A Hope-Based Group Therapy Program to Women with Multiple Sclerosis: Quality of Life

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ABSTRACT

The aim of this study was to assess the effects of a Hope-Based Group Therapy (HBGT) program on Multiple Sclerosis (MS) women's quality of life. Thirty two women with MS were assigned either a HBGT group (n = 18) or a non-HBGT group (n = 14). We used the variables physical health and mental health for indicator of perceived health and the variable hope thoughts for hope-related outcome. The HBGT program resulted in significant improvements in the quality of life of women with MS. In conclusion, this study provides evidence that HBGT can be used as an effective program for improving hope thoughts, mental health and physical health in women with MS, and could thus influence their quality of life.

Key Words: Training, Hope-Based Group Therapy, Quality of Life, Multiple Sclerosis Disease

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Introduction

Multiple Sclerosis (MS) disease is an autoimmune, inflammatory, chronic, and progressive illness that appeared as a nerve injury with degraded myelin in the white body of a brain, spinal cord, and vision nerve (Fitzner and Simons, 2010). MS is one of the most important diseases of the central nervous system and one of the most common neurological diseases in humans and the most common disability in young people (Pérez-Cerdá *et al*., 2016; Ding *et al.*, 2017). According to the National MS Society report in 2011, more than 2.1 million people worldwide are afflicted with MS disorder (Browne *et al*., 2014).

MS like other autoimmune diseases in women is more common; it is two times more than men (Harbo *et al*., 2013). The most commonly occurring age of this disease is 20 to 40 years old (Loren and Rolak, 2002). Given the specific nature of MS, including uncertain cause, unknown prognosis and unpredictable recurrence periods and high prevalence at young ages that one has the most family and social responsibilities and indeed in the age of fertility, it greatly affects the life quality of individuals and levels of psychological adjustment to illness (Simmons, 2010).

Many studies investigated the health-related quality of life (HRQOL) in MS patients, much more than other neurological diseases (Berrigan *et al*., 2016). In a general definition provided by the World Health Organization (2006), HRQOL depends on the extent to which the individual's physical, psychological and social health is affected by a disease or treatment. This definition emphasizes the individual's mentality and the multidimensional quality of life (AGHA *et al*., 2012). The first study on HRQOL of MS patients was published in 1990, since then, many studies have been done on the HRQOL of these patients (Mitchell *et al*., 2005; De Oliveira et al., 2017; Miller and Dishon, 2006; Rudick *et al*., 2007).

The results of these studies show that MS patients have lower quality of life

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than healthy people. Other studies that compared the quality of life of MS patients with patients with other chronic diseases such as epilepsy, diabetes, rheumatoid arthritis and inflammatory bowel disease showed that MS patients have significantly lower quality of life (Hermann *et al*., 1996; Baumstarck *et al*., 2013). In examining the factors affecting the quality of life of these patients, the results of various studies indicate the impact of a set of biological, psychological and social factors on the quality of life of MS patients, such as fatigue (Janardhan and Bakshi, 2002), physical disability severity (Delgado-Mendilivar *et al*., 2005), and coping strategies, creativity, self-efficacy and received support (Mitchell *et al*., 2005). Based on this evidence, all recent research on MS has suggested that MS therapy should be done in a holistic and team-oriented way and that the quality of life of these patients should be promoted through interdisciplinary collaboration of specialists in physical, psychological and social affairs.

In contemporary psychology, with the emergence of positive psychology and health psychology, factors such as happiness, optimism, creativity, meaning in life, self-control, social support and hope, and the use of methods based on these factors in the prevention and treatment of physical illnesses have been considered instead of focusing solely on injuries or mental disorders (Fattahi *et al.,* 2017; Bejarpas and Soleimani, 2017; Gao *et al*., 2017). Meanwhile, the structure of hope has attracted increasing attention. Snyder, the founder of Hope Theory and its treatment, define hope as a structure that includes two concepts: "the ability to design paths or crossings to desirable goals in spite of existing obstacles and the motivating factor for using these crossings" (Grewal and Porter, 2007). He states that the use of hope can turn a patient center into a health center, because of the tremendous effects of the emergence and treatment of major physical and mental disorders in health care centers. The goal of hope therapy is to help target patients to identify clear targets, create multiple paths for the goals, motivate them to pursue the goals, and frameworks barriers as challenges that must be overcome. This intervention is done in a group and derived from thoughts derived from cognitive-behavioral therapy, solution-focused therapy, and narrative therapy, because Snyder's theory assumes that hopeful thinking is reflected in an exchange process.

