

Teacher agency mediates the relationship between meaningful work and life satisfaction levels of special education teachers

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Abstract: This study investigates factors contributing to the well-being and professional sustainability of special education teachers, who face high rates of stress and burnout. The research examined relationships among meaningful work, teacher agency, and life satisfaction. Data from 214 special education teachers in Istanbul, Türkiye, were analyzed using structural equation modeling. Findings indicated strong, positive, and statistically significant correlations among all variables. Meaningful work positively predicted life satisfaction directly ($\beta = .30, p < .001$) and teacher agency ($\beta = .83, p < .001$). Teacher agency also positively predicted life satisfaction ($\beta = .51, p < .001$). Importantly, the analysis revealed a significant indirect effect ($\beta = .42, p < .001$), demonstrating that teacher agency partially mediates the relationship between meaningful work and life satisfaction. These results suggest that meaningful work is a crucial psychological resource that enhances life satisfaction both directly and indirectly by strengthening agency. Interventions aimed at promoting the well-being of special education teachers should prioritize supportive leadership and professional autonomy to foster meaningful work and strengthen agency capacities.

Keyword: Teacher agency

Introduction

Teachers take on important responsibilities in many areas, from planning and implementing education to supporting students' academic achievement and social integration. While it is especially known that teachers and their competencies are among the most influential factors in student achievement, this effect has become more prominent in the education of disadvantaged and special needs students (Koedel, 2009; Rivkin et al., 2005). Today, expectations for teachers to enhance students' academic achievement are increasing. It is also highly important for teachers to continuously develop themselves and find meaning in their profession. Schools need teachers who value their profession and find personal meaning in it, who are open to change and development, and who play an active role in the teaching and learning process. The concept of agency has emerged in relation to all these processes and phenomena (Fu & Clarke, 2017; Hallinger et al., 2017; Priestley et al., 2016; Smith & Kovacs, 2011).

Agency is generally defined as the capacity to shape responses to challenging situations. Teacher agency is defined as teachers' ability to act in ways that influence their professional work or their competence in making decisions on issues such as pedagogical development and curriculum. At the same time, teacher agency is understood as teachers being effective in ways that develop their professional identity, involving purposeful choices and attitudes in this way (Biesta et al., 2017; Campbell, 2012; Eteläpelto et al., 2013). In this context, profession and career are not seen merely as a means of earning economic income but as significant aspects of individuals' lives. Although the meaning of a job may vary for each individual, in general, job meaning

contributes to experiences that enhance professional and psychological functioning. The meaning that teachers attach to their work is particularly prominent.

Job meaning is highly important in terms of the outcomes it produces and entails professional and ethical responsibilities for teachers. Teachers who attribute a high level of meaning to their work are more satisfied with what they do and perceive themselves as more important and respected (Kamdron, 2005; Rosso et al., 2010; Steger et al., 2012). It can be stated that teachers with high levels of meaning in their work are likely to experience an increase in their quality of life and overall life satisfaction. Life satisfaction is defined as the subjective and cognitive evaluation of individuals' living conditions according to criteria determined by themselves. Life satisfaction is not limited to a single domain but is related to an evaluation of life as a whole. Although an individual's satisfaction with one's job does not necessarily imply satisfaction with life in general, it is evident that this situation positively affects overall life satisfaction (Shin & Johnson, 1978; Veenhoven, 1996).

This study aimed to examine the psychological factors that enhance the well-being of special education teachers. In this context, it was assumed that the level of job meaning of special education teachers has both direct and indirect effects on teacher agency and contributes to their life satisfaction through teacher agency. The study sought answers to the following research questions: (1) Does job meaning positively affect life satisfaction? (2) Does job meaning positively affect teacher agency? (3) Does teacher agency positively affect life satisfaction? (4) Does job meaning positively affect life satisfaction by enhancing teacher agency?

Meaningful work

Adults in most countries worldwide spend weekdays working more than any other activity, such as caring for others, leisure, and even sleep (Steger, 2019). Sometimes work invades the time for other daily activities in the form of being available for phone calls or messages and in the form of mental and emotional burdens overflowing into everyday life. As with any meaning, meaning in work is challenging due to the subjective nature of the concept. Rosso et al. (2010) see meaningful work as an experience that is rewarding instead of using the word "meaningful work" to refer to all meanings attributed to labor. In contrast to hedonic (pleasure-oriented) definitions, Steger et al. (2012) view meaningful work as a eudemonic (growth and purpose-oriented) positive process. Steger et al. (2012) defined three main components of meaningful work: Greater good (GG) motivations is the need to contribute to a greater good transcending personal interest. Psychological Meaningfulness (PM) of work is the importance of the job for oneself. Meaning-making (MM) through work denotes meaning in life as a whole as connected with meaningful work, as meaning in work is linked with meaning in life. Increased job satisfaction (Kamdron, 2005), greater levels of overall wellbeing (Arnold et al., 2007), and feelings of centrality and importance (Harpaz & Fu, 2002) and are all correlated with meaningful work.

