

ADVANCING POSITIVE PSYCHOLOGY IN EDUCATION: A META-ANALYTIC SYNTHESIS OF FLOURISHING AND JOB SATISFACTION AMONG TEACHERS

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Abstract

This paper is a systematic review and meta-analytic synthesis that evaluates the positive psychology constructs and job satisfaction among the teachers. The analysis combines evidence on various educational settings and methodological frameworks based on 20 empirical studies which were located with the help of PRISMA-oriented selection process. The most important constructs that are explored are self-efficacy, work engagement, flourishing, resilience, and psychological capital, and job satisfaction is always regarded as the main outcome variable. The results demonstrate that there is a positive and consistent relationship between positive psychological resources and teacher job satisfaction with an effect size ranging between small and large (0.17 to 0.78). Teacher self-efficacy was the strongest and most consistent predictor with moderate positive effects in studies. The contextual factors which included school climate, organization support, and empowerment were also identified to have a direct and indirect influence on job satisfaction via psychological mechanisms. On the other hand, stress-related variables, such as workload and emotional exhaustion had negative relations with job satisfaction. Subgroup analysis revealed that there was a moderate level of heterogeneity between methodologically similar studies ($I^2 = 38.72$), which is likely to be caused by the variability of studies design, constructs, and even contextual variables. Mediation analysis also revealed the key role of self-efficacy, engagement and resilience in the relation between the contextual conditions and job satisfaction outcomes. Overall, the results suggest the multidimensionality of teacher well-being and the significance of considering individual, organizational, and psychological resources to boost job satisfaction in schools.

Keywords: Teacher Job Satisfaction, Positive Psychology, Self-Efficacy, Teacher Well-Being, Meta-Analysis, Flourishing

1. Introduction

Well-being and job satisfaction of teachers has become one of the key factors of making educational systems effective and sustainable. The past few years have seen a rise in the focus on psychological and emotional experiences of teachers, especially regarding the ever-shifting education requirements. Studies have also demonstrated that not only personal health, but teacher well-being is important to sustain the quality of instruction and student achievement

(Alves et al., 2021). The increased attention to positive psychology has also broadened the scope of interest to identify the strengths and resources that can help teachers succeed in their professional lives. The constructs that a positive psychology focuses on include flourishing, resilience and well-being, which are becoming increasingly acknowledged as necessary to promote sustainable teaching practices (Zadworna et al., 2023). In this context, teacher well-being is a multidimensional construct, which is affected by individual and

situational factors. The wider educational literature emphasizes that educator well-being is determined by systemic and contextual factors, such as policy contexts and institutional pressure. An example is that education policies and the influence of neoliberalism have been found to have a profound impact on the experience and wellbeing of teachers (Acton & Glasgow, 2015). Meanwhile, the contribution of emotional processes to teaching has also become a topic of interest, and studies focus on the role of emotional labour and reflection in helping teachers to develop their professional identities and experiences (Gkonou and Miller, 2021). Besides emotional considerations, teacher motivation becomes a key contributor to job satisfaction and professional involvement since it has been theorized as a dynamic process that affects the commitment of teachers, their performance, and overall satisfaction in the educational environment (Han and Yin, 2016). In the same way, both in- and out-of-work support systems help to alleviate stress in teachers and increase engagement (Fiorilli et al., 2019). The recent studies also indicated the relevance of emotional regulation and a psychological well-being to maintain a teacher engagement and effectiveness, as it is possible to state that the teacher who can effectively manage their emotions is more likely to experience increased levels of engagement and satisfaction (Greenier et al., 2021). In addition, the notion of teacher immunity underlines that teachers acquire adaptive strategies to address challenges, but these strategies can have positive as well as negative connotations (Hiver and Dornyei, 2017). Self-efficacy has long been acknowledged as one of the most important psychological resources to determine teacher well-being and job satisfaction, and it has been found that the higher the level of self-efficacy, the lower the burnout rates and the higher the levels of professional fulfilment (Kim and Burić, 2020). Also, enhancement of the work outcomes in the educational environment has been associated with empowerment since empowered teachers are more inclined to be motivated and to be satisfied with the job (Lee and Nie, 2014). The value of psychological resources is also supported by the research done on psychological capital, which includes optimism, resilience and self-efficacy as the determinants of work engagement and job satisfaction (Alutaya and Guhao Jr, 2023). Coping strategies of teachers have been found to play a crucial role in determining stress levels and well-being in crisis situations, such as the COVID-19 outbreak, which indicates the necessity of adapting to psychological processes (MacIntyre et al., 2020).