The Snyder's research results show that hope therapy can improve mental health and quality of life in patients (Weis and Speridakos, 2011). Recent studies have shown the effect of promoting hope on improving the quality of life in a variety of chronic diseases, such as cancer patients (Rustøen, 1998), HIV-positive male patients (Ghezelseflo and Esbati, 2013), and patients with essential hypertension (Mancia and Grassi, 2010). With regard to such results, probably hope therapy can be used as an effective way to improve the quality of life of patients with MS.

Therefore, the aim of this study was to assess the effects of a hope-based group therapy program on perceived health in women with MS disorder. As an indicator of perceived health, we used the variables physical health and mental health (Hobart *et al*., 2001; Ramp *et al*., 2009; McGuigan and Hutchinson, 2004). Furthermore, we included hope thoughts as an important hope-related outcome variable (Snyder *et al*., 1991).

Methods

Participants

Thirty two women (age = 35.4 ± 3.7 years) with MS disorder participated in our study. The women were equally divided into groups based on the criteria age, education level, marital status, job status and duration of MS. Eighteen of the women (mean age = 35.1 ± 3.2 years, duration of MS = 30 ± 10 days) comprised the hope-based group therapy group (HBGT group) and attended a 8 week HBGT program. Fourteen women (mean age = 35.2 ± 2.8 years, duration of MS = 30 ± 12 days) comprising the non-HBGT group followed their regular clinic schedule. The study was approved by the Chronic Disease Research Center in China. All participants provided written informed consent prior to participation in this study.

Measures

We measured hope thoughts of the Snyder Hope Scale (Snyder *et al*., 1991), which consists of 12 items in the original version. The scale measures the hope of a person as a relatively constant personality trait. It applies to all individuals, especially psychiatric patients and for people over 15 years of age. The scale ranged from 8 (lowest score) to 64 (highest score). Snyder *et al*. (2000) supported the reliability and validity of the scale.
We used the scales physical health and mental health of the Multiple Sclerosis Impact Scale (MSIS-29) as indicator of perceived health

(Hobart *et al*., 2001; Ramp *et al*., 2009; McGuigan and Hutchinson, 2004). The scale is a 29-item questionnaire and measures the physical and psychological impact of MS on patients. The physical dimension of the scale consists of 20 questions and ranged from 20 (highest health) to 100 (lowest health). Also, the mental dimension of the scale consists of 9 questions and ranged from 9 (highest health) to 45 (lowest health). McGuigan and Hutchinson (2004) supported the reliability and validity of the scale.

The HBGT program

All women in the HBGT group followed a 1-hour hope-based group therapy program, twice a week for eight weeks, which has been shown to have a positive effect on perceived health in the occupational context (Cheavens *et al.*, 2006). The program provides the principles of hope theory and how these principles are applied in individuals' lives.

Each session consists of 4 parts. In the first part, which lasts approximately 30 minutes, the members of the group discuss the topics of the previous meeting and review the assignment given earlier, and the members are encouraged to help each other to solve problems in doing the assignment. In the second part, which lasts approximately 20 minutes, the members learn a new skill related to hope, including three dimensions of goals, paths, and factor thinking. In the third part, which lasts approximately 50 minutes, the members discuss how to use these skills in their lives and are encouraged to express their problems and help each other learn how to use these skills to solve their problems. Finally, in the fourth part, a homework assignment is provided to the members in 10 minutes, with the goal that the members will use the hope-related skills in their everyday lives. Table 1 provides the content of the second part by separation of treatment sessions.

Statistical analysis

We calculated the mean and SD for women in the both groups. Also, we used an analysis of variance (2 × 2 MANOVA) with the measures mentioned above to examine the effects of Time (before-after the HBGT program) and Group (HBGT-non HBGT group) on the dependent variables physical health and mental health. We set the significant level at $\rho < 0.05$.

Results

Table 1 shows the correlations between the variables hope thoughts, physical health and mental health at before and after the program for both the groups.

