



## Research article

# Meditating role of career sustainability in the relationship between teachers' self-efficacy and job satisfaction and subject well-being

Uğur Özbilen<sup>a,\*</sup>, Ahmet Zeki Güven<sup>b</sup>, Ömer Yiğit<sup>c</sup>, Ömer Tuğrul Kara<sup>d</sup>, Emrullah Banaz<sup>e</sup>

<sup>a</sup> Individual Researcher, Antalya, Turkey

<sup>b</sup> Department of Turkish Education, Akdeniz University, Antalya, Turkey

<sup>c</sup> Ministry of National Education, İstanbul, Turkey

<sup>d</sup> Department of Turkish Education, Çukurova University, Adana, Turkey

<sup>e</sup> Department of Educational Sciences, Bayburt University, Bayburt, Turkey

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## ABSTRACT

The main purpose of this study, explore the mediating role of career sustainability in the relationships between teacher self-efficacy, job satisfaction, and subjective well-being. Teachers should have an acceptable level of satisfaction regarding self-efficacy, career sustainability, and job satisfaction to secure well-being. In a sense, this claim mandates revealing the relationships between these variables. Accordingly, we collected data from 369 Turkish language teachers aged 24–55 years employed in public schools using the Teacher Self-Efficacy Scale, Short Index of Job Satisfaction, Career Sustainability Scale, and Subjective Well-Being Scale and tested a mediation model to seek answers to our hypotheses. We collected the data using an online questionnaire battery web-based survey (Google Forms) which was created using data collection measures and demographic items. After creating the survey using Google Forms, we distributed it through various channels such as email lists, social media platforms, and professional networks (e.g., teacher WhatsApp groups, teacher Telegram groups, etc.). Respondents were invited to participate in the survey voluntarily. The findings showed that career sustainability mediated the relationships between teacher self-efficacy, job satisfaction, and subjective well-being. Accordingly, we may claim that teachers with desirable career sustainability are likely to have increased job satisfaction and well-being, contributing to their self-efficacy. This research emphasises the essential significance of career sustainability in the overall well-being and work satisfaction of teachers. Future study should investigate treatments aimed at improving career sustainability and examine these linkages in other cultural settings.

## 1. Introduction

Attaining a contented, productive professional life may be one important niche within education that needs to be addressed for teachers - the main executors of education [1]. Yet, a teacher may not achieve professional well-being through happiness alone;

\* Corresponding author.

E-mail address: [ozbilenugur@gmail.com](mailto:ozbilenugur@gmail.com) (U. Özbilen).

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instead, they should have an acceptable level of satisfaction regarding self-efficacy, career sustainability, and job satisfaction to secure well-being Bota, 2013 [2]. Job satisfaction is an outcome of an employee's positive perceptions of work and environment and contributes to their happiness [3]. Besides, it is well-established that a "contented" teacher is likely to exert desirable impacts on the quality of education and student learning performance and achievement. Hence, the link between the self-efficacy, job satisfaction, career sustainability, and subjective well-being of participating teachers of native language seems an important niche to be addressed. The significance of this study lies in our endeavor to reveal the mentioned relationship that has received less focus in the literature, to add to resolving potential teacher problems related to these variables, and to contribute to the relevant literature [4].