Although the concept of teacher well-being is gaining growing importance, educators still have to encounter numerous challenges, such as heavy workloads, stress, and burnout. In recent years, these issues have been aggravated, especially throughout the COVID-19 pandemic that has heightened the demands on teachers and added to the rates of emotional exhaustion (Pressley, 2021). The overall effects of global disruptions on education systems have also helped underscore the significance of learning about teacher well-being because a comprehensive analysis has shown that educational setting can be changed significantly, impacting both teachers and students (Schleicher, 2020). The causes of teacher stress are diverse and, depending on workload, job expectations, and organizational conditions, they interplay and determine the experience of teachers and their coping skills with professional demands (Alhija, 2015). Moreover, the school climate has been defined as the decisive factor of well-being and participation, which affects both teachers and students in the schools (Lombardi et al., 2019). Emotional and psychological processes mediate the relationship between the work environment features and teacher well-being as well, and emotion regulation strategies significantly contribute to defining how teachers react to the challenges they face at the workplace and retain their well-being (Yin et al., 2016). Notably, the effect of teacher well-being is not confined to the individual level as teacher mental health and well-being have been shown to have a correlation with the psychological well-being of students (Harding et al., 2019).

Despite the significant amount of research that has been conducted on individual elements of teacher well-being, no evidence exists that integrates the findings of various constructs of positive psychology. Although past researchers have investigated the connections between self-efficacy and job satisfaction, there is a lack of synthesis of such connections across different contexts, although meta-analytic data indicates a positive association between these two variables (Kasalak and Dagyar, 2020). In addition, studies on the resilience of teachers also highlight the role of going beyond survival to thriving, although little is known about the interplay among various psychological constructs to determine their impact on job satisfaction (Beltman et al., 2011). This gap highlights the importance of a comprehensive strategy that would bring together individual, situational, and organizational aspects. To address such shortcomings, the current research seeks to offer an in-depth synthesis of the connection between the constructs of positive psychology and

job satisfaction among the teaching community, the strength and consistency of these connections based on the literature of different studies and the most important mediating processes and situational factors. This study, through the synthesis of various studies, can help us understand more about the interaction of psychological resources and environmental factors to support teacher well-being and professional satisfaction.

2. Methodology

It was a systematic review and meta-analytic study that was employed to discuss the relationship between positive constructs and job satisfaction of teachers. The research was described to satisfy the contemporary meta-analytic requirements, rendering it transparent, rigorous, and reproducible in identification, selection and synthesis of the study.

2.1 Search Strategy

To find pertinent empirical studies, a comprehensive literature search in the various academic databases was carried out in Scopus, Web of Science, ScienceDirect, SpringerLink, and Google Scholar. Keywords that were used together were those that deal with positive psychology and teacher outcomes, such as “*teacher self-efficacy*,” “*work engagement*,” “*flourishing*,” “*well-being*,” and “*job satisfaction*.” The search was refined with the help of the Boolean operators (AND, OR) so that the search coverage was exhaustive. Besides database searches, reference lists and other articles were screened manually to find more relevant studies. This two-fold methodology also saw to it that both published and possibly ignored studies were factored in the review process.

