
Study Satisfaction Scale: Proprietà psicometriche in studenti universitari

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Sommario

C'è un crescente interesse per il costrutto di *study satisfaction*, derivato dal costrutto di *job satisfaction*. Tuttavia, al meglio delle nostre conoscenze, nessuna ricerca ha sviluppato una scala di *study satisfaction* basata sul modello ampiamente applicato di Judge e colleghi. Questa ricerca mira a valutare le proprietà psicometriche della *Study Satisfaction Scale*, una nuova scala sviluppata dal costrutto di soddisfazione lavorativa di Judge et al. Le proprietà psicometriche sono state investigate in studenti universitari italiani. La *Study Satisfaction Scale*, la *Satisfaction with Life Scale* e la *Flourishing Scale* sono state somministrate a 228 studenti universitari italiani. È stata eseguita un'analisi fattoriale confermativa, è stata valutata l'affidabilità utilizzando l'alfa di Cronbach ed è stata esaminata la validità concorrente attraverso le correlazioni con la *Satisfaction with Life Scale* e la *Flourishing Scale*. La *Study Satisfaction Scale* ha dimostrato una struttura fattoriale unidimensionale, un'affidabilità adeguata e una validità concorrente con entrambe le scale, *Satisfaction with Life* e *Flourishing Scale*. La *Study Satisfaction Scale* ha buone proprietà psicometriche ed è adatta per l'uso nella ricerca e negli interventi.

Parole chiave

Soddisfazione nello studio, *Study Satisfaction Scale*, Studenti universitari.

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Study Satisfaction Scale: Psychometric Properties in University Students

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Abstract

There is growing interest in the construct of study satisfaction, which is derived from the construct of job satisfaction. However, to the best of our knowledge, no research has developed a study satisfaction scale based on the widely applied model of Judge and colleagues. This research aims to evaluate the psychometric properties of the *Study Satisfaction Scale*, a new scale developed from Judge et al.'s construct of job satisfaction. The psychometric properties were investigated among Italian university students. The *Study Satisfaction Scale*, the *Satisfaction with Life Scale*, and the *Flourishing Scale* were administered to 228 Italian university students. We performed confirmatory factor analysis, assessed reliability using Cronbach's alpha, and examined concurrent validity through correlations with the *Satisfaction with Life Scale* and the *Flourishing Scale*. The *Study Satisfaction Scale* demonstrated a unidimensional factor structure, adequate reliability, and concurrent validity with both the *Satisfaction with Life Scale* and the *Flourishing Scale*. The *Study Satisfaction Scale* has good psychometric properties and is suitable for use in research and interventions.

Keywords

Study satisfaction, *Study Satisfaction Scale*, University students.

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Introduction

Measurement of study satisfaction in university students is gathering considerable attention in the literature, and researchers agree that it is a relevant construct for academic achievement (Bebermeier et al., 2022; Bowling & Zelazny, 2022). Therefore, some authors have started to examine study satisfaction, adapting it from the widely used construct of job satisfaction. For example, Mostert and colleagues (2024) implemented a unidimensional 7-item scale for assessing study satisfaction derived from a job satisfaction scale developed by Sjöberg and Sverke (2000). Other authors (Różycka-Tran et al., 2021) adapted a study satisfaction scale for Polish and Vietnamese, such as the university student version of the five-item measure of career satisfaction developed by Greenhaus et al. (1990). Additionally, others have developed scales starting from new items (Bebermeier et al., 2022; Merino-Soto et al., 2017). Westermann and colleagues (2018) developed a 9-item scale comprising three factors of three items each: (1) Satisfaction with the study contents, (2) Satisfaction with the study conditions, and (3) Satisfaction with coping with the study loads. The scale was applied examining psychology students' study satisfaction determinants (Bebermeier et al., 2022) and the relationship among study satisfaction, Big Five factors, and academic performance (Rodrigues et al., 2024). Similarly, Merino-Soto and colleagues (2017) developed a three-item brief scale assessing study satisfaction in Peruvian medical students.

Data from previous studies showed that high levels of study satisfaction prevented or buffered the formation of dropout intentions in university students (Bardach et al., 2020), and it was positively related to higher stress tolerance and better academic achievement (Wach et al., 2016). Despite these promising results, no study has been conducted to develop a measure of study satisfaction by adapting the job satisfaction model by Judge and colleagues (Judge et al., 1998). According to this model, job satisfaction can be defined as an overall evaluative judgment of one's job, containing cognitive, affective, and behavioural aspects (Judge et al., 2020). The associated measurement scale is a widely applied five-item unidimensional self-report tool (Bowling & Zelazny, 2022) with good psychometric properties (e.g., Judge et al., 2010, 2020). Therefore, in this view, study satisfaction could be conceived as an overall evaluative judgment of one's study, containing cognitive aspects (beliefs or judgments about the study), affective aspects (feelings that the study arouses), and behavioural aspects (how the individual tends to behave toward the study) (Judge et al., 2020). Moreover, having a psychometrically sound instrument could be a further step forward in the study of the construct of study satisfaction, expanding results to the Italian context, where, to the best of our knowledge, empirical studies evaluating this construct among university students have not been conducted yet.

Therefore, the aim of the present study is to develop the *Study Satisfaction Scale* starting from the Italian version (Di Fabio, 2018) of the *Job Satisfaction Scale* by

Judge et al. (1998). To this end, confirmatory factor analysis, analysis of the reliability using the Cronbach's alpha coefficient, and an examination of concurrent validity were conducted.