Teacher self-efficacy is often described as the degree to which a teacher bears sufficient confidence in their ability to promote student learning [5]. From a socio-psychological perspective of teacher self-efficacy, the development of the self is viewed as a dynamic system that encompasses one's personality, identity, responsibilities, and professional capacity [6]. Teacher self-efficacy also refers to a teacher's beliefs about their individual and collective competencies to influence student learning and engagement. According to Buric and Moè [7], teachers' emotions affect the motivation, cognition, and behavior of both teachers and students. In addition, in self-efficacy skills, a teacher's judgment of own capabilities and professional manner to affect student learning assume a key role in their motivation [8], boosting teacher contributions to teaching and learning. As well as motivation, one's self-efficacy is closely associated with their abilities, self-perception, and personality traits. In this sense, self-efficacy can be considered a key but multi-faceted construct within human acts, that is, the ability to deliberately influence one's functioning and living conditions [9]. Yet, people with poor self-efficacy often see a challenging task as a threat to themselves and sometimes overlook it instead of focusing their attention on the task to complete it successfully (Gist & Mitchell 1992, as cited in Ref. [10]). A teacher who feels threatened during their service is likely to feel insufficient job satisfaction and face problems. Then, the fundamental motivation of this research is to uncover the current job satisfaction of participating teachers and demonstrate the significance of job satisfaction relative to the other research variables to guide the attempts to improve job-related situations in favor of teachers. Relevant studies in the literature previously highlighted that greater teacher self-efficacy predicts higher engagement and job satisfaction and lower levels of burnout [11–15]. Accordingly, desired levels of teacher self-efficacy may hint that they may adopt sound teaching skills, which highlights the need to investigate the self-efficacy of teachers.

Career sustainability refers to a series of career experiences that are connected by various patterns of continuity over time, span different social spaces, and are characterized by individual agency, herewith providing meaning to the individual ([16], as cited in Ref. [17]). Professions consist of a whole with complex objective and subjective judgments, and this resulting whole leads to great diversity in how a career can develop and a broad perspective on whether a career is sustainable [16]. It is expected that teachers and professional in other disciplines attempt to contemplate a sustainable career plan primarily due to aggravated unemployment-related problems and unprecedented adoption of technology Greenhaus & Kossek, 2014 [18]; [19,20]. Teacher career sustainability, therefore, closely concerns teacher professional development. Previous research consistently emphasized that a country owes its sustaining achievements in many fields to quality education and competent teachers (Kupiainen et al., 2009, as cited in Ref. [21]). In this sense, a teacher's professional life cannot be imagined to be free of "happiness" for them to be able to contribute to educational processes and improve themselves. Thus, seeking teachers' views on career sustainability and revealing its relationships with self-efficacy, job satisfaction, and happiness may bring insights into the design and implementation of further improvements in teaching.

Locke [22] defines job satisfaction as one's contentment with their job and work experiences. Accomplishing a task requires one's best effort, leading to a significant achievement in the task. Being attained through adopting the proper methods in the effort and task [23], accomplishment can also grant one sufficient job satisfaction. Job satisfaction can be mentioned when one's expectations and experiences in their professional life converge on a common point. One's satisfaction with their job exerts a positive impact on their ability to meet economic and social needs and maintain a healthy and happy life Demirtaş and Ersöz, 2010 [24]. Besides, teachers are expected to commit to and adopt positive attitudes toward their job, be satisfied with the outcomes of their profession, and have high self-efficacy in educational processes. Such teacher characteristics then influence how to instill desired behaviors and attributes in community members to build a desirable society (Buluç & Demir, 2015, as cited in Ref. [25]). Job satisfaction also affects other psychological factors in professional life. For example, in nine meta-analysis studies covering a total of 1739 employees, Demir [26] concluded a significant positive association between job satisfaction and motivation.

Accordingly, as uncovering teachers' job satisfaction is also likely to inform their motivation, it is deemed highly significant to seek job satisfaction among teachers and its relationship with other related constructs, such as career sustainability, self-efficacy, and subjective well-being.