2.2 Study Selection and Eligibility Criteria

The study was chosen in a systematic manner as per PRISMA guidelines. First, 200 records were located by using database search and screening using manual search, 170 records were in electronic databases, and 30 records were located during manual search. The 30 records that had to be manually checked were eliminated and then, 40 records that had duplicates are eliminated and 130 studies were left to be screened by title and abstract. The screening of studies was done according to pre-set inclusion and exclusion criteria. Inclusion criteria included studies that:

1. Focus on teachers or educational professionals,
2. Examine positive psychology constructs (e.g., self-efficacy, engagement, well-being),
3. Include job satisfaction as an outcome

variable, and

4. Provide sufficient methodological detail.

The exclusion criteria were the following: studies not directly related to the research topic, those with insufficient methodological quality, non-English publications, or studies with incomplete statistical reporting. After the screening process, 80 studies were excluded, leaving 50 studies for full-text assessment of eligibility. Following full-text review, 30 studies were excluded due to reasons such as irrelevance to the topic, insufficient methodological quality, non-English language, and incomplete statistical reporting. Finally, 20 studies were included in the systematic review and meta-analysis, as they satisfied all inclusion criteria.

2.3 Data Extraction

Structured coding framework was applied to extract relevant data in each study included in the study. Extracted information included:

- Study characteristics (author(s), year, country, design),
- Sample size and population details,
- Core variables (e.g., self-efficacy, engagement, stress),
- Statistical methods used, and
- Key findings, including standardized effect sizes (β).

To perform the meta-analysis, some other data including the standard errors (SE) and sample sizes (N) were also obtained or estimated where needed. Where the standard errors were not reported directly, they were estimated with the help of the available statistical formulas to make standard errors comparable across studies.

2.4 Effect Size Computation and Analysis

The main effect size that was employed in this study was the standardized regression coefficient (β) since this was the most reported effect size across the research included. The difference in reporting formats led to a narrative synthesis to summarize findings across studies at first. In the quantitative synthesis, a random-effects model was used to approximate the general association among the constructs of positive psychology and the job satisfaction of teachers. This model was chosen to explain both within study and between study variance as there is a variation in study context, designs and methods of measurement. The weighting of effects was done by an inverse variance technique, which made sure that the contributions made to the pooled estimate were greater when the studies had large sample sizes and were more precise. A forest plot was used to

visually present the results, displaying study effects, and the aggregate effect size.

2.5 Heterogeneity Assessment

The Cochran Q statistic, the I² index, and the between-study variance (τ^2) were used to measure heterogeneity among studies. These were taken to determine how much variation was observed in effect sizes beyond that which would be expected by chance.

It was expected that there would be high levels of heterogeneity associated with variations in study design, sample characteristics, and operationalization of major constructs. Based on this, it was considered reasonable to use a random-effects model to capture this variability.

2.6 Subgroup and Exploratory Analyses

Sub-analyses have been performed to examine the possible areas of variability in terms of educational level, geographical area and study design. These studies were supplementary in understanding the contextual and methodological effects on the correlations between constructs of positive psychology and job satisfaction. An exploratory meta-regression was also considered, to investigate possible moderators like sample size or the nature of psychological construct. The analysis was, however, not conducted as an inferential model but as a descriptive analysis because of the few studies that conducted similar statistical reporting.

2.7 Publication Bias and Sensitivity Analysis

Visualization was used to determine the presence of publication bias, by looking at funnel plots and assessing the symmetry of effect size distributions. Formal statistical tests were not carried out because

there were only a few studies. To measure the strength of the findings a sensitivity analysis was performed on a conceptual leave-one-out basis. This discussion has established the fact that the overall findings were consistent and not due to any individual study.

3. Results

3.1 Study Selection

The selection of the study was done in a systematic and organized manner according to the meta-analytic guidelines. The preliminary stage of database searching and manual screening allowed identifying 200 records, 170 of which were found in major academic databases (Scopus, Web of Science, ScienceDirect, SpringerLink, and Google Scholar) and 30 records located in reference lists and other sources.