The concept of work meaning, or meaningful work, is even more central in the care professions. Pavlish et al. emphasize the importance of care in terms of work meaning and state that the weight of people's trust in it, especially as soon as healthcare professionals are accepted to undergraduate programs (2019). Care professions leave an impact on the life of the employee beyond just the professional relationship. Medina and Luna emphasize that the teaching profession, especially special education teaching, is a care profession, suggesting ethics of care as a meaning mechanism in their work (1999). Occupations that touch the human condition more deeply are rich in opportunities for meaning-making to add to employees' lives as they are challenging.

The idea of meaningful work is vital because it has beneficial effects on any kind of organizations and is a moral or ethical requirement (Michaelson, 2005). It may be even more central when it comes to educational institutions. Meaningful work correlated positively with life satisfaction in a sample of teachers (Shyim & Korb, 2016). Meaningful work of school administrators can also affect teachers in a positive way. Sela (2020) has shown that higher levels of meaningful work of school principals predicted higher levels of positive emotions, engagement, relationships with students, and performance in teachers they lead. Groot Wassink et al. (2019) found that meaningful work is associated with job crafting, work engagement, and resilience. They found that job crafting and engagement mediated the relationship between meaningful work and teacher resilience.

Meaningful work may also have a dark side in case of underemployment. In the study by Allan et al. (2018), meaningful work is related to a positive link between underemployment and stress, depression, and negative affect. On the other hand, people with low meaningful work scores had a positive relationship between underemployment and positive affect. Another significant issue concerning meaningful work is that decent work is required for work to be meaningful. Allan et al. found that higher decent work scores were related to higher levels of meaningful work scores. (2020).

Teacher agency

From past to present, societal expectations of education and educators have undergone considerable change, leading to shifts in teachers' roles. The demand for teachers who are open to change and development and able to adapt to contemporary needs has increased their responsibilities. In today's educational paradigm, the growing emphasis on teacher performance and competencies has been one of the primary factors contributing to the emergence of the concept of teacher agency (Priestley et al., 2012; Pyhältö et al., 2014; Vongalis-Macrow, 2007). Teachers constitute one of the most essential pillars of education systems, and ultimately, they will drive their transformation and development. Agentic teachers possess the necessary strength and competence to enact such change. Teacher agency is understood as teachers' ability to make a difference in fulfilling their responsibilities and enhancing their instructional practices (Priestley et al., 2012). Moreover, it is noted that agentic teachers can adapt curricula at the school, classroom, and student levels. Within this framework, agentic teachers are considered to consider their students' individual differences (Campbell, 2012). They hold the capacity to interpret, adapt, design, and implement curricula across diverse educational and policy contexts. Although teacher agency plays a substantial role in academic innovation and transformation, teachers exercising agency may not always be welcomed during these processes. Such circumstances can lead to reluctance or resistance among agentic teachers (Ball, 2012). In turn, teachers may resist policies and restrictions that conflict with school values and educational approaches (Robinson, 2012; Sannino, 2010).

Teacher agency possesses a quality that challenges the educational system's structure and the schools' overall functioning. Teachers often operate as passive professionals within education systems, carrying out directives without autonomy (Piyaman, Hallinger, & Viseshsiri, 2017). In particular, teachers' limited influence in areas such as curriculum development, educational policymaking, and the improvement of teaching skills, coupled with the centralized governance of education systems, negatively affects the development of teacher agency (Biesta et al., 2015). As a result, teachers may become alienated from their profession, feel devalued, and refrain from participating in decision-making processes. They may also demonstrate reluctance toward initiatives to improve education within their schools and enhance professional development (Liu et al., 2016).

Teacher agency is considered essential for fostering teachers' professional development, improving student achievement, and enhancing the quality of education. Research indicates a relationship between teachers' engagement in professional development activities and their agency level (Piyaman et al., 2017). Teachers who exercise agency tend to assume greater responsibilities and roles in the educational process. Consequently, agentic teachers can effectively and rapidly drive educational change and transformation (Goswami & Stillman, 1987). Since curricula are known to affect student achievement significantly, reforms are periodically undertaken when deemed necessary. The success of such reforms is closely linked to teacher roles, underscoring the importance of agency in their implementation (Lee & Yin, 2011).

Life satisfaction

Life satisfaction is commonly understood as an individual's overall cognitive evaluation of life circumstances, including domains such as economic situation, work, family, and social relationships, as well as one's sense of happiness and self-worth (Neugarten et al., 1961). It reflects the extent to which people's expectations about life are met in relation to their personal standards (Vara, 1999). In this sense, life satisfaction can be viewed as a positive outcome that encompasses overall quality of life. Accordingly, it involves a comprehensive assessment of one's family, work, educational, and relational life based on individual criteria (Christopher, 1999).

The teaching profession is generally associated with high levels of stress, which affects not only teachers' professional lives but also their personal well-being. As a result, both job satisfaction and life satisfaction are significantly influenced by adverse conditions in the workplace (Greenglass et al., 1997; Travers & Cooper, 1993). Research has shown that teachers' life satisfaction is related to organizational support, job satisfaction, positive action, goal progress, and self-efficacy. In this context, teachers report greater life satisfaction when they are satisfied with their jobs, achieve their work-related goals, and experience positive emotions. Moreover, self-efficacy, working conditions, job satisfaction, and goal achievement exert indirect effects on teachers' life satisfaction (Lent et al., 2011). Sociodemographic variables such as gender, marital status, and income status also play an important role on teachers' life satisfaction. For instance, female teachers report higher life satisfaction than male teachers, married teachers higher than single teachers, and teachers with higher income report higher life satisfaction than those with lower income (Dağlı & Baysal, 2017). In addition, teachers' need for competence and their experience of flow at work are predictors of intrinsic goals and life satisfaction. The positive relationship between intrinsic goals and life satisfaction is partially explained by increased competence satisfaction and greater flow at work. Conversely, extrinsic goals exert only an indirect influence on life satisfaction, along with autonomy and work flow (Olčar et al., 2019).