The ultimate goal of education may be to raise individuals whose contributions the community capitalizes on. Priorities and methods to implement this goal differ by country; however, what is common is to utilize the potential of educators in the best possible way to secure the best possible education [27]. To do so, a teacher should have sound physical and mental health. Aiming to promote one's holistic well-being and growth and contribute to unearthing their full potential, positive psychology has something to raise to bring a new perspective to happiness. In this perspective, positive psychology accepts "subjective well-being" as the scholarly term closest to "happiness" Diener & Scollon, 2014 [28]. Subjective well-being is defined as feeling and thinking that one lives a desirable life regardless of how others' lives appear Diener, 2009 [29]. A teacher with a robust cognitive state can then contribute to student learning and engagement. Students converged on a common goal in a classroom where teachers exemplify positive attitudes and behavior can shine as intellectually- and psychologically-developed community members. To attain such a remarkable goal and provide a positive learning setting in the classroom, teachers remove all learning-restricting obstacles, mobilize all students and available resources, and manage time to use efficient classroom management methods Ihtiyaroglu, 2018 [30]. One factor ensuring teacher efficacy in the classroom may be to have optimum subjective well-being. Besides, individuals with vigorous subjective well-being are more active, and demonstrate high productivity in their professional lives. In addition, "happy" individuals are more

creative and more willing to help others and participate in social activities -irsky et al., 2005 [31]. In this sense, one can propose the idea that a teacher with sufficient subjective well-being would be more productive in the classroom. Therefore,

To sum up, one important assumption of this research is that career sustainability has a positive mediating role between teacher self-efficacy and subjective well-being. We also assume that career sustainability has a positive effect on the relationship between teacher self-efficacy and job satisfaction. Thus, our statistics focus on the test following two hypotheses.

- 1) H<sub>1</sub>. Career sustainability has a positive mediating effect on the relationship between teacher self-efficacy and subjective well-being.
- 2) H<sub>1</sub>: Career sustainability has a positive impact on the relationship between teacher self-efficacy and job satisfaction.

## 2. Method

### 2.1. Participants

We recruited a total of 369 teachers of native language employed in public schools across Turkey. Participating teachers were 24–55 years old ( $M = 34.43$ ,  $SD = 7.85$ ), and about 63 % were females. The majority had an undergraduate degree (77.8 %), followed by those holding a graduate degree (22.2 %). The professional service years of the participating teachers were classified into three categories. The distribution of participants by length of professional service is as follows: 1–10 years (55.6 %), 11–20 years (22.2 %), and 20 years and above (22.2 %). We collected the data using an online questionnaire battery web-based survey (Google Forms) which was created using data collection measures and demographic items. After creating the survey using Google Forms, we distributed it through various channels such as email lists, social media platforms, and professional networks (e.g., teacher WhatsApp groups, teacher Telegram groups, etc.). Respondents were invited to participate in the survey voluntarily. Moreover, the Ethics Committee of Akdeniz University granted ethical approval to our study (September 04, 2023/359).

### 2.2. Measures

#### 2.2.1. Career Sustainability Scale (CSS)

The CSS was utilized to measure the sustainability levels of participating teachers' careers. Developed by Chin et al. [32], the CSS was adapted into Turkish by Arar and Çetiner [33] as a two-factor structure with 12 items. All items are scored using a 6-point scale (1 = strongly disagree to 6 = strongly agree). Arar and Çetiner [33] found that the scale had strong internal reliability estimate for Turkish people.

#### 2.2.2. Teacher Self-Efficacy Scale (TSES)

Developed by Friedman and Kass [34], the TSES is utilized to measure teacher self-efficacy. Arslan [35] adapted the scale into Turkish as a 10-item form by removing four items. Items are scored on a 6-point Likert-type scale ranging from 1 (Never) to 6 (Always). Arslan [35] found that the TSES provided a sufficient reliability estimate for teachers.

