

# **The impact of Control Therapy on heart rate variability (HRV) and reduced premenstrual syndrome**

## **Dissertation Abstract**

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Premenstrual syndrome and its more severe form, Premenstrual dysphoric disorder as a psychosomatic disorder with a set of physical, behavioral, and emotional symptoms are perceived as a stressful issue which affects on the function of the physical, psychological, and interpersonal relationships of women. Given that, in general, illness and health are now explained through multi-faceted approaches, and researchers are suggested biopsychosocial factors in the context of health and disease. In addition to biological aspects and psychometric aspects of PMS have also been taken into consideration by psychologists. One of the psychological factors in health is control. Premenstrual syndrome as a recurring and stressful cause can lead to loss of control, and as a result these individuals experience more severe symptoms. The perception of this syndrome as a stressful phenomenon can also affect the function of the sympathetic and parasympathetic nervous system. The purpose of this study was to examine control profile in women with premenstrual syndrome and also to test the effectiveness of control therapy on reducing the premenstrual syndrome and improving the index of heart rate variability (HRV). This study examined the above objectives in two steps. In the first study, the profile of people with premenstrual syndrome was compared with normal people. For this purpose, 119 people participated in the project. After the psychiatric interview in the two groups (disease group=59 people and normal group=60 people). the Shapiro Control Questionnaire (SCI) was completed.

In the second study, 33 patients in the experimental (N=22) and control groups (N = 11) participated in the study to evaluate the effectiveness of control therapy on reducing the premenstrual syndrome and control profile and increasing heart rate variability. Therapy delivered in 9 sessions. Both groups filled in the questionnaires of control (SCI), The pre-menstrual tension scale in two stages of pretest and posttest. Also, HRV was measured in both stages. To analyze the research data, descriptive statistics, mean and percentages, and inferential statistics, covariance analysis, one way analysis of variance and repeated measure ANOVA were used.

The results of the first study showed that the control profile of people with premenstrual syndrome and normal people is different in negative sense of control

and negative assertive ( $P < 0.05$ ). However, this difference was not observed in the two groups of premenstrual syndrome and premenstrual dysphoric disorder. The results of the second study also showed that control therapy improved control profiles in positive control, negative control variable ( $P < 0.05$ ), specific control domains ( $P < 0.05$ ), positive assertive ( $P < 0.05$ ) and positive acceptance ( $P < 0.05$ ) and control tendency ( $P < 0.05$ ). It changes profiles from abnormal control to optimal control, as well as reduction of symptoms of premenstrual syndrome ( $P < 0.00$ ). The results also showed that the treatment improved the high frequency (HF) component as a parasympathetic index, but did not have a significant effect on low frequency (LF) and LF /HF index improvement. Based on the findings, it can be concluded that control therapy is effective in reducing severing of syndrome and improving control profiles, but the improvement of HRV indices is not conclusive at the same time.

Key words: Group therapy, Control Therapy, Premenstrual syndrome, Premenstrual dysphoric disorder, Heart rate variability.