Methods

Participants and Procedures

This research was conducted on 228 university students from Central Italy, comprising 122 females (54.4%) and 104 males (45.6%), with an average age of 21.76 years ($SD = 2.09$). Participation was voluntary, and informed consent was obtained in accordance with Italian privacy laws (DL-196/2003; EU 2016/679). The sequence in which the questionnaires were administered was counterbalanced to reduce any potential biases due to the order of presentation.

Measures

The *Study Satisfaction Scale* by Di Fabio and Svicher. It is adapted from the Italian version (Di Fabio, 2018) of the *Job Satisfaction Scale* (Judge et al., 1998), and it is composed of 5 items. Studies on the *Job Satisfaction Scale* revealed a reliable one-factor structure (Di Fabio, 2018; Judge et al., 2010, 2020).

The *Satisfaction with Life Scale* (SWLS; Diener et al., 1985; Italian version: Di Fabio & Gori, 2020) is a five-item, one-dimensional self-report tool designed to assess cognitive processes related to an individual's overall subjective well-being (Diener et al., 1985; Di Fabio & Gori, 2016). Participants responded to items on a seven-point Likert scale ranging from «Strongly agree» to «Strongly disagree». Cronbach's alpha was .83.

The *Flourishing Scale* (FS; Diener et al., 2010; Italian version: Di Fabio, 2016) is an eight-item self-report instrument that evaluates socio-psychological flourishing, reflecting perceived success in important life domains such as self-esteem, relationships, and optimism (Diener et al., 2010). Responses were given on a seven-point Likert scale from «Completely disagree» to «Strongly agree». The scale had a Cronbach's alpha of .88.

Statistical Analysis

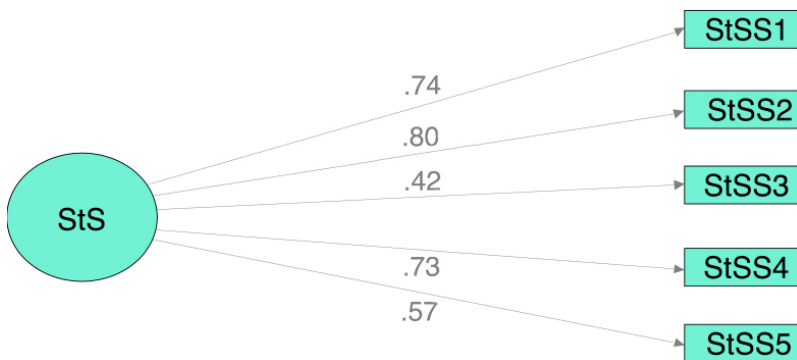
Confirmatory factor analysis (CFA) was carried out using the Lavaan .6-13 R package. Model fit was evaluated with the comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA). Good fit was indicated by CFI and TLI values over .97, and acceptable fit by values

between .95 and .97. RMSEA values were classified as good ($\leq .05$), acceptable (.05-.08), mediocre (.08-.10), and unacceptable ($> .10$) (Schermelleh-Engel et al., 2003). The reliability of the scale was assessed using Cronbach’s alpha via the Psych 2.3.3 R package, with alpha (α) values above .70 considered adequate. The concurrent validity of the Study Satisfaction Scale was measured using Pearson’s correlation coefficients with the *Satisfaction with Life Scale* and the *Flourishing Scale*. All analyses were conducted using R Studio 2022.12.0 for Macintosh.

Results

Confirmatory factor analysis was run to test the unidimensional model. A one-factor solution showed an acceptable fit to the data: CFI = .96; TLI = .95; RMSEA = .06; SRMR = .06. Cronbach’s alpha of the scale was found to be adequate with a value of $\alpha = .83$. The path diagram of the tested model is shown in Figure 1. Pearson’s correlations between the *Study Satisfaction Scale* and SWLS and between the *Study Satisfaction Scale* and FS, are presented in Table 1. The *Study Satisfaction Scale* showed positive and statistically significant correlations with both SWLS and FS.

Figure 1



StS = Study Satisfaction; StSS = Study Satisfaction Scale.
Study Satisfaction Scale: Confirmatory Factor Analysis — Path Diagram of the Tested Models ($N = 228$).

Table 1

Correlations Between *Study Satisfaction Scale* and *Satisfaction with Life Scale* and Between *Study Satisfaction Scale* and *Flourishing Scale* ($N = 228$)

	Satisfaction with Life Scale	Flourishing Scale
Study Satisfaction Scale	.68**	.49**

** $p \leq .01$.

Discussion

To our knowledge, no research has examined the construct of study satisfaction based on the model of job satisfaction of Judge and colleagues (1998). In this line, study satisfaction is an overall evaluative judgment of one's study, containing cognitive aspects, affective aspects, and behavioural aspects. The objective of this research was to investigate the psychometric proprieties of the *Study Satisfaction Scale*, which was developed from the *Job Satisfaction Scale* by Judge et al. (1998). Results illustrated a unidimensional factor structure yielded through confirmatory factor analysis. These results are consistent with the model that was first created for workers (Judge et al., 1998, 2010, 2020). The overall score of the scale showed adequate reliability in accordance with the scale developed for workers (Di Fabio, 2018; Judge et al., 1998, 2010, 2020). Positive and strong statistically significant correlations with the *Satisfaction with Life Scale* and the *Flourishing Scale* provide evidence of concurrent validity for the Study Satisfaction Scale.

The good psychometric qualities shown by the *Study Satisfaction Scale* make it suitable for use in research and intervention with Italian university students.

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