

Research Paper

Evaluation the Effect of the Health Promoting Lifestyle by Multimedia Education on Sexual Function in Women With Multiple Sclerosis



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ABSTRACT

Background & Aims Multiple sclerosis is the most common progressive neurological disease in young people and affects women several times more than men. Sexual problems are one of the most common symptoms in affected women, which have a great impact on the couple's relationship and are often ignored. Therefore, the present study aimed to determine the effect of health-promoting multimedia education on sexual function in women with multiple sclerosis.

Materials & Methods The present study is a randomized controlled trial of before and after with the control group. 116 women with multiple sclerosis, referred to Hazrat Rasool Akram Hospital and a private referral center for multiple sclerosis patients (from 21 September 2020 to 19 January 2021) were selected by continues sampling method to participate in the study. They were assigned as two groups, intervention and control ones, using the Sealed envelope randomized online site which randomly divided to single up to quintuple blocks, which allocated equally in intervention and control groups. Data collection tools were demographic profile form and intimacy and sexual activity questionnaire for multiple sclerosis patients (MSISQ-19). Data analysis is done by using descriptive statistical methods (mean, standard deviation, frequency and percentage) and with independent t-test, chi-square, analysis of covariance and analysis of variance with repeated measures RM using SPSS software v. 16.

Results Before the intervention, there was no significant difference between the two groups in terms of sexual function scores and all its dimensions ($P=0.690$). Mean sexual function in the intervention group at 4 weeks ($P=0.014$) and 12 weeks after the intervention ($P=0.021$) was significantly lower than before, but there was no statistically significant difference between the scores at 4 weeks and 12 weeks after the intervention ($P<0.050$).

Conclusion Health-promoting lifestyle (HPL) training has an effect on sexual performance of women with multiple sclerosis and this training can be a good way to improve their sexual problems.

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Extended Abstract

Introduction

Multiple sclerosis is the most common progressive neurological disease in young people, affecting women several times more than men. Sexual problems are one of the most common symptoms in women with multiple sclerosis that is often neglected. The main aim of this study is evaluate the effect of health promoting lifestyle (HPL) education in multimedia method on the sexual function of women with Multiple Sclerosis.

Materials and Methods

The present study is a randomized controlled trial of before and after with the control group. 116 women with multiple sclerosis with inclusion criteria, referred to **Hazrat Rasool Akram Hospital** and a private referral center for multiple sclerosis patients (from 21 September 2020 to 19 January 2021) were selected by continues sampling method to participate in the study. They were assigned as two groups, intervention and control ones, using the Sealed envelope randomized online site which randomly divided to single up to quintuple blocks, which allocated equally in intervention and control groups. After providing a description of objectives and methods of the study, the informed written consent (for those who were invited to study by phone was sent and completed electronically) was completed by the participants. Data collection tools were demographic profile form and intimacy and sexual activity questionnaire for multiple sclerosis patients (MSISQ-19), which were completed three times before, immediately after training (4 weeks after the start of the study) and after the follow-up period (12 weeks after the start of the study) completed. The second and third times of completing the questionnaires were electronic. After completing the questionnaires for the first time, multimedia HPL training with multimedia in 4 sessions of 40 minutes, one session per week was provided for the intervention group. During the training and follow-up period, the researcher answered the participants' questions during a telephone call and providing a brief description of the training on the topic of that week. Data analysis is done by using descriptive statistical methods (mean, standard deviation, frequency and percentage) and with independent t-test, chi-square, analysis of covariance and analysis of variance with repeated measures RM using SPSS software v. 16.

Results

Independent t-test results showed pre-intervention between sexual function scores ($P=0.690$) and all its dimensions (primary $P=0.117$; secondary $P=0.053$; tertiary $P=0.287$) there was no significant difference between the two groups. The results of analysis of variance with repeated measures showed that the scores of sexual function ($P=0.431$) and all its dimensions (primary $P=0.362$, secondary $P=0.915$; tertiary $P=0.168$). There was no significant difference in time in the control group. But in the intervention group, sexual function scores ($P<0.001$) and primary dimensions ($P=0.003$) and secondary ($P<0.001$) had a significant difference in at least one of the times. The results of Bonferroni correction test showed that the scores of sexual dysfunction in primary, secondary and total scores of sexual function in 4 weeks and 12 weeks after the intervention were significantly lower than before ($P<0.050$). There was no statistically significant difference between 4 weeks and 12 weeks after the intervention ($P>0.050$). To evaluate the effect of the intervention, Partial η^2 was used, which according to Cohen's classification is considered as small (0.01), medium (0.06) and high (0.14) effect. The effect size of sexual function was equal to 0.143 and the maximum effect on sexual function was in the secondary dimension (0.216) and the lowest effect was in the primary dimension of sexual function (0.105). The results of analysis of covariance showed that sexual dysfunction in the primary dimension ($P=0.019$) in the intervention group in 4 weeks after the intervention and sexual function in the secondary dimension 4 weeks after the intervention ($P=0.026$) and 12 weeks later in the intervention group ($P=0.013$) was significantly lower than the control group. But there was no significant difference between the scores of tertiary sexual function at 4 weeks ($P=0.249$) and at 12 weeks ($P=0.089$) between the two groups. The total score of sexual function 4 weeks after the intervention ($P=0.014$) and 12 weeks after the intervention ($P=0.021$) in the intervention group was significantly lower than the control group.

The results of covariance test showed that before the intervention, there was a significant difference between the two groups in the sexual dysfunction ($P<0.001$). Many items of female sexual function in the intervention group immediately after the intervention and the follow-up period improved. In the initial dimension of intervention in items with late orgasm, the intensity or low pleasure of orgasm was significant and the highest effect was related to the item of late orgasm (0.176). In the secondary dimension, intervention in pain or burning items, intestinal problems, urinary problems, concentration, memory and thinking problems were significant and the highest effect was related to body pain or

burning items (0.152). There was no difference between the groups in the third dimension

Dissection

According to the findings of this study, HPL education affects the sexual function of women with multiple sclerosis. Therefore, a HPL can be a good way to improve the sexual problems of these women. Training in this study was done using multimedia, which was cost-effective and cost-effective compared to face-to-face methods, and was considered a safe method, especially in the context of the study due to the presence of the corona epidemic. Due to the possibility of repeated use of education at the desired times and places and places have a high impact on the limited time of the study, due to the simultaneous use of multimedia and engaging multiple senses of the body in education, learning faster, deeper and easier wetness and durability has had a greater effect on the learner than what has been learned. It is recommended that physicians, midwives and other sexual health therapists use this method, which is low cost and does not require patient traffic and can be used at any time and place. Officials and therapists of the Multiple Sclerosis Association can use this method along with other methods to reduce the sexual problems of these patients. The absence of the spouses of the women participating in the study and their lack of education, which can be an obstacle to effective communication between the couples, is a limitation of the study to evaluate the sexual function of women with multiple sclerosis.

Ethical Considerations

Ethical permission for this study has been obtained from the ethics committee of [Iran University of Medical Sciences](#) with the code IR.IUMS.REC.1399.367 and has been registered in the Iranian Clinical Trial Center (IRCT2016061528449N4).

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All authors contributed equally in preparing all parts of the research.

Authors' contributions

Research and article writing: Masoumeh Khairkhah and Azadeh Ahadi; Doing statistical affairs of the research: Najmeh Tavakol; Sampling: Massoud Nabavi and Lotfi.

Conflict of interest

The authors declared no conflict of interest.

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