#### 2.2.3. Short Index of Job Satisfaction (SIJS)

The SIJS, developed to measure teacher job satisfaction by Brayfield and Rothe [36] as an 18-item form, was adapted into Portuguese in a 5-item form by Sinval and Maroco [37]. Items are rated on a 5-point Likert-type scale between 1 (strongly disagree) and 5 (strongly agree). We adapted the SIJS into Turkish and concluded that it is a valid and reliable tool to be utilized to measure teacher job satisfaction in the Turkish context. In order to adapt the scale, Sinval and Maroco were initially contacted. Subsequently, a preliminary translation was prepared in the target language for review. Following this, the translation was evaluated and then retranslated into the source language. This retranslation was then re-evaluated, and finally, expert opinions were sought to assess the quality of the translation Brislin, Lonner & Thordike, 1973 [38]. Once the translation was complete, the scale was administered to a sample of 215 teachers. Subsequently, the CFA and EFA tests were conducted using the SPSS v27 program. The factor loadings of the items, found within two factors (CFA-EFA), ranged from .830 to .920, and the total variance explained was 75 %. This illustrates that the translated scale possesses a distinctive characteristic. In order to ensure reliability, the scale was evaluated using two primary methods: internal consistency and the test-retest method. These methods were employed to ascertain the scale's ability to yield consistent results across different time points. In order to ascertain the consistency of the measurement tool employed, Cronbach's alpha internal consistency coefficient and composite reliability values were calculated. Cronbach's alpha value was .854, and the combined reliability value was .857. The fact that these values exceed the .7 threshold [39] indicates that the internal consistency of the measurement tool is high.

#### 2.2.4. Subjective Well-Being Scale (SWBS)

The SWBS is a 9-item instrument nested in the Comprehensive Inventory of Thriving (CIT) designed by Arslan [40]. Items are scored on a 6-point Likert-type scale ranging from 1 (Never) and 6 (Always). Arslan [40] demonstrated that the instrument demonstrated sufficient reliability to be used for measuring subjective well-being in the Turkish context.

### 2.3. Data analysis

We performed data analyses on SPSS v27 and AMOS v24. After exploring descriptives of the research variables, we rested on skewness and kurtosis values to check the normality of distribution D'Agostino et al., 1990 [41]; [42]. The relationships between the

variables were revealed using Pearson’s correlation coefficients. Then, we utilized structural equation modeling (SEM) to test the mediating role of career sustainability in the relationships between teacher self-efficacy, job satisfaction, and subjective well-being. We explored the goodness-of-fit of the measurement model using Root Mean Square Error of Approximation (RMSEA; acceptable fit when  $\leq .08$  and good fit when  $\leq .05$ ), Tucker-Lewis Index, and Comparative Fit Index (TLI and CFI; acceptable fit when  $\geq .90$  and good fit when  $\geq .95$ ; [42,43]). Finally, we assessed the indirect effect of career sustainability in the model through the bootstrap method with 5000 resamples.

3. Results

3.1. Descriptive statistics and correlations

In descriptive statistics, while skewness values ranged between .60-.40, kurtosis values varied between -.01-4.08. Byrne [44] emphasized that a skewness value  $< |2|$  and a kurtosis value  $< |7|$  can be considered empirical evidence for normally distributed data (Table 1).

The findings demonstrated that teacher self-efficacy was moderately associated with job satisfaction ( $r = .35, p < .001$ ), career sustainability ( $r = .39, p < .001$ ), and subjective well-being ( $r = .37, p < .001$ ). Job satisfaction also exhibited a moderate correlation with career sustainability ( $r = .32, p < .001$ ) and a relatively strong association with subjective well-being ( $r = .47, p < .001$ ). Similarly, we found a positive correlation between career sustainability and subjective well-being ( $r = .46, p < .001$ ; Table 2).

3.2. Mediation model

We tested a mediation model to examine the mediating role of career sustainability in the relationship between teacher self-efficacy, job satisfaction, and subjective well-being. Results indicated a good model-data fit –  $\chi^2 = 2.75, df = 1, p = .09, TLI = .96, CFI = .99, RMSEA (95 \% CI) = .069 (.00, .17$ ; Fig. 1).