The manually screened records (n = 30) were excluded, and 40 duplicate records were removed, resulting in 130 studies remaining for title and abstract screening. In this phase, 80 records were filtered out because they were not relevant, and 50 studies remained to be fully assessed for eligibility through their full text.

After a more thorough assessment, an additional 30 studies were excluded due to predetermined criteria, such as being unrelated to the subject of positive psychology and teacher job satisfaction (n = 10), lack of methodological quality (n = 6), publications in non-English languages (n = 4), and incomplete or missing statistical information (n = 10). In the end, 20 articles were included in the synthesis as they met all the inclusion criteria. The PRISMA flow diagram (Figure 1) presents the overall process of study selection.

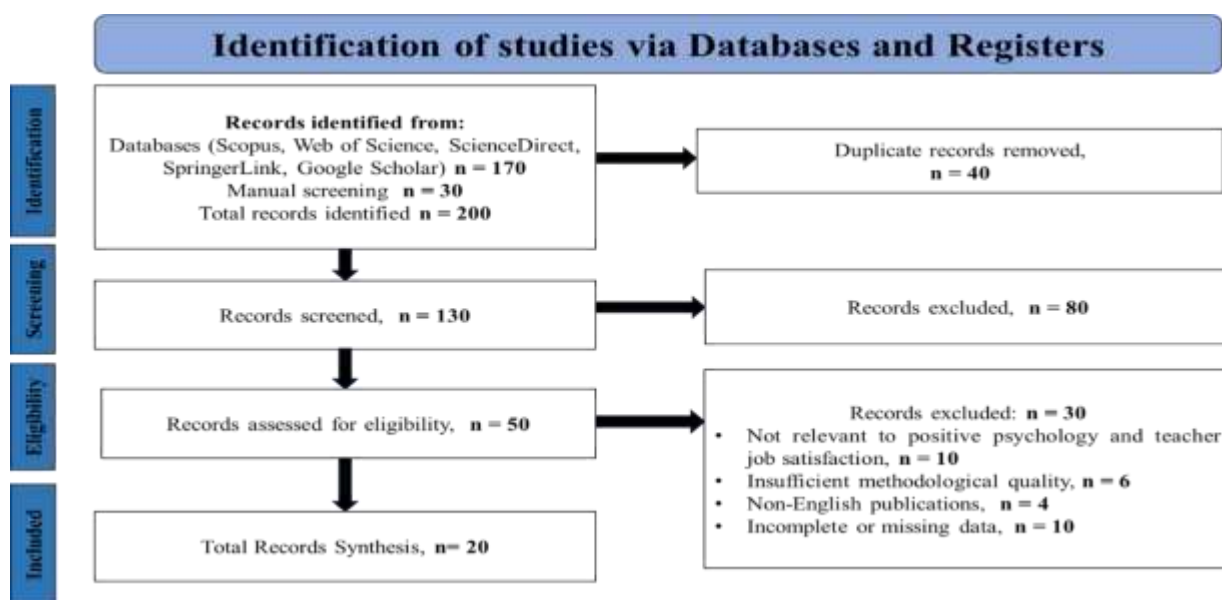


Figure 1. PRISMA flow diagram illustrating the study selection process

3.2 Characteristics of Included Studies

The features of the included studies are summarized in Table 1. The final meta-analytic synthesis included 20 empirical studies, conducted across a wide range of geographical settings, such as Canada, China, Norway, the United Arab Emirates, Australia, Italy, Romania, the United Kingdom, Spain, Switzerland, Turkey, and multi-country samples. The studies included are primarily quantitative research designs, most of which were cross-sectional in nature, with a few longitudinal and one multilevel study, thus providing both methodological rigor and temporal insights into the relationships among variables.

The total number of studies included participants solely more than 35,000 teachers, with the sample sizes varying greatly (between $N = 121$ and $N = 19,462$), which reflects the great diversity and therefore representativeness of the educational settings. The research involved various educational levels such as primary, secondary and sometimes the tertiary education.