Based on teachers' professional experiences, it has been stated that job satisfaction positively correlates with life satisfaction (Demirel, 2014). According to Aydınhan and Koç (2016), teachers must first be satisfied with their profession to achieve life satisfaction. Similarly, teachers who prioritize their profession tend to have higher job satisfaction, which enhances their life satisfaction. In this respect, job satisfaction is considered an important predictor of life satisfaction. Factors such as self-efficacy, working conditions, job satisfaction, and personal effort also influence an individual's life satisfaction (Lent et al., 2011). Therefore, teachers' experiences in the school environment affect both their professional and personal well-being.

Teachers' life satisfaction is influenced by various factors within the school environment, and support from their surroundings plays a crucial role in enhancing it. Among these

factors, peer support is particularly significant. Support from colleagues, which may include practical assistance, encouragement, emotional backing, or instructional guidance, has been shown to increase teachers' positive emotions and overall life satisfaction (Greenglass et al., 1997). Equally important is the support provided by school principals. Such support helps teachers feel valued both professionally and personally, fostering a sense of belonging and motivation within the school. Teachers who perceive strong support from their principals are more likely to view the school environment as productive, experience lower levels of stress and burnout, and contribute more effectively to school initiatives. By stating that teachers' work is meaningful and that they are valued, principals can enhance teachers' engagement, participation in school activities, and commitment to achieving success (Littrell et al., 1994).

While teaching is generally considered a high-stress profession, the field of special education involves stressors that may lead to distress and burnout (Greenglass et al., 1997). Such negative circumstances can affect teachers' job performance. Teachers experiencing these stressors are likely to show a decline in performance, whereas those who do not face these challenges are less likely to experience such a decline. Consequently, teachers' life satisfaction is closely associated with their experiences in the work environment (Travers & Cooper, 1993). Reducing the negative conditions encountered by special education teachers may contribute to higher job satisfaction and potentially enhance life satisfaction. In addition, support from school principals has positive effects on teachers' commitment, job satisfaction, and retention. Research conducted with special education teachers and teachers from other disciplines has shown that when school principals provide emotional and instructional support, teachers in both groups are more likely to derive satisfaction from their profession (Littrell et al., 1994). In conclusion, minimizing work-related negativity in special education environments is expected to improve teachers' job satisfaction first, which may subsequently enhance their overall life satisfaction.

The current study

Resignation rates among special education teachers are higher than among other teachers (Fu et al., 2022). According to Cancio et al. (2013), nearly one-third of novice special education teachers leave the profession after working in the field for three years. Special education teachers report experiencing higher levels of job-related stress compared to general education teachers (Fore et al., 2002), and their burnout rates are steadily increasing (Berry, 2012). Shortages of teachers in special education lead to insufficient educational services for students with special needs (Smith et al., 2010). Therefore, it is important to identify the factors that may contribute to special education teachers leaving the field.

The meaningfulness of work is known to have a positive effect on individuals' well-being. Work life is linked to personal values and exerts an influence that extends beyond the immediate moment. Moreover, work meaningfulness facilitates the development of empathetic and supportive relationships among individuals (Cameron, 2012). Thus, work meaningfulness among special education teachers may be related to their likelihood of leaving the profession.

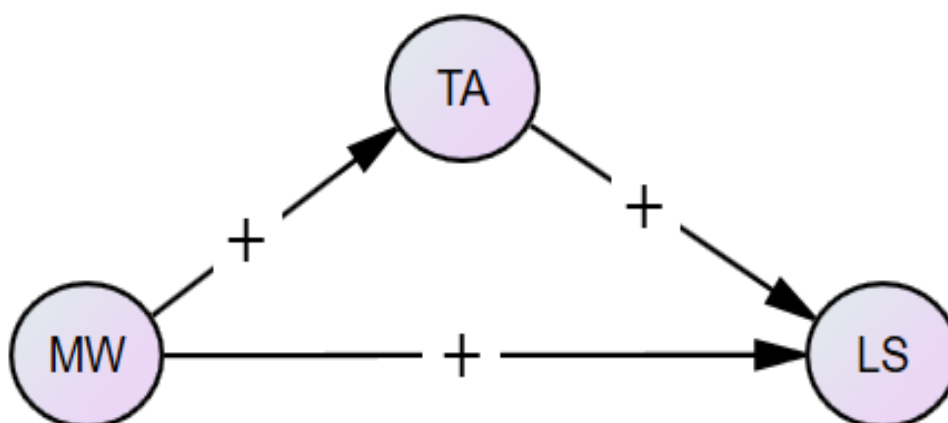
Teacher agency is defined as teachers' capacity to make active, daily decisions about contextually appropriate and inclusive pedagogies, to act with intention, and to strategically implement changes (Wang et al., 2017). Lyons et al. (2016) conceptualized teacher agency as the capacity to foster an inclusive learning community through the application of knowledge, skills, and collaboration. Consequently, agency is likely to have

a positive impact on teachers' job satisfaction and commitment, particularly through collaborative engagement with colleagues (Berry, 2012).

