In general, the concept of spiritual health has received little attention in the medical context. As such, assessment of the relationship between spiritual health and factors such as quality of life, employment status, interpersonal communication, and family and social responsibilities is of paramount importance in MS patients. As in other chronic diseases, healthcare providers aim at maximizing the capabilities, enhancing the physical and psychological performance, and promoting the quality of life of MS patients through effective nursing care (14).

As a broad concept, improvement of the quality of life has recently been viewedas one of the most critical medical objectives. Considering the pivotal role of spiritual health in the well-being of MS patients, evaluation of the quality of life and its influential factors, including the concept of spirituality and spiritual health, could yield valuable information for healthcare planners. As defined by WHO, overall health encompasses the physical, physiological, social, and spiritual aspects of an individual's life. Spiritual health is an essential component of human health, which has drawn the attention of many researchers.

According to some scholars, lack of spiritual health leads to the deterioration of other health aspects, and therefore, the individual could not obtain the highest level of quality of life (15). In Iran, especially in regions such as Mazandaran, limited studies have

focused on the concept of spiritual health, quality of life, and the associatedfactors in MS patients with different geographicalbackground.Since this patient population has been mostly investigated in terms of physiological interventions, this study aimed to evaluate the relationship between spiritual health and quality of life in MS patients. It is hoped that the results of this study pave the way for adequate support of MS patients through related interventions and care programs.

Materials and Methods

This cross-sectional study was conducted on 223 MS patients referred to Mazandaran Multiple Sclerosis Association (MMSA) during May-September 2015. Study protocol was approved by the Ethics Committee of Research and Technology Department of Mazandaran University of Medical Sciences. Participants were selected via census sampling.

Inclusion criteria of the study were as follows: 1) definitive diagnosis of MS by a neurologist based on McDonald 2 criteria (adopted from patient records); 2) age above 18 years; 3) ability to read and write; 4) awareness of Multiple Sclerosis disease; 5) not being pregnant; 6) no history of severe or acute stress within the past six months (e.g., sudden death of immediate relatives); 7) disease duration of more than one year and 8) absence of cognitive disorders or chronic diseases.

Exclusion criteria were as follows: 1) disability above level five based on the scoring scale of Expanded Disability Status Scale; 2) patients diagnosed with progressive MS; 3) patients in the relapse phase of the disease and 4) unwillingness to participate in the study.

In sample selection, religious background of the patients was not taken into account since the instrument used to evaluate spiritual health mainly focused on the basic belief and faith of the respondents in God.

Data collection tools included a demographic questionnaire (age, gender, marital status, disease duration, economic status, and education status), Paloutzian's spiritual well-being scale, and the standard Multiple Sclerosis Quality of Life (MSQOL-54).

Spiritual well-being was evaluated using Paloutzian and Ellison's 20-Item Spiritual Well-being Scale (SWBS). This test consists of 20 questions of which 10 questions measure religious well-being and the other 10 questions measure existential well-being. These items are scored based on six-point Likert scale. Scores are from 1 to 6 as: from strongly disagree to disagree-slightly and agree-strongly. In addition, 9 items have been scored in reverse.These 20 items generally measure the underlyingphilosophy of life, having purpose and meaning inlife, as well as love and forgiveness. Existentialwell-being deals with having life satisfaction andpurpose and religious well-being deals with beingsatisfied because of a relationship with a supremepower or God. The overall score of spiritual wellbeinghas been divided into three levels: High (100-120), Moderate (41-99) and Low (20-40). Paloutzian's spiritual well-being scale has been evaluated and translated into Persian by Seyyed Fatemi et al. (16). Content validity has been used to confirm the validity of this scale, and its reliability has been determined at Cronbach's alpha of 0.82 (17).

MSQOL-54 consists of 54 items, 18 of which specifically involve MS patients, and 36 items focus on general quality of life (SF-36). Items in this questionnaire are responded with 2-7 options and scored based on a Likert scale. Total score of quality of life in MSQOL-54 was calculated by summing up the scores obtained in two areas of physical health (physical role limitation, overall physical health, pain, energy, health perception, and sexual function) and physiological health (mental role limitation, vitality, mental and social function, mental health defects, and life satisfaction).

