*Research Paper*

# The Effectiveness of Acceptance and Commitment Therapy on Improving Academic Self-regulation and Psychological Flexibility in Students with Specific Learning Disorder(SLD)

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## Abstract

The purpose of this study was to evaluate The effectiveness of acceptance and commitment therapy on improving academic self-regulation and psychological flexibility in students with specific learning disorder. This research was an experimental study with the pre and post-test with a control group design. The statistical population of the present study was all male students with specific learning disorder in two learning disability centers in Tehran. Among them, 40 students were selected as the sample of the study by available sampling and randomly classified into two. The experimental group received eight 90-minute session of ACT program. The control group was placed on a waiting list. For data collection we used academic self-regulation and psychological flexibility scale. The results indicated the acceptance and commitment therapy improved on academic self-regulation and psychological flexibility students with specific learning disorder.

*Keywords* :Acceptance and commitment therapy, academic self-regulation, psychological flexibility, specific learning disorder.

## Introduction

Specific learning disorder according to the fifth edition of the diagnostic and statistical manual of mental disorders, is a neurological developmental disorder of biological origin that causes abnormalities at the cognitive level. Learning disorder refer to current problems in one of three areas: reading, writing, and math, which are fundamental to learning ability (Tatsiopoulou, et al., 2021). Academic self-regulation is one of the issues that deals with the role of the individual in the learning process. Academic self-regulation is the ability of an individual to change his or her behavior in education, behaviors that change according to certain criteria and ideals or goals resulting from internal or social expectations (Sawalhah, et al., 2020). Another variable

that can affect a specific learning disorder is psychological flexibility. Psychological flexibility, the ability to recognize and adapt to situational demands to achieve long-term personal results (Dawson, et al., 2020). Psychological flexibility arises from a combination of cognitive diffusion, acceptance, present moment focus, chosen values, committed action, and self as context (Loma, et al., 2017). Acceptance and commitment therapy is one of the new psychological therapies that has been proposed in the field of psychological disorders and is especially effective in the field of specific learning disorder. Studies on the effectiveness of acceptance and commitment therapy in increasing psychological well-being (Chapman, et al., 2020; Marino, et al., 2021) and reducing inflexible behaviors (Szabo, 2019) tells in these people. According to the above points of this study, the main purpose for this study was to effect of acceptance and commitment on improving academic self-regulation and psychological flexibility of students with specific learning disorder.

## Method

The statistical population of the present study was all male students of two learning disability centers in Tehran who had referred to improve their learning disabilities and were studying in the first secondary school of Tehran in the academic year 2020-2021. from these people, 22 people with math disorder, 8 people with writing disorder and 10 people with reading disorder were selected for both groups. of these, 20 were randomly assigned to the experimental group and 20 to the control group. The following tools were used to collect information:

**Bouffard et al.'s (1995) Academic Self-Regulation Questionnaire**: The 14-item Bouffard et al.'s (1995) questionnaire is a self-regulatory assessment tool based on Bandura's cognitive-social theory. Bouffard et al. (1995) determined the reliability coefficients of this questionnaire by Cronbach's alpha method for the subscale of cognitive strategies 0.78 and for the subscale of metacognitive strategies 0.72 and its validity has been reported by calculating the correlation between subscales in the range from 0.40 to 0.42. In the present study, internal consistency with Cronbach's alpha method was 0.76 for the subscale of cognitive strategies and 0.71 for the subscale of metacognitive strategies.

**Acceptance and Action Questionnaire–II**: This questionnaire was developed by Bond, et al., (2007) and consists of 10 items. The mean internal consistency coefficients by Cronbach's alpha method were 0.84 (0.78-0.88) and the reliability of the test-retest at 3 and 12 months was 0.81 and 0.79, respectively (Bond et al., 2007). In this study, internal consistency for the whole scale was obtained by Cronbach's alpha method equal to 0.81.

## Results

**Table 1. Descriptive statistics of Academic self-regulation and Psychological flexibility among in the pre-test - post-test of the studied groups**

| Dependent Variables | Exprimental | | | | Contorol | | | |
|---|---|---|---|---|---|---|---|---|
| | Pre-test | | Post-test | | Pre-test | | Post-test | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Cognitive strategies | 13.25 | 1.86 | 28.85 | 1.38 | 14.10 | 1.91 | 13.90 | 1.51 |
| Metacognitive strategies | 13.95 | 1.76 | 30.05 | 1.27 | 14.15 | 1.26 | 13.35 | 2.97 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Totall(Academic self-regulation) | 27.20 | 3.01 | 58.90 | 1.77 | 28.25 | 2.48 | 27.25 | 2.78 |
| Psychological flexibility | 19.75 | 3.33 | 63.35 | 2.03 | 23.50 | 4.08 | 19.85 | 3.31 |

As can be seen in Table 1, the mean total score of post-test students in the experimental group increased compared to the control group in the variables of academic self-regulation and psychological flexibility.

**Table 1. Results of multivariate analysis of covariance (MANCOVA) on the scores of variables of academic Self-regulation and Psychological flexibility in experimental and control groups**

| Dependent variable | Component | Sources of changes | Ss | df | MS | F | P | Eta |
|---|---|---|---|---|---|---|---|---|
| Academic self-regulation | Cognitive strategies | pretest | 0.88 | 1 | 0.88 | 0.41 | 0.526 | 0.01 |
| | | group | 168.66 | 1 | 168.66 | 787.68 | 0.001 | 0.95 |
| | Metacognitive strategies | pretest | 2.67 | 1 | 2.67 | 0.56 | 0.45 | 0.01 |
| | | group | 1780.68 | 1 | 1780.68 | 378.12 | 0.001 | 0.91 |
| Psychological flexibility | | pretest | 6.09 | 1 | 6.09 | 0.806 | 0.37 | 0.02 |
| | | group | 14173.92 | 1 | 14173.92 | 1784.60 | 0.81 | 0.98 |

Based on the results, after adjusting the pre-test scores, the acceptance and commitment treatment in the post-test phase focuses on the components of self-regulation, i. e. cognitive strategies (P <0.001, F = 787.68) and metacognitive strategies (P <0,001, F = 378.12) and psychological flexibility (P <0.001, F = 1784.60) had a significant effect.

## Discussion and conclusion

The results of this study showed that acceptance and commitment therapy has improved academic self-regulation and psychological flexibility of students with specific learning disorder. This finding is in line with research Chapman, et al. (2020), Marino, et al. (2021), Szabo (2019). In explaining this finding, it can be said That the willingness and acceptance component allows people to accept unpleasant inner experiences without trying to control them, and this makes the experiences seem less threatening and have less impact on a person's life. Given this, it can be said that the more people seek to accept their negative inner experiences, the more they will achieve academic self-regulation. On the other hand, the practice of cognitive diffusion of acceptance and commitment therapy causes students to be flexible in the face of stressful cognitive perceptions in the field of education, their beliefs about their ability to manage difficult situations related to homework and self-blame. Lack of follow-up period was one of the limitations of the present study. Considering the follow-up period is one of the present research suggestions.

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