Life satisfaction is a critical factor influencing subjective well-being (Luque-Reca et al., 2022). Evidence suggests that teachers report lower life satisfaction compared to the general population (e.g., Association of Secondary Teachers, 2018; OAJ, 2018; Office for Standards in Education, 2019). This factor is considered to influence teachers' decisions to leave the profession (Madigan & Kim, 2021) and may exacerbate the globally recognized teacher shortage (UNESCO Institute for Statistics, 2016). Consequently, life satisfaction can be regarded as a factor affecting the attrition of special education teachers.

In research aimed at understanding the mechanisms that enhance the well-being of teachers in special education contexts, the psychological processes operating within this unique group are particularly important. As illustrated in Figure 1, work meaningfulness among special education teachers is hypothesized to influence their life satisfaction both directly and indirectly via teacher agency.

Figure 1.
Hypothetical model



Based on the proposed model, the hypotheses are as follows: a) levels of meaningful work positively influence life satisfaction, b) levels of meaningful work positively influence teacher agency, c) teacher agency positively influences life satisfaction, and d) levels of meaningful work positively affect life satisfaction indirectly through teacher agency.

Method

Participants

The study employed a non-random, purposive sampling method to select participants. The sample comprised 214 special education teachers working in Ministry of National Education-affiliated Special Education Practice Schools in Istanbul, including 127 females (59.3%) and 87 males (40.7%). The participants' ages ranged from 23 to 59 years. Regarding teaching experience, 66 teachers (30.8%) had 1–5 years, 57 teachers (26.6%) had 6–10 years, 38 teachers (17.8%) had 11–15 years, 32 teachers (15.0%) had 16–20 years, and 21 teachers (9.8%) had 20 or more years of experience. In terms of student populations, 47 teachers (22.0%) work with students with mild intellectual disabilities, 99 (46.3%) work with students with moderate to severe intellectual disabilities, and 68 (31.8%) work with students with autism.

Measures and data collection

The research data were gathered electronically during the first semester of the 2021–2022 academic year using the Teacher Agency Scale, the Satisfaction With Life Scale, and the Work and Meaning Inventory. The participants were recruited from Special Education Practice Schools affiliated with the Ministry of National Education in Istanbul. Data collection was conducted via Google Forms, which included structured sections for informed consent, demographic information, and the study scales. Before participating, all teachers received detailed briefings on the study's purpose, the handling of personal data, and their right to withdraw at any time. Electronic informed consent was obtained from all participants prior to accessing the survey instruments. To ensure absolute anonymity, no personally identifiable information was recorded. The study adhered to the ethical principles outlined in the Declaration of Helsinki (WMA, 2013) and the national regulations applicable during the period of the investigation."

The Teacher Agency Scale was developed by Liu et al. (2016) and adapted into Turkish by Bellibaş et al. (2019). The scale comprises four dimensions: learning effectiveness (6 items), teaching effectiveness (7 items), optimism (5 items), and constructive engagement (6 items). The scale uses a 5-point Likert format (1 = Strongly disagree, 5 = Strongly agree) and contains no reverse-scored items. Higher scores on the scale indicate higher levels of teacher agency. Confirmatory factor analysis (CFA) indicated acceptable model fit for the scale, with $\chi^2 = 526.56$, $df = 241$, $\chi^2/df = 2.19$, $p < .001$, RMSEA = .05, SRMR = .08, and CFI = .91. In the current study, the scale demonstrated excellent internal consistency, with a Cronbach's alpha of .96. CFA fit indices were $\chi^2 = 486.01$, $df = 245$, $\chi^2/df = 1.98$, $p < .001$, RMSEA = .068, SRMR = .046, NNFI = .92, and CFI = .93.

The Satisfaction With Life Scale was developed by Diener et al. (1985) and adapted into Turkish by Dağlı and Baysal (2016). The scale comprises a single factor with five items. It utilizes a 5-point Likert-type scale (1 = Strongly disagree, 5 = Strongly agree). Higher scores on the scale indicate greater levels of life satisfaction. The scale demonstrated good internal consistency, with a Cronbach's alpha of .88. Confirmatory factor analysis (CFA) revealed excellent model fit, with $\chi^2 = 5.87$, $df = 5$, $\chi^2/df = 1.17$, $p > .05$, RMSEA = .03, SRMR = .01, NNFI = 1, CFI = 1, GFI = .99, and AGFI = .97. In the current study, the scale demonstrated excellent internal consistency, with a Cronbach's alpha of .93. Confirmatory factor analysis indicated a good model fit, with $\chi^2 = 7.78$, $df = 5$, $\chi^2/df = 1.55$, $p > .05$, RMSEA = .05, SRMR = .01, NNFI = .99, CFI = .99, GFI = .98, and AGFI = .95.