Standardized regression weights demonstrated that teacher self-efficacy was a significant predictor of career sustainability ( $\beta = .37, p < .001$ ), accounting for 13 % of the variance in this variable. It also had a significant predictive effect on job satisfaction ( $\beta = .22, p < .001$ ) and subjective well-being ( $\beta = .25, p < .001$ ). In addition to this direct relationship, the findings indicated that career sustainability mediated the relationship between teacher self-efficacy and job satisfaction ( $\beta = .37, p < .001$ ) and subjective well-being ( $\beta = .37, p < .001$ ). Besides, teacher self-efficacy and career sustainability collectively explained 25 % of the variance in job satisfaction and 27 % in subjective well-being. Moreover, the bootstrap method with 5000 resamples (95 % confidence intervals [CI]) supported the mediating role of career sustainability in this relationship for job satisfaction ( $\beta = .14, p < .001$ ; .09-.19,  $SE = .03$ ) and subjective well-being ( $\beta = .14, p < .001$ ; .08-.21,  $SE = .03$ ).

4. Discussion

Despite a plethora of research on teacher subjective well-being [45,46], these studies seem to concentrate on stress and burnout [8, 13,46,47]. Besides, there remains no research, to our knowledge, that would allow us to understand the relationships between teacher self-efficacy, subjective well-being, job satisfaction, and career sustainability. Thus, scrutinizing these relationships may be counted as the distinct contribution of this study to the literature. In this concern, we sought answers to the following hypotheses on the data from 369 teachers of native language aged 24–55 years serving in public middle schools in different regions of Turkey.

- 1) H<sub>1</sub>. Career sustainability has a positive mediating effect on the relationship between teacher self-efficacy and subjective well-being.

Teacher self-efficacy refers to the teacher’s ability to inspire students to learn in the in- and out-of-school settings and to adapt any particular subject to attract students’ interest in teaching. Moreover, teachers with high self-efficacy have concerns about improving their students’ critical thinking abilities and motivating low-achieving students to participate in classroom activities. From this perspective, teachers with high self-efficacy can also employ diverse learning and teaching strategies for students with learning difficulties [14].

Our findings indicated that teachers with higher self-efficacy had increased career sustainability. Moreover, we discovered participating teachers with increased career sustainability to be happier both in their jobs and daily lives. These findings then imply that career sustainability positively bears a positive impact on the relationship between teacher self-efficacy and subjective well-being,

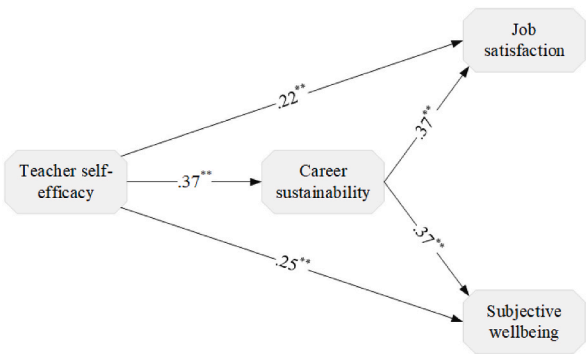
Table 1  
Descriptive statistics.

	Min.	Max.	M	SD	Skewness		Kurtosis	
					Statistic	Std. Error	Statistic	Std. Error
Teacher self-efficacy	30	77	58.31	8.20	−.47	.12	.38	.25
Job satisfaction	5	25	15.06	2.08	−.54	.12	4.08	.25
Career sustainability	9	45	29.42	7.30	−.60	.12	−.01	.25
Subjective well-being	12	72	45.97	11.82	−.40	.12	.23	.25

**Table 2**  
Correlations between research variables.

	1.	2.	3.	4.
1. Teacher self-efficacy	–			
2. Job satisfaction	.35 <sup>a</sup>	–		
3. Career sustainability	.39 <sup>a</sup>	.32 <sup>a</sup>	–	
4. Subjective well-being	.37 <sup>a</sup>	.47 <sup>a</sup>	.46 <sup>a</sup>	–

<sup>a</sup>  $p < .001$  (2-tailed).



