

The Effect of George Play's Mathematics Teaching Method on Problem Solving Skill and Mathematics Achievement of 5th Grade Girls Students

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Introduction

Mathematics teaching has important role in people mental and social improvement. In current digital world, teaching math is increasingly necessary, but many problems may occur in students' functioning in math. The present study aimed to investigate the effects of George Polya's mathematics method on problem solving skill and math achievements of fifth grade female students in Dezful.

Method

This research was a quasi-experimental research with the design of non-equivalent groups. Three female primary schools from three different social-economical regions of Dezful, "uptown, city center, downtown", were selected by cluster random sampling method. In each school, two 5th grade classes were selected. Then, one class was assigned randomly to experimental group and the other one as the control group. The number of the students in each group was 65 persons. Research instrument was a descriptive researcher-made test that implemented in two steps (pre-test and post-test). This descriptive 20 items test included 5 main questions. Each question included 4 minor questions that assessed components such as comprehension, strategy selection, calculation and assessment, in the way of George

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Poliya`s problem solving. The validity of the test was confirmed by some experts in education. For investigating the reliability, Pearson correlation coefficient was 0.81. Univariate and multivariate analysis of variance was used to analysis data.

Findings

The findings showed that the mean scores of experimental group had a significant increase in post-test, in comparison to pre-test; that means teaching problem solving skills has a significant positive impact on the students' achievement. The highest effect was on comprehension ($\eta^2 = 0.57$), strategy selection ($\eta^2 = 0.56$) and review ($\eta^2 = 0.57$), and the lowest effect was on calculation ($\eta^2 = 0.42$).

Conclusion

Based on these finding, we can say that problem solving is a learnable skill, and must be taught to reach academic progress, especially in mathematics. By teaching this skill, the important part of academic disappointment of students in math can be diminished.

Keywords: Problem Solving Skill, Mathematical Achievement, Understanding, Strategy Selection, Review

The Effectiveness of Schema Therapy on General Health, Ruminating and Social Loneliness of Divorce Women

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Introduction

The divorce process has many psychological and social consequences for individuals, which it often takes a long time after divorce to get the person out of turmoil and sometimes requires interventional methods to speed up the process of returning to normal life, confront incompatible and ineffective thoughts and social isolation, and maintain the overall health. So the purpose of this study was to determine the effectiveness of schema therapy on general health, rumination, and loneliness of divorced women.

Method

The research method was a quasi-experimental with pre-test and post-test design with control group. The statistical population consisted of all divorced women referring to counseling centers in Sari city, in 2017. The sample consisted of 20 persons in each experimental and control group (40 samples in total), which were selected randomly. Also, the criteria for entry of the sample groups into the research were: divorced with no child, aged 20-40 years old, resident of Sari city, no obvious physical illness based on physician examinations and routine tests requested, no obvious psychotic and mood disorders in individuals based on clinical interviews by the psychiatrist, based on the criteria of the fifth Diagnostic and Statistical Manual of Mental Disorders. In this research, three questionnaires, the SELSA-S Loneliness Scale, General Health Questionnaire (GHQ), Nullen Hoeksma and Marrow Rumination Questionnaire (RRS), and Schema Therapy Protocol were used. Questionnaires were provided to them after explaining the purpose of the research and obtaining informed consent from the participants and assuring them of confidentiality of the information. In general, no one was excluded from the study in the two groups. Also, a multivariate covariance analysis (MANCOVA) was used to test the hypotheses.

Results

The results of this study, using multivariate analysis of covariance,

showed that schema therapy significantly improved the health and decreased rumination and loneliness of divorced women. Specifically, schema therapy can reduce loneliness, increase general health and decrease ruminating of divorced women.

Conclusion

The findings show that schema therapy causes changes in the cognitive, experimental, emotional, and behavioral fields. This approach has been effective in challenging maladaptive schemas and ineffective responses and replacing them with better and more responsive thoughts and responses. It is recommended that advisers and therapists' use the schema therapy rules to rehabilitate women after divorce, in order to increase their general health and reduce rumination and facilitate social relationships.

Keywords: Schema Therapy, Health Promotion, Rumination, Loneliness, Divorced Women