The Work and Meaning Inventory (WAMI) was developed by Steger et al. (2012) and adapted into Turkish by Akın et al. (2013). The scale consists of three dimensions: Psychological Meaningfulness (4 items), Meaning Making through Work (3 items), and Greater Good Motivation (3 items). The scale employs a 5-point Likert format (1 = Strongly disagree, 5 = Strongly agree). Higher scores on the scale indicate greater levels of work meaning. The scale demonstrated good internal consistency, with a Cronbach's alpha of .86. Confirmatory factor analysis (CFA) indicated acceptable model fit, with $\chi^2 = 68.92$, $df = 32$, $\chi^2/df = 2.15$, $p < .001$, RMSEA = .08, SRMR = .05, CFI = .98, NNFI = .96, IFI = .98, and NFI = .94. In the current study, the scale demonstrated excellent internal consistency, with a Cronbach's alpha of .94. Confirmatory factor analysis indicated acceptable model fit, with $\chi^2 = 67.62$, $df = 31$, $\chi^2/df = 2.18$, $p < .001$, RMSEA = .07, SRMR = .02, NNFI = .96, CFI = .97, GFI = .94, and AGFI = .90.

Data analysis

Structural equation modeling (SEM) was employed in this study to test the proposed theoretical models using various statistical techniques (Cheung, 2015). SEM is a flexible approach that facilitates the examination of relationships between latent and observed variables within a theoretical framework (Schumacker & Lomax, 2004). Multiple goodness-of-fit indices were utilized to assess these relationships and to evaluate the adequacy of the proposed structural model. Kline (2016) considers the evaluation of model fit using the p -value, χ^2/df , RMSEA, TLI, and CFI indices to be adequate. In contrast, Hu and Bentler (1998) suggest that reporting SRMR in combination with TLI, CFI, or RMSEA provides a sufficient assessment of model fit. Within structural equation modeling, χ^2/df values below 5, RMSEA and SRMR values below .08, and CFI, TLI, and NFI values above .90 are generally regarded as indicative of acceptable model fit (Kline, 2016). To examine the significance of mediation in the proposed structural model, bootstrapping procedures were employed (Hayes, 2018). Data analyses were conducted using IBM SPSS Statistics 25 (IBM Corp., 2017) and IBM SPSS AMOS 24 (Arbuckle, 2017).

Results

Descriptive statistics

Before testing the hypothesized model, descriptive statistics and bivariate correlations among the latent variables were examined. Table 1 presents the intercorrelations, means, standard deviations, skewness, and kurtosis values for Meaningful Work (MW), Teacher Agency (TA), and Life Satisfaction (LS).

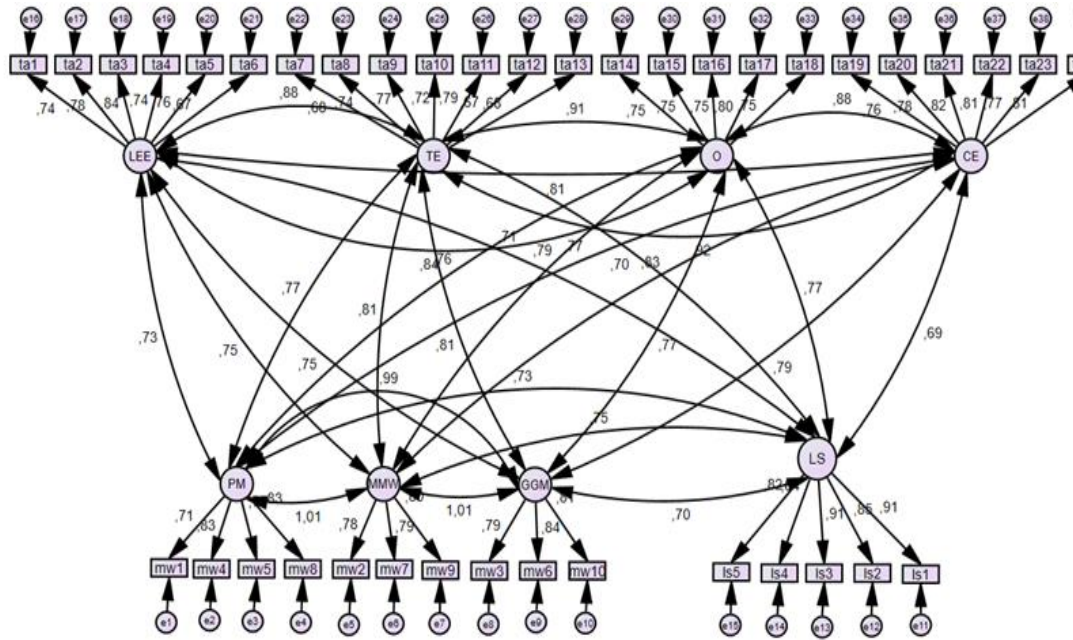
Table 1. Inter-correlation and descriptive statistics of latent variables							
Variable	1	2	3	M	SD	Skewness	Kurtosis
1. MW	-			38.51	8.21	-.744	-.587
2. TA	.64*	-		92.69	16.38	-.941	-.034
3. LS	.631	.65*	-	22.97	7.07	-.433	-.967
* $p < .001$							

As shown in Table 1, there were strong, positive, and statistically significant correlations between MW (Meaningful Work) and TA (Teacher Agency) ($r = .64$, $p < .001$), MW and LS (Life Satisfaction) ($r = .63$, $p < .001$), and TA and LS ($r = .65$, $p < .001$). Furthermore, all inter-variable correlation coefficients were below .85, and the calculated variance inflation factor ($VIF = 2.572$) was below 10, suggesting no issues with multicollinearity (Kline, 2016).