**Fig. 1.** The mediation model. Note: Observed variables in the model were created using total scores.

overlapping with previous findings [13,25,26,32,48–52]. The 2020 OECD report underscores that higher teacher self-efficacy functions as a protective factor for stress and burnout and also increases job satisfaction [53]. It is out of the question that teachers are cornerstones in communities for continuous development, acquisition of skills, and leading the future. Hence, it is reasonable to assert that they need to commit and feel competent in teaching. Teachers without job satisfaction are likely to lose their productivity [25], which hinders achieving desired educational goals and leads education policies to fail. Besides, our finding that participating teachers with high self-efficacy felt happier and, thus, adopted a more sustainable career may imply that teachers with greater self-efficacy secure effective and efficient implementation of curricula.

2) H<sub>1</sub>: Career sustainability has a positive impact on the relationship between teacher self-efficacy and job satisfaction.

Teacher self-efficacy is a critical component of teacher job satisfaction since it conveys a teacher’s personal abilities and teaching competencies to deliver in an educational environment and other areas of subject matter expertise. In the school setting, high self-efficacy also allows a teacher to improve teaching, teacher-student/parent interactions, professional collaboration, decision-making, and school climate [14]. Therefore, the nourishing and efficient implementation of curricula seems to rely on high self-efficacy and, thus, increased job satisfaction among teachers. Furthermore, an additional mediation analysis indicated that self-efficacy functions as a positive mediator in the relationship between teamwork, competency development, and career sustainability Adegbite & Hoole, 2024 [54]. The results demonstrated that teachers with high self-efficacy adopted a more sustainable career, contributing to their job satisfaction. Thereby, we can predicate based on our empirical evidence that career sustainability positively mediates the relationship between teacher self-efficacy and job satisfaction, consistent with previous results Chamani et al., 2023 [55]; [25,26,32,48,49,52].

**5. Conclusion**

A substantial body of literature previously explored teacher self-efficacy and commonly revealed many associated factors, either positively or negatively, and mediators of these associations. The overall endeavor of this study is to reveal the relationships between teacher self-efficacy and job satisfaction, subjective well-being, and career sustainability. Our findings showed that teachers with high self-efficacy had a more sustainable career and, thus, higher job satisfaction and subjective well-being, suggesting that career sustainability positively mediated the relationships between teacher self-efficacy and job satisfaction and subjective well-being. The results of research indicate that the relationship between teacher self-efficacy, job satisfaction, and subjective well-being is significantly impacted by career sustainability. These results highlight the need of sustaining a viable career in order to enhance the well-being of teachers. The practical ramifications of this statement are that there is a need for professional development programs that assist in maintaining a sustainable career for teachers.

## Limitations and implications

The most prominent limitation of this study may be that our findings are all limited to the self-report data of participating teachers of native language employed at public middle schools in Turkey. Nevertheless, our findings may guide future efforts to design and implement in-service training oriented to improve teacher self-efficacy and encourage teachers to participate in such training and similar activities. In this way, we may claim that teachers attaining higher self-efficacy are likely to adopt a more sustainable, productive career, contributing to their job satisfaction and subjective well-being.

## Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The Ethics Committee of Akdeniz University granted ethical approval to our study (September 04, 2023/359).

## Compliance with ethical standards

### *Disclosure of potential conflicts of interest*

The authors declared no conflicts of interest with respect to the research, authorship, and/or publication of this article.

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## Informed consent informed

Consent was obtained from all participants included in the study.

## CRediT authorship contribution statement

**Uğur Özbilen:** Writing – review & editing, Formal analysis, Conceptualization. **Ahmet Zeki Güven:** Project administration, Formal analysis. **Ömer Yiğit:** Validation, Investigation. **Ömer Tuğrul Kara:** Software, Resources. **Emrullah Banaz:** Visualization, Formal analysis.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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