Minimum and maximum scores of quality of life in MSQOL-54 ranged between 0-100, with higher scores interpreted as more favorable quality of life. This scale was first designated in 1995 for patients suffering from MS. Validity and reliability of this scale have been verified at the correlation-coefficient of 0.86 in foreign and domestic studies (18-20).

Official permit for conducting this study was obtained

from Mazandaran University of Medical Sciences and presented to the MS association of the provinceduring weekdays (Saturday-Thursday). In order to have access to all the patients, the researcher referred to the MS association in two shifts in the morning and afternoon. Researchers then selected the subjects and provided them with adequate explanation aboutthe study objectivesand obtaining informed consent, finally asked theseparticipants to complete the questionnaires.

Data analysis was performed in SPSS V.18 using descriptive statistics (mean, standard deviation, and frequency), independent T-test, and Pearson's correlation-coefficient, and *P* value of 0.05 was considered significant.

Results

In this study, MS patients were within the age range of 18-30 years (mean age: 36.14±9.4 years), and mean of disease duration was 8.41±6.8 years. The majority of the patients were female (64.6%) and married (64.1%). With regard to education status, the majority of the participants (57.8%) had academic education, and 38.1% of the patients were employed. Moreover, 57.4% of the patients had favorable economic status.

According to the results of this study, 71.7% and 28.3% of the MS patients had average and high quality of life, respectively. Mean scores of quality of life and its dimensions are shown in Table 1. The results of independent T-test were indicative of no significant correlation between spiritual health and gender. However, the mean score of spiritual health in female patients was calculated at 82.1±5.6, while it was 81.6±4.8 in male subjects, which was indicative of higher spiritual health in female patients with MS. Mean scores of spiritual health in two dimensions of existential and religious health

Table 1. Mean scores of quality of life and spiritual health dimensions in patients with multiple sclerosis (MS), (n= 223)

Dimensions			Score (Mean±SD)
Quality of life	Overall physical health	Physical role limitation	22.53±14.65
		Overall physical health	47.66±19.21
		Pain	58.99±12.89
		Energy	33.32±7.12
		Health perception	64.97±6.86
		Sexual function	65.8±25.88
		Total score	49.37±10.65
	Overall mental health	Mental role limitation	44.84±41.63
		Emotional well-being	45.66±8.44
		Cognitivefunction	83.87±8.18
		Social function	43.34±9.45
		Health distress	40.02±17.74
		Life satisfaction	50.33±20.48
		Total score	50.3±12.84
	Total score		50.2±12
Spiritual well-being	Religious health		45.09±7.9
	Existential health		37.4±6.74
	Total score		82.5±14.4

Table 2. Correlations between spiritual health and quality of life in MS patients (n= 223)

	Existential health	Religious health	Spiritual health
Physical dimension of quality of life	r=0.92 *P*<0.0001	r=0.87 *P*<0.0001	r=0.91 *P*<0.0001
Mental dimension of quality of life	r=0.92 *P*<0.0001	r=0.95 *P*<0.0001	r=0.95 *P*<0.0001
Overall quality of life	r=0.97 *P*<0.0001	r=0.95 *P*<0.0001	r=0.97 *P*<0.0001

are presented in Table 1.

Our findings were indicative of a positive significant correlation between thescores of quality of life and spiritual health among MS patients. As such, quality of life of these patients improved with strongerreligious inclinations (*P*=0.0001, r=0.975) (Table 2).

Discussion

According to the results of the present study, level of spiritual health among MS patients was average, which is consistent with previous studies in this regard (12, 13, 21). Patients with chronic diseases, such as MS, are frequently faced with social and psychological stressors, such as existential conflicts associated with the induced pain, which challenges their perception towards the meaning of life (22). Therefore, it seems that the problems associated with MS, cause the patients faced a gap in spiritual and religious matters; this leads to certain changes in the overall health of the patients.

