

## A Meta-Analysis of the Relationship Self-Efficacy and Academic Performance

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### Introduction

Academic performance can be defined as the attainment of either medium or long-term educational goals. Academic performance is a complex phenomenon that is influenced by the interaction of various factors that one of this factors is self-efficacy. Self-efficacy may be defined as an individual's belief in his or her ability to succeed in a specific situation or accomplish a specific task. Over the past two decades, many researchers have examined the relationship between self-efficacy and academic performance, which yielded different results. Some researchers found a weak relationship, some found a moderate and significant relationship and some found a high relationship between self-efficacy and academic performance. According to this, the purpose of the present study was to analyze and combine the results of the researches in this field and reach a general conclusion and resolve the existing contradictions and discover possible moderators.

### Method

According to the purpose of this study, the present study was conducted by meta-analysis method. The statistical population of the present study was all research published in scientific valid journal which was available in computer databases and examined the relationship between self-efficacy and academic performance. Using the purposive sampling method and extensive search based on the specified keywords and applying entry and exit criteria, 130 studies were selected as sample and entered the meta-analysis process. The extracted data were analyzed with CMA software.

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## Results

From selected studies as sample, in total, 146 effect sizes were extracted which 9 extreme effect sizes were eliminated in sensitivity analysis and the next analyzes were performed on 137 effect sizes. The value of “fail-safe N” statistic was obtained 4848, which indicated that after entering this number of non-significant studies, the combined effect size will be non-significant. The amount of combined effect size calculated 0.384 in fixed model and 0.390 in random model that both of them were statistically significant ( $p < 0.001$ ) which indicated that the positive and significant relationship between self-efficacy and academic performance. As the effect sizes were heterogeneous, gender and type of sample were examined as the mediating variables. The results indicated that the effect size of relationship between self-efficacy and academic performance in researches that used of female sample is more than to the other researches. Also the results indicated that in researches the subjects of the research were university students the effect size of relationship between this two variable is more than. The results indicated that the relationship between self-efficacy and academic performance in type of math self-efficacy is more than to the other types of self-efficacy.

## Discussion:

The results of the study showed that self-efficacy had a significant effect on the academic performance and based on cohen's criterion, the effect size of this relationship was found to be moderate ( $ES = 0.390$ ). Hence it has been assumed that self-efficacy is one of the most important factors or predictors for learners to achieve learning success. This may mean that if a student's self-efficacy is enhanced, the student may be able to achieve higher academic results.

**Keywords:** Meta-Analysis, Self-Efficacy, Academic Performance, Effect Size.

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**Author Contributions:** Dr Abolfazl Farid studied the subject and formulated the theoretical framework and guided the overall research process. Tohid Ashrafzade was responsible for collecting data, analyzing data, reporting findings and writing the paper. The conclusions of the findings and interpretation of the results was done jointly with the authors discussion.

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