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Original Research Article

The Effectiveness of Cognitive Emotion Regulation on Emotional Regulation, Cognitive Flexibility, and Mental Happiness among Students with Internet-addicted: A Pilot Study

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Abstract

Background and Objective: The various attractions of Internet content in diverse functional areas have increased users' consumption and, in acute cases, lead to Internet addiction. The aim of this study was to determine the effectiveness of cognitive emotion regulation training on emotional regulation, cognitive flexibility, and mental happiness of students with Internet addiction.

Materials and Methods: The present study is a quasi-experimental study with pretest, posttest design with experimental and control groups. The statistical population of the study consisted of all students with Internet addiction at Lahijan University in 2017. The statistical sample of the present study included 30 students addicted to the Internet who were randomly divided into two groups of experimental and control (15 people in each group). The training of cognitive emotion regulation strategies was performed as a group in 8 sessions for the experimental group, but the control group did not receive any intervention. Questionnaires of cognitive flexibility, emotional regulation and mental happiness were administered before, after the treatment period and also three months later. Data were analyzed using repeated measures analysis of variance and SPSS.22 software.

Results: The mean (SD) age of the experimental group was 25.26 (1.3), and the control group was 26.02 (1.7) years. In the experimental group, the mean (SD) score of the cognitive reassessment increased from 24.2 (2.1) in the pretest to 30.9 (4.6) in the posttest, and 30.1 (4.4) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of the emotion suppression score decreased from 21.8 (2.8) in the pretest to 16.4 (3.7) in the posttest, and 16.8 (3.6) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of controllability perception increased from 26.1 (5.3) in the pretest to 36.1 (5.9) in the posttest, and 35.2 (5.4) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of the perception of different options increased from 45.5 (1.5) in the pretest to 51.4 (5.4) in the posttest, and 51.1 (5.5) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of mental happiness increased from 29.2 (4.5) in the pretest to 41.7 (4.7) in the posttest, and 39.7 (5.2) in the follow-up, $P<0.001$, but this Changes in the control group were not significant.

Conclusion: It can be concluded that cognitive emotion regulation training effectively increased cognitive reassessment, controllability perception, perception of different options, mental happiness, and reducing emotion suppression among students with Internet-addicted.

Keywords: Emotion Regulation, Cognitive Flexibility, Happiness, Internet Addiction.

Introduction

The various attractions of Internet content in diverse functional areas have increased users' consumption and, in acute cases, lead to Internet addiction. The number of Internet users in the country is over 57 million, which makes Iran one of the most Internet-consuming countries in the Middle East (1).

Internet addiction is associated with poor mental health, increased feelings of loneliness and social isolation, decreased student life satisfaction and academic performance (2). People addicted to the Internet have lower levels of mental happiness (3) and experience severe psychological problems such as anxiety and stress due to severe mental conflict and emotional stress caused by Internet addiction. These conditions lead to a decrease in their mental happiness. Due to the low levels of mental happiness, cognitive flexibility, and cognitive emotion regulation, psychologists use various training courses to increase this group's ability (4). Increasing adaptive emotion regulation strategies increases mental happiness, successfully applying adaptive emotion regulation strategies in different situations, and cognitive flexibility (5). The aim of this study was to determine the effectiveness of cognitive emotion regulation training on emotional regulation, cognitive flexibility, and mental happiness of students with Internet addiction.

Materials and methods

The present study is a quasi-experimental study with a pretest, posttest design with experimental and control groups. The statistical population of the study consisted of all students with Internet addiction at Lahijan University in 2017. The statistical sample of the present study included 30 students addicted to the Internet who were randomly divided into two groups of experimental and control (15 people in each group). The training of cognitive emotion regulation strategies was performed as a group in 8 sessions for the experimental group, but the control group did not receive any intervention. Questionnaires of Internet addiction (6), cognitive flexibility (7), emotional regulation (8), and mental happiness (9) were administered before, after the treatment period, and also three months later. Data were analyzed using repeated-measures analysis of variance and SPSS.22 software.

Results

The mean (SD) age of the experimental group was 25.26 (1.3), and the control group was 26.02 (1.7) years. In the experimental group, the mean (SD) score of the cognitive reassessment increased from 24.2 (2.1) in the pretest to 30.9 (4.6) in the posttest, and 30.1 (4.4) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of the emotion suppression score decreased from 21.8 (2.8) in the pretest to 16.4 (3.7) in the posttest, and 16.8 (3.6) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of controllability perception increased from 26.1 (5.3) in the pretest to 36.1 (5.9) in the posttest, and 35.2 (5.4) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of the perception of different options increased from 45.5 (1.5) in the pretest to 51.4 (5.4) in the posttest, and 51.1 (5.5) in the follow-up, $P<0.001$. In the experimental group, the mean (SD) score of mental happiness increased from 29.2 (4.5) in the pretest to 41.7 (4.7) in the posttest, and 39.7 (5.2) in the follow-up, $P<0.001$, but this Changes in the control group were not significant.

Discussion

The study showed that the cognitive emotion regulation course increased the levels of emotional regulation, cognitive flexibility, and mental happiness of female Internet-addicted students. These findings are in line with the results of another study (10) on the effect of emotion regulation training on psychological distress and cognitive flexibility in heart patients and another study (11) on the effect of emotion regulation training on reassessment and emotional repression in soldiers with the disorder. Learning to deal with dysfunctional thoughts and emotions by learning relaxation techniques such as deep breathing will have a significant effect on increasing emotional empowerment and reducing a person's vulnerability. Cognitive emotion regulation training includes reducing and controlling negative emotions as well as using positive emotions effectively. People who undergo this course are equipped with effective problem-solving skills, anger management skills, identifying and correcting pathological assessments, and cognitive reassessment strategies (12).

Regarding the cognitive flexibility of students with Internet addiction, it should be noted that

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emotion regulation plays an important and significant role in adaptive performance in the environment. The findings of this study were in line with other studies (13, 3), which showed that cognitive emotion regulation training increases the levels of cognitive flexibility. According to the findings of this study, passing the training course on cognitive emotion regulation makes people with Internet addiction better able to control and perceive their surroundings. When a person is less affected by his emotions and learns to adjust his positive and negative emotions with positive strategies. As a result, it will have positive consequences and lead to higher cognitive flexibility in the person (3). In addition to making a person more aware and sensitive to their emotions, emotion regulation training also teaches them to know better about their own and others' positive and negative emotions and to be able to treat others well. Understand, this pattern helps the individual to have more control over their social and personal relationships and to show a higher degree of cognitive flexibility in stressful situations with a higher perception of different problem-solving options. As the findings of this study showed, cognitive emotion regulation training focusing on positive cognitive strategies has reduced negative feelings and increased positive and adaptive emotions in individuals. These conditions have increased the levels of mental happiness of the subjects. Since emotion regulation seeks to regulate and manage emotions, and people with Internet addiction have positive emotion regulation skills that lead to better adaptation to critical situations. Hence, emotion regulation training is effective for this group of people and increases emotional well-being in an individual's life, and promotes mental happiness (14).

Conclusion

It can be concluded that cognitive emotion regulation training effectively increased cognitive reassessment, controllability perception, perception of different options, mental happiness, and reducing emotion suppression among students with Internet-addicted.

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Conflict of Interest

None of the authors has any conflict of interest to disclose.

Ethical publication statement

We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this report is consistent with those guidelines.

Ethical code: IR.IAU.RASHT.REC.1399.025.

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