Original Research

Investigating The Relationship Between Self-Care And Performance Improvement And Reduction Of Complications Of MS

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Abstract

Background: People with multiple sclerosis (PwMS) are known to use a wide range of medical and non-medical treatments. The present study is applied in terms of purpose and is descriptive-analytical in terms of method and uses a questionnaire . The aim of this study was to investigate the relationship between self-care and performance improvement and reduction of MS complications.

Method : The number of samples was calculated using Cochran's formula, 384 people. The validity of the questionnaire questions was confirmed by professors and experts, its reliability was calculated by Cronbach's alpha test, 0.81. SPSS software was used to analyze the data obtained from the questionnaire. Kolmogorov-Smirnov test showed that the data were abnormal. Finally, the non-parametric Spearman test was used to test the research hypotheses.

Results : The results of Spearman test showed that there is a positive and significant relationship between self-care and performance improvement and reduction of MS complications with 95% confidence level.

Conclusion: The final result of the study showed that self-care practice will improve patients and reduce the complications of MS.

Keywords: Self-care, performance improvement, reduction of complications of MS

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Introduction

MS affects approximately 1 in every 1,000 people and its prevalence is about 1.1 million people in the world [1]. According to the Multiple Sclerosis Association of Iran, there are about 40,000 patients in the country, of which 9,000 have been registered [2]. This number is increasing. Multiple sclerosis is one of the diseases of the central nervous system that is chronic and It is incurable. In this disease, symptoms such as lack of urine control, progressive muscle weakness, feeling of extreme tiredness, etc. strongly affect the life of the individual and his family and leave side effects on quality of life. The most common age of this disease is 20 to 40 years [3]. Multiple sclerosis or MS is a disease of the central nervous system. This disease is one of the most common neurological diseases in humans and is the most debilitating disease at a young age. In this disease, the myelin sheath of the central nervous system, such as the brain, optic nerve, and spinal cord, is damaged. The most common onset period is adolescence and is about twice as common in women as in men [4]. Self-care increases the ability of parents of patients to deal effectively with health problems. And increases the possibility of constructive health-related decisions and a commitment to participate in care and treatment of long-term illness. Adherence to self-care behaviors leads to better disease control. Self-care has a direct role in disease control and increases life expectancy, healthier and more active life, improves quality of life, reduces costs and hospitalization, better control and improves treatment outcomes [5] . Self-care involves learned, conscious, and purposeful actions. What people do for themselves, their people and their families. To stay healthy. Self-care is known as one of the health-promoting behaviors. According to Pender, health-promoting behaviors are any action taken to increase and maintain the health and self-fulfillment of an individual or group. Self-care is not a substitute for professional and organizational care, but its complement and one of the determining factors in how much and how to use it. Self-care means conscious, acquired and purposeful activities that people do in order to maintain their life, ensure and maintain their health. And in it, people use their knowledge and skills to take care of their health responsibly. Self-care is the most important form of care in the first level of prevention for all countries (developing and developed). Because at this level most diseases can be effectively prevented, in fact at this level of prevention, the individual is the core of the self-care function, which in this regard is supported by family, community and policy makers [6].

Background

Nasiri et al. (2016)[7] have conducted a study entitled "The effect of family-centered education on self-care in patients." Due to the role that studies have given to family-centered education, to promote health and well-being, to motivate patients to adhere to treatment and prevention, and to reduce treatment costs. This article is designed to investigate family-centered education on self-care in patients. This review study was written in 1398 using all articles indexed in national and international databases since 2000 and using the keywords family-centered education, self-care, patient care and family empowerment. 42 articles were reviewed qualitatively and quantitatively. In recent decades, the concept of family-centered education and self-care has been addressed and has been considered in various specialties of medical sciences, including nursing. With health-centeredness, attention has increased to a family-centered approach that emphasizes participatory decision-making for the patient. One of the effective models in this field is the family-centered empowerment model, the effect of which on patients' self-care has been confirmed. And family support in patient education has been proposed as one of the

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success factors in education and health promotion and disease prevention by increasing self-efficacy. The use of models such as family-centered empowerment in education can be effective in promoting self-care behaviors and its effect has been confirmed in several studies. Family empowerment increases knowledge, attitude and performance improvement, increases self-care capacity and It leads to improving the quality of care and accelerating the recovery of patients and reducing the complications of the disease. Rastegar et al. (2017)[8] have conducted a study entitled "Designing a self-care application for MS patients". Multiple sclerosis is a chronic and progressive disease that affects more than 2.5 million people worldwide. It is also the most common non-traumatic cause of neurological disability in young and middle-aged people in the world. Research shows that self-care interventions significantly improve quality of life outcomes in people with MS. Therefore, researchers sought to design and provide a self-care application for MS patients.

Materials & methods

This research is an applied study, of research and development type. First, the self-care content of MS patients was extracted from various specialized books and classified into various topics such as disease symptoms, patient nutrition, exercise, drugs and side effects and reviewed by specialists and experts. Then, for the initial design of the application, the collected materials were provided to the programmer. Then, in order to evaluate the initial version, the application was distributed among a number of patients and experts. Finally, based on the opinions of patients and experts, the final version of the application was designed and approved by experts.