Table 1. Contents of the second part

Row	Contents
1	Determining the purpose and types, the need for goal in different spheres of life, ways to achieve the goal and the motivation necessary to pursue the goals.
2	Describing the relationship between thinking and feeling, expressing ways to increase factor thinking through setting the goals, explaining the continuity of progress, and expressing the need to re-evaluate the goals.
3	Expressing three strategies for setting the goals in a practical manner (setting the objective goals by considering the end point, in the form of a tendency approach and breaking the big goals into sub-goals).
4	Expressing two main areas of motivation (physical and psychological motivation), explaining self-esteem as an important factor in mental willpower, studying the reasons to apply negative self-reflection and expressing ways to change the negative self-reflection.
5	Expressing path strength to achieve the goals and providing two strategies to improve the path strength (having multiple paths and listing them and visualizing the success of the paths).
6	Expressing another way to increase the level of mental willpower (reassessment of the goals), and ultimately expressing two strategies to increase the level of physical willpower (regular diet and exercise modalities adapted to physical conditions and expert supervision).
7	Talking about obstacles to reach the goals and ways to deal with the obstacles (having different ways to reach the goal, thinking about obstacles before they get ahead, etc.).
8	Expressing the possibility of recurrence and slipping and providing an opportunity to members to talk about the experience of grouping and emotions at the end of the group.

Hope thoughts

In our first hypothesis we assumed that the HBGT program has a positive effect on hope thoughts. The HBGT group outperformed the non-HBGT group with respect to hope thoughts assessed immediately after the program, $F(1, 30) = 4.59^*$ (Fig. 1). However, tests showed a significant increase of hope thoughts in the HBGT group, before the HBGT program: M = 5.21, SD = 0.18; after the HBGT program: M = 6.03, SD = 0.24, but

significant decrease in the non-HBGT group, before the HBGT program: M = 5.26, SD = 0.57; after the HBGT program: M = 4.69, SD = 0.66.

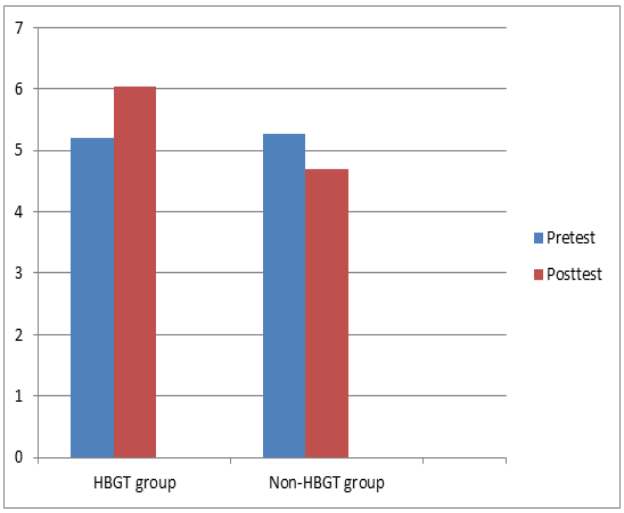

Figure 1. Changes in hope thoughts over time at before and after the HBGT program

Mental health

In the second hypothesis we assumed that the HBGT program has a positive effect on mental health. Fig. 2 shows that the HBGT group outperformed the non-HBGT group with respect to mental health assessed immediately after the program, F(1, 30) = 5.31**. However, tests showed a significant increase of mental health in the HBGT group, before the HBGT program: M = 3.18, SD = 0.29; after the HBGT program: M = 3.63, SD = 0.33, but significant decrease in the non-HBGT group, before the HBGT program: M = 3.23, SD = 0.62; after the HBGT program: M = 3.02, SD = 0.65.