Measurement model

Prior to testing the proposed structural model, a measurement model encompassing all variables was constructed and evaluated. The measurement model is depicted in Figure 2. The subscales for Meaningful Work (MW), measured by the Work and Meaning Inventory (WAMI), are MMW (Meaning Making through Work), PM (Psychological Meaningfulness), and GGM (Greater Good Motivation). The subscales for Teacher Agency (TA) are LEE (Learning effectiveness), TE (Teaching effectiveness), O (Optimism), and CE (Constructive engagement). LS represents a single factor of Life Satisfaction.

Figure 2.
Measurement model

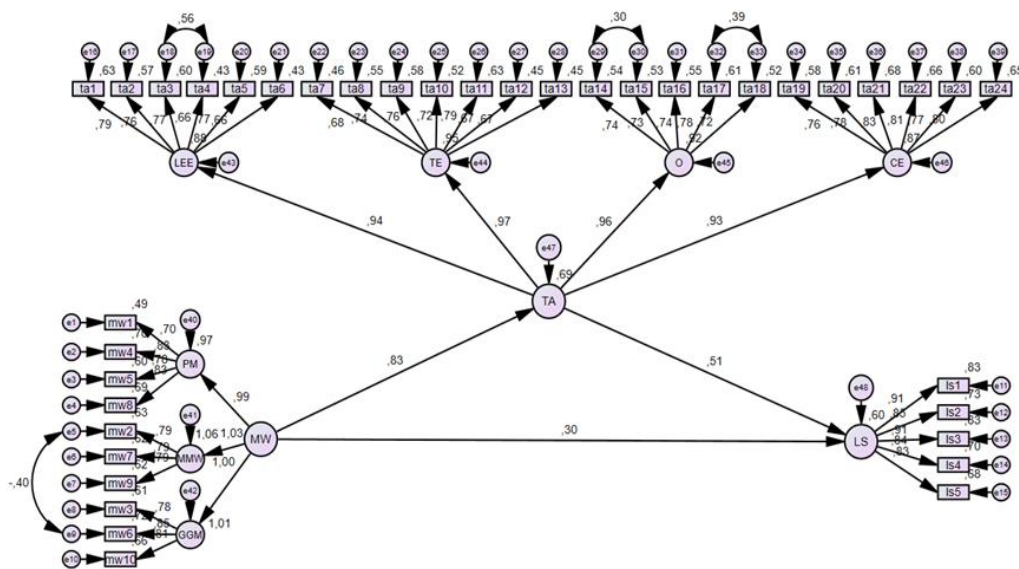


The analysis yielded the following goodness-of-fit indices: $\chi^2 = 1319.662$, $df = 674$, $\chi^2/df = 1.95$, $p < .001$, RMSEA = .067, SRMR = .053, CFI = .90, TLI = .90, IFI = .90. All path coefficients were statistically significant, indicating that the measurement model demonstrated acceptable fit and was validated.

Structural model

The analysis yielded the following goodness-of-fit indices: $\chi^2 = 1209.338$, $df = 688$, $\chi^2/df = 1.75$, $p < .001$, RMSEA = .060, SRMR = .048, NFI = .83, CFI = .92, TLI = .91, IFI = .92. These results indicate that the proposed model demonstrated acceptable fit and was validated. The path diagram for the proposed model is depicted in Figure 3.

Figure 3.
Path diagram



As shown in Figure 3, the paths from MW (Meaningful Work) to TA (Teacher Agency) ($\beta = .83, p < .01$), from TA to LS (Life Satisfaction) ($\beta = .51, p < .01$), and from MW to LS ($\beta = .30, p < .01$) were all statistically significant.

Mediation analysis

A bootstrapping analysis with 5,000 resamples and a 95% confidence interval was conducted to examine the mediating role of teacher agency (TA) in the relationship between meaningful work (MW) and life satisfaction (LS). The results are summarized in Table 2.

Path	β	SE	R ²	95% CI Lower	95% CI Upper
Direct effects					
MW $\rightarrow$ LS	.298*	.135	.52	.023	.559
MW $\rightarrow$ TA	.829*	.032	.68	.758	.884
TA $\rightarrow$ LS	.509*	.118	.60	.276	.745
Indirect effect					
MW $\rightarrow$ TA $\rightarrow$ LS	.422*	.100	–	.230	.628

* $p < .001$

The direct effect of MW on LS was positive and statistically significant ($\beta = .30, p < .001$, 95% CI [.023, .559]), indicating that higher levels of meaningful work were associated with greater life satisfaction. Similarly, MW positively predicted TA ($\beta = .83, p < .001$, 95% CI [.758, .884]), and TA, in turn, positively predicted LS ($\beta = .51, p < .001$, 95% CI [.276, .745]).

