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## Psychometric Properties of Teacher Self-efficacy Scale

Sosan Karbasi<sup>a</sup>, & Siamak Samani<sup>b\*</sup>

<sup>a</sup> Dep. Psychology, Mmarvdasht Branch, Islamic Azad University, Marvdasht, Iran

<sup>b</sup> Dep. Psychology, Shiraz Branch, Islamic Azad University, Shiraz, Iran

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### Abstract

The purpose of the study was to exam the validity and reliability of the teacher self-efficacy scale for Iranian sample. The sample consisted of 280 teachers (166 female and 114 male). All participants filled out the Persian form of teacher self-efficacy scale and self-esteem questionnaire. Teacher self-efficacy includes 28 items. Participants rate their confidence by recording a number from 0 to 100. Principle component factor analysis was used to exam factor structure of the teacher self-efficacy scale. The results revealed a four factors structure. These factors named: instructional self-efficacy, efficacy to create positive school climate, efficacy to enlist community involvement, and efficacy to influence decision making. Alpha coefficients for these factors were ranged between .77 to .85 and test-retest reliability for those were ranged between .77 to .83. In sum, the results showed that teacher self-efficacy is a reliable and valid instrument for Iranian sample.

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### 1. Introduction

How do you evaluate your capability to make a good performance in your job? In which academic area do you feel ability? According to Bandura (1997) "*perceived self-efficacy is concerned with people's beliefs in their capabilities to produce given attainment*". One may feel different capability in different area. For example one may feel high ability to make an excellent record in math but feels moderately in science. Perceived self-efficacy is

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\* Corresponding author. Tel.: 9173150780; fax: +98-713-2349217.  
E-mail address: [samanisiamak@gmail.com](mailto:samanisiamak@gmail.com)

developed based on mastery experience, vicarious experience, verbal persuasion, and somatic and emotional states (Bandura, 2004).

High self-efficacy leads to apply and low self-efficacy leads to avoid. When you feel ability to do something there is high probability to apply to do that and when you do not feel ability there is low probability to do that.

Self-efficacy is different from self-esteem. Self-efficacy is an evaluation of capability and self-esteem is a judgment of self worth. As self concept is one's attributes, self efficacy refers to the belief that what a person can do (Zimmerman & Cleary, 2006).

Self-efficacy	▶	Judgment of capabilities to do something
Self-esteem	▶	Judgment of self worth
Self-concept	▶	Judgment about one's attributes

If you are a teacher, how do you judge your capability to do? The main purpose of the study was to exam the psychometric properties of the teacher self-efficacy scale for Iranian sample.

Teacher self-efficacy scale was developed to measure the degree to which a teacher beliefs he/she can be effective in school activities such as: teaching, decision making, involving parents, creating positive school climate,... (Bandura, 1998).

The main purpose of the study is to exam the reliability and validity of the perceived teacher self-efficacy scale for Iranian sample.

**2. Method**

The sample of the study consisted of 280 teachers (166 female and 114 male). All teachers have been working in Organization of Special Education in Shiraz. To have a good sample size, the number of items in teacher self-efficacy scale (28 items) has been multiplying by 10. The scale includes 28 items. Participants rate their confidence by recording each item in a number from 0 to 100. The scale consisted six subscales: efficacy to influence decision making, instructional self-efficacy, disciplinary self-efficacy, efficacy to enlist parental involvement, efficacy to enlist community involvement, and efficacy to create a positive school climate. Translation and back translation method (English to Persian and then Persian to English) was used to prepare the Persian form of the perceived teacher self efficacy. All participant filled out the Persian form of the perceived teacher self efficacy scale (Bandura, 2006). Also Coopersmith self-esteem inventory was used to exam convergent validity of the Persian form of the perceived teacher self-efficacy scale.

**3. Results**

Principle component factor analysis was run to check the construct validity of the Persian form of the perceived teacher self-efficacy scale. Initially, the KMO index and Bartlett's test of sphericity was checked. Table 1 showed these two indexes for the scale.

Table1. The KMO and Bartlett's test of sphericity

KMO	0.94
Bartlett's test of sphericity	Chi=4814.88, df=378, p< 0.0001

Based on scree plot and theoretical criterion, three to six factor solutions were checked to define the acceptable factor structure. The results of factor analysis with varimax rotation revealed that four factors solution is acceptable and definable factor structure for the Persian form of the perceived teacher self-efficacy scale. Table 2 showed the eigenvalue and percent of variance for extracted factors. These four factors include more than 61 percentages of the total variance of scale. These four factors named: *instructional self-efficacy*, *efficacy to create positive school climate*, *efficacy to enlist community involvement*, and *efficacy to influence decision making* respectively. Table 3 showed factor load of each items under each factors.

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