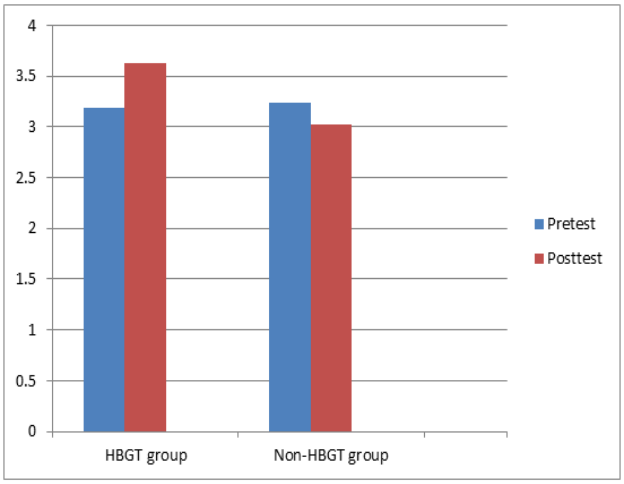

Figure 2. Changes in mental health over time at before and after the HBGT program

Physical health

In the third hypothesis we assumed that the HBGT program has a positive effect on physical health. As shown in Fig. 3, the HBGT group outperformed the non-HBGT group with respect to physical health assessed immediately after the program, F(1, 30) = 4.81*. However, tests showed a significant increase of physical health in the HBGT group, before the HBGT program: M = 4.24, SD = 0.93; after the HBGT program: M = 4.49, SD = 0.54, but significant decrease in the non-HBGT group, before the HBGT program: M = 4.19, SD = 0.48; after the HBGT program: M = 3.87, SD = 1.07.

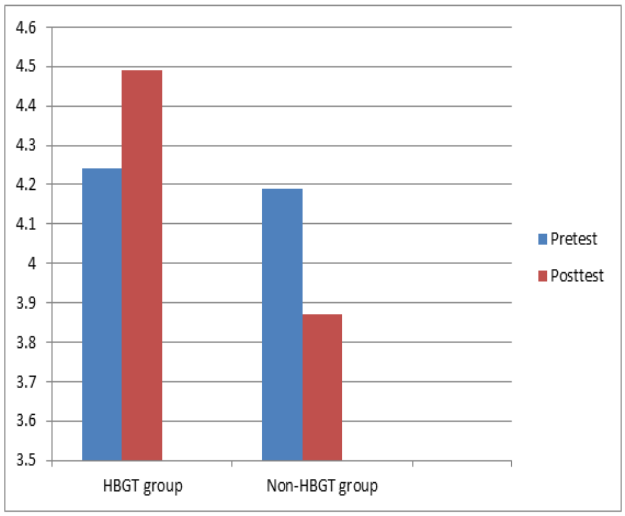

Figure 3. Changes in physical health over time at before and after the HBGT program.

Discussion

Multiple sclerosis is one of the diseases of the central nervous system, chronic and non-treatable, and according to recent studies its emergence can affect the quality of life of these patients. The purpose of this study was to investigate the effectiveness of Hope-Based Group Therapy (HBGT) on the quality of life of MS patients. The results after the HBGT program showed that there is a significant difference between the HBGT group and the non-HBGT group in terms of quality of life; therefore, the HBGT program has led to an increase in quality of life in participants in the experimental group compared with the control group. Our results support former findings showing positive effects of HBGT programs on indicators of perceived health in the occupational context (Sanatani, Schreier and Stitt, 2008; Duggleby *et al*., 2007).

The findings of this study indicate that the HBGT program, as a technique, increases the re-look into important areas of life and the patient

determines important, satisfactory, achievable, and relevant goals and conditions. Also, his belief in being able to find directions towards desirable goals and prompts himself to use and use the directions create positive emotions and well-being in him. The results in the HBGT group indicate that the HBGT program lead to improve the mental and physical dimension of quality of life in women with MS (Tesar *et al*., 2003; Snyder, 2002; Gum and Snyder, 2002; Snyder *et al*., 2002, 2006).

In conclusion, our study showed improvements in quality of life by women with MS who participated in the 8-session HBGT program. This provides evidence that group therapy programs can improve physical and mental health in individuals with MS.

This research has some limitations, so it is suggested that future studies examine the following: Sustainability of the treatment effects in 3 or 6-month periods, the effect of hope therapy on other psychological disorders in patients with MS, the role of a possible moderator of the type of MS (including relapsing-remitting, primary-progressive, secondary-progressive, and progressive-relapsing) and the extent of disability. It is also recommended to specialists and therapists the following: The comprehensive use of general overview, team and interdisciplinary methods in the treatment of MS patients, developing preventive plans based on the hope Snyder's theory and using its preventive role by educating students and adolescents in order to protect them from stressful life events.

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