Section: Miscellaneous

Original Research Article

EFFECTIVENESS OF ROCKING IN THE MANAGEMENT OF THE PAIN AND STRESS IN THE YOUNG ADULTS WITH PREMENSTRUAL SYNDROME

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ABSTRACT

Background: Premenstrual syndrome comprises psychological stress and somatic pain, especially during the luteal phase of the menstrual cycle. Rocking improves cognitive functions, sleep and autonomic functions. Vestibular stimulation has also been reported to relieve pain and reduce stress. The studies where rocking was applied in the management of the pre-menstrual syndrome were sparse. Hence, the present study was undertaken.
Aims and objectives: The present study was undertaken to observe the effectiveness of rocking in the management of pain and stress in young adults with premenstrual syndrome.
Materials and Methods: The present study recruited a total of 60 young adults with PMS after obtaining written informed consent. Females with PMS who were willing to participate in the study, between the ages of 18-24 years were part of the study. The participants in the experimental group were made to sit in a rocking chair that was specified in the earlier studies in the literature and subjected to mild rocking for 30 minutes a day for 12 weeks. After 12 weeks of stimulation, post-interventional data was collected in the luteal phase of the menstrual cycle. Depression, anxiety, and stress were analysed using the DASS 21 scale, which is a standard scale to assess negative psychological parameters. Pain scores were recorded using the visual analogue scale.
Results: There was a significant decrease in the depression, anxiety and stress scores and a significant decrease in the pain scores in the experimental group females with premenstrual syndrome when compared to the control group.
Conclusion: The results of the current study support the earlier studies as there was a significant reduction in the stress scores and the pain scores followed by the rocking in a rocking chair. Further detailed multi centre studies with higher sample size were recommended.
Key words: Stress, pain, Premenstrual syndrome, young adults, vestibular stimulation.

INTRODUCTION

Premenstrual syndrome comprises psychological stress and somatic pain, especially during the luteal phase of the menstrual cycle.[1] There will be excess of stress in these individuals, and that adversely affects the day-to-day activities and decreases the quality of life. After the beginning of the menstruation, these symptoms will disappear. The severity of the symptoms varies from mild to severe.[2] These symptoms include loss of hunger sensation, increase in body weight, pain in the abdomen, low back pain, headache, lack of sound sleep, irritability, negative emotions etc.[2] The vestibular system plays a key role in the maintenance of posture and equilibrium. Apart from this function, the vestibular system also plays a key role in the management of cognition and higher

functions. Hence, it is called as sixth sense. Vestibular stimulation can be stimulated by multiple methods. Rocking is a natural way of stimulating the vestibular system. Earlier studies reported many beneficial effects followed by the rocking in the elderly population.[3] Rocking is a simple and cost-effective method of stimulating the vestibular system. It offers sound sleep and calming effects.[4] Another study reported that rocking improves cognitive functions, sleep and autonomic functions.[5-8] Vestibular stimulation has also been reported to relieve pain and reduce stress. The studies where rocking was applied in the management of the pre-menstrual syndrome were sparse. Hence, the present study was undertaken.

Aim and objectives: The present study was undertaken to observe the effectiveness of rocking in the management of pain and stress in young adults with premenstrual syndrome.

MATERIALS AND METHODS

The present study recruited a total of 60 young adults with PMS after obtaining written informed consent. Females with PMS who were willing to participate in the study, between the ages of 18-24 years were part of the study. Those who were already under any kind of treatment or therapy and had any severe complications were excluded from the study. After the recruitment, the participants were randomly assigned into two groups with 30 participants in each group using the random numbers generated by the software. Afterwards, the participants underwent a general physical examination. Soon after, their baseline data was collected in the luteal phase of the menstrual cycle. The participants in the experimental group were made to sit in a rocking chair that was specified in the earlier studies in the literature and subjected to mild rocking for 30 minutes a day for 12 weeks. After 12 weeks of stimulation, post-interventional data was collected in the luteal phase of the menstrual cycle. Depression, anxiety, and stress were analysed using the DASS 21 scale, which is a standard scale to assess negative psychological parameters.9 Pain scores were recorded using the visual analogue scale.10

Statistical Analysis: Data was analysed using SPSS 20.0 version. Student t-test was applied to observe the significance of the difference between the groups. A probability value of less than 0.05 was considered significant.

RESULTS

Table 1 presents the demographic data of the participants. There was not a significant difference in the demographic data of the participants. Table 2 presents the comparison of depression, anxiety, stress, and pain scores before intervention. The values were not significantly different between the two groups. Table no 3 presents the comparison of depression, anxiety, stress, and pain scores after intervention. There was a significant decrease in the depression, anxiety and stress scores and a significant decrease in the pain scores in the experimental group females with premenstrual syndrome when compared to the control group.

Table 1: Demographic data of the participants

Parameter	Experimental group (n=30)	Control group (n=30)	P value
Age (years)	20.67±2.42	21.14±2.73	0.7479
Height (cm)	168±8.85	171.14±9.72	0.5574
Weight (kg)	51.5±5.29	52.14±5.30	0.8183

Data was mentioned as mean and SD.

Table 2: Comparison of depression, anxiety, stress, and pain scores before intervention

Parameter	Experimental group (n=30)	Control group (n=30)	P value
Depression	23.14±2.04	23.80±2.20	0.5419
Anxiety	16±2.45	15.43±1.62	0.6159
Stress	24.63±4.87	28±3.82	0.1451
Pain score	7.89±0.60	8±0.94	0.7662

Data was mentioned as mean and SD. *P value less than 0.01.

Table 3: Comparison of depression, anxiety, stress, and pain scores after intervention

Parameter	Experimental group (n=30)	Control group (n=30)	P value
Depression	19.66±2.88	23.80±2.20	0.0001*
Anxiety	13.11±1.34	15.43±1.62	0.0001*
Stress	25±3.33	28±3.82	0.0011*
Pain score	6±0.21	8±0.94	0.0001*

Data was mentioned as mean and SD. *P value less than 0.01.

DISCUSSION

The present study was undertaken to observe the effectiveness of rocking in the management of pain and stress in young adults with premenstrual syndrome. There was a significant decrease in the depression, anxiety and stress scores and a significant decrease in the pain scores in the experimental group females with premenstrual syndrome when compared to the control group.

Excessive stress was reported in females with premenstrual syndrome.[11] Stimulating the vestibular system was reported to inhibit the stress axis and reduce the cortisol levels.[12] Vestibular stimulation by swing was reported to be beneficial and increase the quality of life.[13,14] The balance between the sympathetic and parasympathetic systems is balanced by the vestibular stimulation. Salivary cortisol was reported to be decreased, followed by the vestibular system. Excessive stress causes negative emotions and reduces the quality of life. Vestibular stimulation reduces stress and improves quality of life.[15] Excessive pain and anxiety were reported during the premenstrual syndrome.[16] A decrease in the pain was reported in the patients, followed by the vestibular stimulation.[17] Another study reported that caloric vestibular stimulation reduces pain effectively in stroke patients.[18] Cold water vestibular stimulation was reported to reduce pain in the central post stroke patients.[19] The results of the current study support the earlier studies as there was a significant reduction in the stress scores and the pain scores followed by the rocking in a rocking chair. Further detailed multi-centre studies with higher sample size were recommended.

CONCLUSION

The results of the current study support the earlier studies as there was a significant reduction in the stress scores and the pain scores followed by the rocking in a rocking chair. Further detailed multi-centre studies with higher sample size were recommended.

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