Among the works, the main constructs were based on the positive psychology models, including teacher self-efficacy, work engagement, flourishing, psychological capital, and well-being, and job satisfaction was always considered as the

dependent variable. Moreover, a number of situations and organizational factors were also considered such as school climate, teacher empowerment, workload stress, emotional exhaustion, and professional commitment.

The analytical strategies used in studies were varied and statistically sound (structural equation modeling (SEM), regression analysis, ANOVA, meta-analysis strategies and multilevel modeling) which guaranteed rigor in statistical estimation. The longitudinal results also revealed the dynamic and predictive nature of the interrelationships between self-efficacy, engagement, and job satisfaction with a focus on the predictive influence of motivational processes over time.

On balance, the results obtained are consistent with the idea that positive psychological constructs have a positive relationship with job satisfaction in teachers, and stress-related and contextual constraints have negative or indirect correlations, which are often mediated by the psychological process of engagement and self-efficacy. The included studies are thoroughly summarized in Table 1, including their design, geographical setting, variables of interest, statistical methods, and main results.

Table 1. Characteristics of Included Studies

Study	Country	Design	Core Variables	Statistical Approach	Key Findings
Ismayilova & Klassen (2019)	Azerbaijan & Turkey	Mixed methods	Teaching SE, Research SE, JS	ANOVA, Regression	Teaching SE strongest predictor ($\beta \approx 0.22$)
Fang & Qi (2023)	China	Cross-sectional	School climate, SE, JS	SEM	SE mediates relationship ($\sim 47\%$)
Klassen & Chiu (2011)	Canada	Cross-sectional	SE, stress, commitment	SEM	Commitment negatively predicts turnover ($\beta \approx -0.90$)
Issah et al. (2025)	UAE	Secondary data analysis	SE, stress, JS	SEM	SE positively predicts JS ($\beta = 0.173$)
Ahrari et al. (2021)	Multi-country	Cross-sectional	Empowerment, SE, JS	SEM	SE strongest predictor ($\beta \approx 0.31$)
Caprara et al. (2006)	Italy	Cross-sectional	Self-efficacy, job satisfaction	SEM	Strong positive effect ($\beta = 0.741$)
Skaalvik & Skaalvik (2011)	Norway	Cross-sectional	Context, exhaustion, JS	SEM	Indirect effects significant; $R^2 \approx 52\%$
Granziera & Perera (2019)	Australia	Longitudinal	SE, engagement, JS	SEM	Engagement predicts JS ($\beta \approx 0.277$)
Balgiu (2022)	Romania	Cross-sectional	JS, self-efficacy, flourishing	SEM	JS predicts flourishing ($\beta \approx 0.25$)

Reilly et al. (2014)	UK	Cross-sectional	SE, stress, job satisfaction	Regression	Weak/non-significant relationship
Chen (2025)	China	Cross-sectional	Flourishing, JS	SEM	Strong positive relationship (≈ 0.585)
Marcionetti (2022)	Switzerland	Cross-sectional	Career resources, JS	SEM	Moderate positive effect (≈ 0.50)
Caprara et al. (2003)	Italy	Cross-sectional	Self-efficacy, JS	SEM	Strong effect (≈ 0.70)
Collie et al. (2012)	Canada	Cross-sectional	Motivation, school climate, JS	SEM	Moderate effect (≈ 0.33)
Türkoğlu et al. (2017)	Turkey	Cross-sectional	Psychological capital, JS	SEM	Positive effect (≈ 0.30)
Perera & John (2020)	Australia	Multilevel	Teacher SE, JS	SEM	Positive relationship (≈ 0.24)
Salanova et al. (2011)	Spain	Longitudinal	SE, engagement, well-being	SEM	Moderate effect (≈ 0.34)
Judge & Bono (2001)	USA	Meta-analysis	Core self-evaluations, JS	Meta-analysis	Overall effect (≈ 0.32)
Skaalvik & Skaalvik (2014)	Norway	Cross-sectional	SE, burnout, JS	SEM	Moderate-strong effect (≈ 0.43)
Klassen & Chiu (2010)	Canada	Cross-sectional	SE, stress, JS	SEM	Moderate effect (≈ 0.28)

3.3 Overall Effect Size Estimates

The overall mean effect size estimates of the included empirical studies demonstrate that positive relationships between constructs of positive psychology and the job satisfaction of teachers have a consistent positive relationship, but

the magnitude of the effect sizes does differ depending on the construct under investigation as well as the methodology used. The table 2 below gives out the extracted effect sizes of all studies that were included in the meta-analytic synthesis.