Findings

The information elements and functional capabilities required by the program were identified. The final product is a mobile application that can be used for Android environments, and the application interface is easy and designed in Persian, and the content of the application can be provided offline (without the need for the Internet).

Electronic treatment monitoring has prevented restrictions such as transportation, time, and difficulty in accessing specialists. Mobile-based applications provide a multidimensional tool for patients with multiple sclerosis to improve their self-care, and these programs help empower patients, follow treatment strategies, and treat the disease. Habibnia et al. (2017) [6] have conducted a study entitled "The effect of self-care education on the performance of MS patients in a clinical trial study". MS is a chronic autoimmune disease in which the immune system damages the myelin of the central nervous system. Myelin is lost in many parts of the nervous system and affects sensory and motor function. Between the ages of 20-40, it occurs twice as often in women as in men. There is no definitive treatment and it causes many problems in all aspects of patients 'lives, so performing uncomplicated and effective intervention in the form of self-care education is especially important to improve patients' performance. The results of this study showed that self-care education improves the performance of MS patients. Therefore, self-care education can be used as a useful and effective intervention in improving the performance of MS patients. Masoudi et al. (2011)[9] have conducted a study entitled "The effect of self-care program based on the Orem model on fatigue and daily activities of life in patients with multiple sclerosis." Fatigue is one of the most excruciating symptoms of multiple sclerosis. Fatigue, by reducing self-care activities, limits role-playing and limits a person's ability to perform daily activities. The aim of this study was to determine the effect of self-care program based on Orem model on fatigue and daily activities in patients with multiple sclerosis. The use of a self-care program based on the Orem model, based on the patient's

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educational needs and as a low-cost non-invasive nursing intervention, is effective on fatigue and daily activities of multiple sclerosis patients.

Research objectives

Investigating the relationship between self-care and performance improvement in MS patients.

Investigating the relationship between self-care and reducing the complications of MS patients.

Theoretical foundations of research

What causes MS?

The cause of MS is unknown. Research suggests that a combination of genetic and environmental factors may play a role.

Genes and family background

MS is not inherited directly, and unlike some complications, it is not caused by a single gene. It is possible that a combination of genes may make some people more susceptible to MS; But these genes are also present in all members of the population. So genes are only part of the story, and other factors are involved in MS. Although MS can occur in more than one family member, it is more likely not to happen. In fact, the risk of having a child with MS is only 2 percent for someone who has had MS.

Environmental factors

MS is more common in areas far from the equator. In countries such as Malaysia and Ecuador, MS is almost unknown; But it is more common in the United Kingdom, North America, Canada and Scandinavia. The reason for this is not clear, but it is possible that an environmental factor, which may be a bacterium or a virus, may play a role. To date, no virus has been identified that affects MS, but there is growing evidence that a common childhood virus, such as Epstein Barr, can act as a trigger. This theory remains unproven, and many people without MS may have been exposed to these viruses, so just like genes, they are less likely to be the whole story.

Different types of MS

There are four types of MS, each with its own characteristics. Regardless of the type of MS, some patients may have only a mild form throughout their lives, while for others these effects may appear quickly. Most patients with MS have an experience between these two extremes. It is not always clear what type of MS the patient has, especially when the disease has just been diagnosed. Regardless of the type of MS, health professionals manage and control the symptoms of the disease based on individual needs.

Relapsing-receding MS

In many patients (approximately 85%), receding-relapsing MS is diagnosed first [10].This means that in a relapsing patient (recurrence refers to cases in which people with MS develop new symptoms or their previous symptoms return and recur), recurrences can be very high. They occur quickly and usually last for a few weeks, and their severity varies from mild to severe. Of course, it is possible to get relief after a relapse, and the person with MS will recover completely or partially. Most people who are diagnosed with MS initially have "recurrent and relieving MS." Or experience an exacerbation of the symptoms of the disease (also called an attack or exacerbation of the disease), after which the disease subsides.

Benign MS

In benign MS, complete or partial recovery of the patient after the onset of complications can only be achieved after several years of MS. Recognized. Only if one patient can be infected. The benign SS found that the MS did not worsen over 10 to 20 years and that the person had little or no disability. It is difficult to provide accurate statistics, but between 10 and 30 percent of people with MS are likely to fall within this broad definition and have spent several years without serious disability. But using the word "benign" can be misleading. Benign MS does not mean that the patient will not have any problems; Rather, after years of MS being latent, a recurrence period may

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occur from time to time. Unfortunately, it is still difficult to predict the symptoms of MS, even with the symptoms one has experienced so far.

Progressive secondary MS

Many people start with relapsing-receding MS and then progress to what is called progressive secondary MS. Progressive MS is a condition of MS that is constantly increasing in severity. "Primary progressive MS" is a condition of MS that is progressive from the beginning. But "secondary progressive MS" refers to a condition of MS that worsens later and after a few years of "recurrent and relieving MS" [10]. In progressive secondary MS, the complications after recurrence of the disease are not completely eliminated and the degree of disability always increases. To determine if a patient has progressed to secondary MS, whether the recurrence continues or not, he or she should have a steady deterioration for at least six months. On average, 65% of patients with relapsing-receding MS develop progressive secondary MS 15 years after diagnosis [11].