Importantly, the indirect effect of MW on LS via TA was also significant ($\beta = .42, p < .001$, 95% CI [.230, .628]), suggesting that teacher agency partially mediates the relationship between meaningful work and life satisfaction. These findings indicate that meaningful work enhances life satisfaction both directly and indirectly through its impact on teacher agency.

Discussion and conclusion

Examining the effects of teacher agency and the meaning attributed to work on the life satisfaction of special education teachers is expected to contribute to understanding the relationship between this specific group's career development, professional competence, and overall well-being. The findings revealed a statistically significant and positive relationship among meaningful work, teacher agency, and life satisfaction. This result is consistent with the existing literature. Previous studies have shown that perceiving work as meaningful strengthens teachers' professional identity, enhances their motivation, and consolidates their professional commitment (Canrinus et al., 2012; Rosso et al., 2010; Watt & Richardson, 2008). Meaningful work has been found to positively affect professional satisfaction and individuals' overall subjective well-being (Arnold et al., 2007; Chamani et al., 2023; Rothausen & Henderson, 2019). In this regard, perceiving their work as meaningful can be considered a crucial psychological resource for special education teachers that enhances their professional performance and life satisfaction. The importance of these findings becomes even more pronounced in the context of special education, as teachers in this field are at a higher risk of stress and burnout compared to teachers of other disciplines (Fore et al., 2002; Berry, 2012; McGrew et al., 2023; Park & Shin, 2020). Therefore, modifiable psychological factors such as work meaning and agency in teachers' life satisfaction may be viewed as a strategic element that strengthens teachers' intention to remain in the profession and reduces professional attrition (Fu et al., 2022; Madigan & Kim, 2021). Consequently, the

results of this study indicate that initiatives aimed at increasing teachers' life satisfaction should focus on fostering a school climate and professional autonomy practices that nurture the meaningfulness of work. In this regard, supportive leadership behaviors of school administrators, collegial collaboration, and expanding professional development opportunities may enhance teacher agency and improve life satisfaction (Drago-Severson, 2012; Li et al., 2023).

Teachers' levels of meaningful work positively influence their agency. This finding is consistent with research suggesting that perceiving work as meaningful can enhance individuals' capacities for professional autonomy, decision-making, and initiative-taking (Laaser & Bolton, 2021; Rosso et al., 2010). Experiences of meaningful work contribute to teachers' involvement in pedagogical decisions and position them as more effective actors in educational change processes. Indeed, Priestley et al. (2016) conceptualize agency not as teachers being passive curriculum implementers, but as professionals who interpret, adapt, and transform educational policies. In this regard, perceiving work as meaningful can be a factor that strengthens teachers' professional identities and activates their agency capacities. Similarly, Arnold et al. (2007) demonstrated that meaningful work enhances employees' psychological well-being and supports proactive behaviors in the workplace. Within the educational context, Wassink et al. (2019) found that teachers' levels of work meaning are associated with higher levels of engagement, creativity, and resilience. These findings also reveal that when teachers perceive their profession as meaningful, their levels of burnout decrease, and they become more effective in adapting curricula, responding to student needs, and engaging in school-based innovations (Beames et al., 2023; Granger et al., 2023; Grayson & Alvarez, 2008). In sum, the positive effect of meaningful work on teacher agency can be considered a critical mechanism that supports both teachers' professional development processes and the transformation of educational systems. In special education, fostering school climates, administrative support, and professional development opportunities that help teachers perceive their work as meaningful can strengthen their agency capacities and directly contribute to students' learning processes.

Teachers' levels of meaningful work positively affect their life satisfaction. This finding is consistent with previous research emphasizing that perceiving work as meaningful influences not only individuals' professional lives but also their overall life experiences (Cheney et al., 2016; Rosso et al., 2010; Steger & Dik, 2009). Life satisfaction is defined as a global evaluation of one's life according to self-determined criteria, and it has been shown that positive experiences gained in work life contribute to this overall assessment (Shin & Johnson, 1978; Veenhoven, 1996). For teachers in particular, perceiving work as meaningful serves to buffer against negative aspects of the profession, such as stress and burnout, thereby supporting psychological well-being (Benevene et al., 2020; Luque-Reca et al., 2022; Trillo et al., 2024). Considering that teaching requires a high degree of emotional labor and often entails challenging conditions, the perception of work as meaningful functions as a compensatory resource mitigating these difficulties (Chang, 2009; Naring et al., 2006; Wang et al., 2019). In this regard, the influence of meaningful work on teachers' life satisfaction is critical not only at the individual level but also in terms of professional commitment and intentions to remain in the profession (Madigan & Kim, 2021; Skaalvik & Skaalvik, 2011). Empirical findings further indicate that individuals with high levels of meaningful work report greater job and life satisfaction (Rice et al., 1985; Wolfram, 2023), as well as stronger social relationships and heightened perceptions of societal contribution (Cheney et al., 2008). Thus, perceiving their work as meaningful enables teachers to achieve higher personal life satisfaction and greater productivity and resilience in their professional roles. In line with these findings, the contribution of meaningful work to life satisfaction is significant for teachers' professional development processes and the sustainability of educational institutions. Supportive approaches by school administrators that enhance teachers' sense of the value of their

work, increased opportunities for professional growth, and the encouragement of collegial collaboration emerge as structural factors that can strengthen teachers' life satisfaction (Crisci et al., 2019; Edinger & Edinger, 2018; Littrell et al., 1994).