In the current study, mean scoreof religious health in MS patients washigher compared to the dimension of existential health, which is in line with the results of previous studies in this regard (23, 24). On the other hand, this finding is inconsistent with the results of Allahbakhshian et al study (12), which could be due to diversities in the cultural and religious background of MS patients in different cities and provinces (25).

Our findings indicated thatthe level of spiritual health was higher in women compared to men, which is consistent with the results of previous studies in this regard (8, 12, 23, 24). It seems that involvement with life disability and responsibilities in men might aggravate the disease, leading to the lower tendency of men to comply with spiritual and religious issues. In the present study, the majority of MS patients had poor quality of life, which could be due to the limitations associated with the disease, such as the disability to perform daily tasks. Therefore, special attention must be paid to the promotion of quality of life in patients with MS.

According to the results of the present study, the dimension of "physical role limitation" had lower scores in terms of quality of life compared to the other dimensions of this parameter, which is consistent with the results of previous studies in this regard (20, 21, 25). On the other hand, the highest scores of quality of life were observed in the dimension of "cognitive function". Considering the fact that the majority of MS patients in Iran suffer from recurrence (25), cognitive function of the patients is not significantly affected. It is also noteworthy that in the current study, mean duration of MS was eight years, and the patients had no significant mental afflictions caused by the disease.

Findings of the present study were indicative of a positive significant correlation between spiritual health and quality of life in MS patients, which is in line with similar studies conducted on dialysis and elderly, hospitalized patients (26-28). Several studies have confirmed the pivotal role of spirituality in promoting the hope, compatibility, and adjustment of patients with the pain and complications caused by life-threatening, incurable diseases. In eastern countries, people commonly have long-established religious beliefs and cultural inclinations. Therefore, multidimensional care of patients in such communities could be facilitated through meaning-oriented programs. In order to enhance the quality of life and ability to cope with life-threatening physical disabilities in patients with chronic diseases, identification of spiritual requirements.

Research has established that stressful conditions differently affect individuals depending on their personality traits and perception of challenges (29); some of the influential factors in this regard are the life stage, economic status, and self-esteem. It has been reported that patients with chronic diseaseswho have more favorable socio-economic statustend to cope with their disease more effectually compared to others, which reduces the adverse effects of disease complications on their quality of life (27, 30).

Study limitations

In the present study, since MS patients referred to the clinic onlyonce a week for injections and follow-up, number of referrals to this center (Mazandaran Multiple Sclerosis Association (MMSA)) was limited.

As such, we were not able to access the community of MS patients in the province, and only a limited number of these patients were enrolled inthe study. Therefore, it is recommended that future studies in this regard be conducted on larger sample sizes in order to achieve more accurate results. Furthermore, use of convenient sampling for the selection of MS patients might have influenced the possibility to generalize our findings. Therefore, it is suggested that future studies in this regard use random sampling, as well as different methods of data collection.

Conclusion

According to the results of this study, spiritual health of the majority of MS patients was at an average level. Moreover, the mean scores of quality of life were relatively low among the participants of this study. Spirituality in life could be a beneficial factor for MS patients to cope with the physical and mental complications caused by the disease. As such, in societies where people have long-establishedreligious beliefs, focusing on meaning-oriented care programs could be an effective approach to promote the overall health and quality of life of patients with chronic diseases. Therefore, healthcare providers, especially nurses, are expected to pay sufficient attention to the development and implementation of such interventions in order to promote the quality of life and spiritual health level of MS patients.Therefore, it is recommended that medical and nursing students become familiar with the concept of spiritual well-being as a significant component of health and life satisfaction among patientsto be able to provide appropriate services.

Conflicts of interest

The Authors have no conflicts of interest.

Authors' contributions

All authors contributed equally to the writing of the scientific proposal, data collection, and manuscript drafting. The final manuscript was reviewed and approved by all the authors.

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