Progressive primary MS

Progressive Primary MS is a relatively uncommon form of MS - affecting about 15% of people with MS [4]. This type is usually diagnosed in older people, who are usually forty years old or older. From the very beginning of the disease, a person with primary progressive MS develops symptoms that become more and more severe, and at the same time, their disability increases. Unlike relapsing-receding MS, men and women are equally at risk for developing this type of MS [12].

Self-care

The concept of self-care was first proposed in 1959 by Orem [3] under the title Nursing Theory of Self-Care Deficiency. Self-care refers to the activities that each person deems necessary to perform in order to maintain their life, health and well-being [5].

Research Hypotheses

There is a positive and significant relationship between self-care and improving the performance of MS patients.

There is a positive and significant relationship between self-care and reducing the complications of MS patients.

Research method

The present research is applied in terms of purpose and has a descriptive-analytical nature in terms of method. Data collection was with the help of library documentary studies and field surveys were done through observation tools and completing a questionnaire. The statistical population of the study was MS patients in Tehran and 30 people were selected as the sample. Its reliability was calculated by Cronbach's alpha test of 0.77 (Table 2). SPSS software was used to analyze the data obtained from the questionnaire. Kolmogorov-Smirnov test showed that the data were abnormal. Finally, the nonparametric Spearman test was used to test the research hypotheses.

Table 1 - Cronbach's alpha test

Dimensions	Cronbach's alpha value
Self-care	0.77
Improving the performance of MS patients	0.77
Reducing the complications of MS patients	0.77

Results

According to Table (2) Kolmogorov-Smirnov test showed abnormality of research data, so Spearman test was used.

Table 2 - Kolmogorov-Smirnov test to check for normality

Variable	Number	Kalmogrov-Smirnov	Significance (P)
Self-care	30	1.369	0.001
Improving the performance	30	1.412	0.001

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of MS patients			
Reducing the complications of MS patients	30	1.588	0.001

Investigation of research hypotheses

The first hypothesis:

H1: There is a positive and significant relationship between self-care and improving the performance of MS patients.

H0: There is no positive and significant relationship between self-care and improving the performance of MS patients.

Table 3. Spearman correlation test assumptions for the first hypothesis

Spearman correlation coefficient value	The significance level	Result
0.541	0.000	Significant positive correlation and rejection of H

According to Table (3), the results obtained for the level of significance indicate that the correlation between the two variables of self-care with improving the performance of MS patients with a coefficient of 0.541 and sig = 0.000 was confirmed and accepted with a 95% confidence level. Is. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of self-care with improving the performance of MS patients and as a result, H0 hypothesis is rejected and H1 hypothesis is confirmed.

H1: There is a positive and significant relationship between self-care and reducing the complications of MS patients.

H0: There is no positive and significant relationship between self-care and reducing the complications of MS patients.

According to Table (4), the results obtained for the level of significance indicate that the correlation between the two variables of self-care with reducing the complications of MS patients with a coefficient of 0.541 and sig = 0.000 was confirmed and accepted with a 95% confidence level. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of self-care with reducing the complications of MS patients and as a result, the H0 hypothesis is rejected and the H1 hypothesis is confirmed.

Table 4. Spearman correlation test assumptions for the second hypothesis

Spearman correlation coefficient value	The significance level	Result
0.541	0.000	Significant positive correlation and rejection of H

Discussion

Self-care is an important aspect of treatment for patients with multiple sclerosis. Self-care activities are activities that people do in order to maintain themselves and gain independence in daily life. Self-care activities and their independence as much as possible is one of the most important issues for all patients [9]. With advances in medical science and increased life expectancy, the number of patients with disabilities has also increased. This increases the likelihood of dependence on personal matters depending on the type of disability. Kolmogorov-Smirnov test showed that the research data were abnormal, so Spearman test was used. The results obtained for the level of significance indicate that the correlation between the two variables of self-care with improving the performance of MS patients with a coefficient of 0.541 and sig =

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0.000 is confirmed and accepted with a 95% confidence level. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of self-care with improving the performance of MS patients and as a result, H0 hypothesis is rejected and H1 hypothesis is confirmed. Which is consistent with the results of Masoudi et al (2011)[9] and Maftoon et al (2015)[12]. The findings for the significance level indicate that the correlation between the two variables of self-care with reducing the complications of MS patients with a coefficient of 0.541 and sig = 0.000 is confirmed and is accepted with a 95% confidence level. Due to the fact that the level of significance in the correlation coefficient is less than five percent, so there is a direct and significant relationship between the two variables of self-care with reducing the complications of MS patients and as a result, the H0 hypothesis is rejected and the H1 hypothesis is confirmed. Which is consistent with the results of Panahi et al (1397)[2] and Habibnia et al (2017)[6].

Conclusion

The final result of the study showed that self-care practice will improve patients and reduce the complications of MS. And there is a correlation between self-care variable and improving MS patients 'performance, and reducing patients' complications.

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