Teacher agency positively affects teachers' life satisfaction. Teacher agency is teachers' capacity to make decisions, exercise initiative, and enact professional autonomy within pedagogical processes (Molla & Nolan, 2020; Priestley et al., 2016). The literature frequently reports that individuals' perceived control over their lives strengthens their sense of self-efficacy and self-determination, which is positively associated with life satisfaction (Deci & Ryan, 2000; Diener et al., 2018). In this context, individuals with higher levels of teacher agency are expected to experience greater professional functionality and higher overall life satisfaction. Educational research has shown that enhanced agency capacities among teachers strengthen their professional commitment, subjective well-being, and intentions to remain in the profession (Biesta et al., 2015; Vähäsantanen, 2015). Teachers with high agency are more effective in coping with challenges in the school environment, more open to pedagogical innovations, and better able to generate flexible solutions to students' needs (Campbell, 2012). This, in turn, is believed to increase professional satisfaction and contribute to life satisfaction. In the context of special education, the agency emphasizes teachers' capacity to adapt to complex and often unpredictable learning needs. Higher levels of agency among special education teachers enhance their ability to cope with occupational stress, reduce the risk of burnout, and consequently increase their life satisfaction (Li & Ruppar, 2020; Sözer Boz et al., 2020). Moreover, structural factors such as a supportive school climate, collegial collaboration, and leadership support can strengthen teachers' agency, indirectly enhancing their life satisfaction (Herman et al., 2023; Littrell et al., 1994). In conclusion, teacher agency can be regarded as a critical element that improves the quality of pedagogical processes and enhances teachers' overall life satisfaction. Therefore, educational policies and school practices that provide teachers with greater autonomy, participation, and decision-making opportunities can contribute to their professional and personal quality of life.

It was determined that teachers' levels of meaningful work positively affect their life satisfaction by enhancing teacher agency. Thus, agency mediates the relationship between teachers' perceptions of meaningful work and their life satisfaction. In other words, perceiving work as meaningful strengthens teachers' agency capacities, and increased agency in turn contributes to their life satisfaction. This finding is consistent with the existing literature. For instance, Hasan et al. (2020) emphasized that meaningful work enhances individuals' subjective well-being by increasing their motivation and commitment in professional life, while Eakman and Eklund (2012) highlighted that meaningful work contributes to life satisfaction by providing individuals with a stronger sense of purpose and control. Similarly, Chavez et al. (2022) noted that teachers' agency capacities are directly related to their professional identities and are closely linked to well-being. This finding is particularly critical in special education, where teachers are exposed to high levels of stress, role ambiguity, and risk of burnout (Fore et al., 2002; Park & Shin, 2020). Therefore, psychological resources such as meaningful work and agency that indirectly support life satisfaction may serve as strategic protective factors for the professional sustainability of teachers (Fu et al., 2022; Madigan & Kim, 2021). In conclusion, the contribution of meaningful work to life satisfaction through the mechanism of teacher agency highlights the importance of structural arrangements such as school climate, leadership, and professional development opportunities in promoting teachers' professional well-being. Revealing the mediating role of teacher agency in this relationship is expected to shed light on the mechanisms that affect special education teachers' well-being and inform interventions and policies aimed at enhancing their well-being. Providing teachers with greater autonomy and opportunities for participation in

educational policies can be considered an effective strategy to strengthen their agency and, in turn, increase their life satisfaction.

Practical implications and limitations

The findings of this study indicate that teachers' levels of meaningful work strengthen their agency, which in turn positively reflects on their life satisfaction. Accordingly, school administrators providing teachers with experiences that enhance the meaningfulness of their profession, increasing their participation in decision-making processes, and supporting their autonomy may foster teacher agency and thereby improve their well-being. Particularly in the context of special education, where teachers face high levels of stress and risk of burnout, practices that enhance the meaningfulness of work hold strategic importance for professional sustainability. In this regard, supportive leadership behaviors within the school climate, opportunities for collegial collaboration, and expanded possibilities for professional development can be regarded as structural arrangements that strengthen teachers' life satisfaction. Nevertheless, this study has certain limitations. The sample was limited to teachers working in special education schools in Istanbul, Türkiye, which restricts the generalizability of the findings. Furthermore, the data were collected at a single point in time using self-report measures, which requires caution when making causal inferences. Although the structural model fit indices were within acceptable levels, future research conducted in different cities and regions, across diverse school types, and utilizing longitudinal designs with a broader set of variables could provide a deeper understanding of the relationship between meaningful work, teacher agency, and life satisfaction, thereby enhancing the contributions of the present study.

Ethical Consideration

This study was conducted in accordance with the ethical principles of the Declaration of Helsinki (World Medical Association, 2013). During the data collection phase, the research adhered to all applicable institutional ethical standards and regulations. Given the study's non-interventional nature, the minimal risk posed to adult participants, and the ensurement of complete anonymity, the research maintained the highest ethical integrity. Participants were provided with comprehensive information regarding the study's objectives and the voluntary nature of their involvement. Electronic informed consent was obtained from each respondent, and all data were handled with strict confidentiality, ensuring no personally identifiable information was collected.

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