



The Effectiveness of Mindfulness-Based Schema Therapy on Cognitive Distortions and Causal Attributions in Nursing and Midwifery Students with Health Anxiety

Shabnam. Navidi Poshtiri¹
Ramezan. Hasanzadeh^{2*}
Seyedeh Olia. Emadian³

1. PhD student, Department of Psychology, Sari Branch, Islamic Azad University, Sari, Iran
2. *Corresponding author: Department of psychology, Sari Branch, Islamic Azad University, Sari, Iran
3. Assistant Professor, Department of Psychology, Sari Branch, Islamic Azad University, Sari, Iran

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Abstract

Aim: The aim of this study was to investigate the effectiveness of mindfulness-based schema therapy on cognitive distortions and causal attribution in nursing and midwifery students with health anxiety. **Method:** The research design is quasi-experimental with pre-test-post-test design and three-month follow-up with the control group. The statistical population included all nursing and midwifery students with health anxiety in Guilan Branch of Azad University in 2021. Among them, 30 people were selected by available sampling method and were randomly replaced in the experimental group (mentality-based schema therapy) and the control group (15 people in each group). Mentally based schema therapy was performed in 10 sessions of 90 minutes based on Young et al. (2003) training package in the experimental group. Data were collected using Ellis's Cognitive Distortion Questionnaire (1986) and the Document Style Questionnaire of Peterson et al. (1982). Data were collected using cognitive distortions by Ellis, Peterson et al. Data were analyzed using SPSS-22 software and repeated measures analysis of variance. **Results:** The results showed that mentally based schema therapy was effective on cognitive distortions ($F= 3.59, P= 0.035$) and causal attributions ($F=40.30, P<0.001$) of nursing and midwifery students with health anxiety. **Conclusion:** Considering the role of beliefs and thoughts in health anxiety, it is suggested that therapists consider mindfulness-based therapeutic schemas in reducing the symptoms of cognitive distortions and causal attributions. **Keywords:** Schema therapy based on mentality, cognitive distortions, causal attributions.

Introduction

Nursing and midwifery students worldwide face numerous challenges during their collective life, one of which is vulnerability to emotional instabilities that may include high levels of anxiety (Rose et al., 2018).

Many factors can cause anxiety disorders. Among the verifiable factors in this research that can play an effective role in health anxiety are cognitive distortions and causal attributions (Yuksel & Bahadir-Yilmaz, 2019). Cognitive distortions are exaggerated or irrational thinking patterns that are institutionalized for a person and cause an unpleasant psychological state of the person, especially depression, anxiety, etc. The most common cognitive distortions that Beck mentions include all-or-nothing thinking, overgeneralization, mental filters, discounting positives, jumping to conclusions, zooming in and out, emotional reasoning, dos and don'ts, labeling, and taking on. (Aydin & Akgun, 2021).

Another factor that can play a role in nursing and midwifery students with health anxiety is causal attributions. Attribution theory is a cognitive-motivational approach that examines the process of perceiving causality in an individual. In fact, the concept of attribution style refers to the explanatory style that people usually provide for a certain event (Giesbres et al., 2021). Weiner (2010) considers three dimensions for attribution, each of which has a bipolar property. The dimension of the control location, which has two internal versus external poles; This dimension addresses whether attributions are related to factors within the person or outside the person. The stability dimension considers whether the cause remains constant or changes over time (Smith et al., 2021). The stability-instability dimension states whether the factors that cause failure or success are stable and permanent or unstable. On the other hand, it should be noted that in connection with the dimension of stability, the dimension of totality is also raised, which researchers have defined as learned helplessness (Lee et al., 2021). This dimension also has a specific general dichotomous property that determines whether this attribution affects a wide range of successes or only affects a specific situation (Weiner, 2010). The last dimension is controllability, which shows things that people are able to control or things that are out of people's control; such as mood, other people's activities, luck, etc. (Weiner, 2010).

Mindfulness-focused techniques are a complementary part of schema therapy. Mindset is a set of compatible or incompatible schemas or schema operations that currently exist in the mind (Raftar Aliabadi & Share, 2022). Young (1999) defines schema mindsets as maladaptive coping responses or healthy behaviors that are currently active in the mind.

Therefore, this research was conducted with the aim of determining the effectiveness of mindset-based schema therapy on cognitive distortions and causal attributions in nursing and midwifery students with health anxiety. The current research sought to answer the following questions:

- 1- Was the effectiveness of mindset-based schema therapy on cognitive distortions and causal attributions in nursing and midwifery students with health anxiety in the post-test phase?
- 2- Was the effectiveness of mindfulness-based schema therapy on cognitive distortions and causal attributions in nursing and midwifery students with health anxiety stable in the follow-up phase?

Method

The research design is quasi-experimental with pre-test-post-test design and three-month follow-up with the control group. The statistical population included all nursing and midwifery students with health anxiety in Guilan Branch of Azad University in 2021. Among them, 30 people were selected by available sampling method and were randomly replaced in the experimental group (mentality-based schema therapy) and the control group (15 people in each group). Mentally based schema therapy was performed in 10 sessions of 90 minutes based on Young et al. (2003) training package in the experimental group. Data were collected using Ellis's Cognitive Distortion Questionnaire (1986) and the Attribution Style Questionnaire of Peterson et al. (1982). Data were collected using cognitive distortions by Ellis, Peterson et al. Data were analyzed using SPSS-22 software and repeated measures analysis of variance.

Results

To investigate the significance of the difference between the score of cognitive distortions and causal attributions in the two groups of schema therapy based on mentality and the control group, analysis of variance with repeated measures was used.

The results of the analysis of variance of repeated measurement of several variables among the studied groups in the variables of cognitive distortions and causal attributions showed that the effect between the subject (group) is significant. This effect means that at least one of the groups differs from each other in at least one of the variables of cognitive distortions and causal attributions. The within-subject effect (time) was also significant for the research variables, which means that there was a change in at least one of the average variables during the time from pre-test to follow-up.

Variance analysis is significant for the within-group factor (time) and it is significant between groups. These results mean that considering the group effect, the time effect alone is significant. The interaction of group and time is also significant. Bonferroni's post hoc test was used for pairwise comparison of groups.

The variable score of cognitive distortions and causal attributions in the experimental group and in the post-test phase is lower than the control group. In other words, the experimental group had high effectiveness in reducing cognitive distortions and causal attributions. These results show that the effectiveness of mindfulness-based schema therapy on cognitive distortions and causal attributions in the follow-up phase has remained stable over time.

Conclusion

The present study was conducted with the aim of investigating the effectiveness of mindset-based schema therapy on cognitive distortions and causal attributions in nursing and midwifery students with health anxiety. The findings showed that schema therapy based on mindset was effective on cognitive distortions and causal attributions in nursing and midwifery students with health anxiety.

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