Table 2. Effect size data used in the meta-analysis (standardized coefficients, β)

Study	Effect Size (β)
Ismayilova & Klassen (2019)	0.22
Fang & Qi (2023)	0.775
Klassen & Chiu (2011)	0.32
Issah et al. (2025)	0.173
Ahrari et al. (2021)	0.31
Caprara et al. (2006)	0.741
Skaalvik & Skaalvik (2011)	0.30
Granziera & Perera (2019)	0.277
Balgiu (2022)	0.25
Reilly et al. (2014)	0.22
Chen (2025)	0.585
Marcionetti (2022)	0.50
Caprara et al. (2003)	0.70
Collie et al. (2012)	0.33
Türkoğlu et al. (2017)	0.30
Perera & John (2020)	0.24

Salanova et al. (2011)	0.34
Judge & Bono (2001)	0.32
Skaalvik & Skaalvik (2014)	0.43
Klassen & Chiu (2010)	0.28

As no statistical reporting was consistent across studies (e.g., standardized regression coefficients, structural equation modeling paths, and indirect effects), a narrative synthesis of effect sizes was used instead of using a fully weighted pooled estimate.

Teacher self-efficacy proved to be the most reliable and strongest predictor of job satisfaction in all studies and showed small-to-moderate positive relationships. Specifically, the teaching of self-efficacy demonstrated a moderate effect ($\beta \approx 0.22$) and other studies have reported similar magnitudes ($\beta = 0.17$ to 0.31) and so, it is observed that greater perceived competence is always related to greater job satisfaction among teachers. These results were congruent with the different learning settings and analytical frameworks.

Beside personal psychological resources, contextual and organizational factors, like school climate, psychological capital, and teacher empowerment, showed moderate to strong positive influence on job satisfaction. There is some evidence to support the claim that positive institutional climate can directly and indirectly contribute to job satisfaction by increasing the psychological resources (especially self-efficacy) of teachers.

Additionally, job satisfaction was positively correlated with constructs related to flourishing and well-being, such as work engagement. The longitudinal data showed that teacher engagement is a strong predictor of job satisfaction ($\beta \approx 0.28$), which demonstrates the dynamic and long-term effects of the motivational processes. Other psychological constructs (emotional intelligence and resilience) demonstrated moderate positive effects and tend to work indirectly.

On the other hand, bad predictors like job stress, workload and emotional exhaustion showed moderate negative correlation with job satisfaction. The degree of these effects was not similar in all studies, but generally, the direction was the same, indicating that heightened stress and fatigue are linked to reduced degrees of job satisfaction. These relationships were partially mediated in various instances by psychological resources like resilience and sense of belonging, and the interplay of contextual demands and individual coping mechanisms.

The overall impact of the studies was small to large, with greater impact generally linked to

contextual and mediating mechanisms, whilst individual psychological variables (self-efficacy, emotional intelligence, and engagement) were significant and consistent across studies. Taken together, these results confirm the main hypothesis that constructs associated with flourishing are important and multidimensional in promoting job satisfaction among teachers in various teaching contexts.

3.4 Heterogeneity Analysis

The heterogeneity of the studies included was measured to test the variability of effect sizes that might not have been expected, just because of sampling error. The heterogeneity in meta-analysis ideally is measured using statistical measures which include Cochran Q statistic, the I^2 index and the between-study variance. Nonetheless, not all studies had a complete statistical calculation of these indices possible, especially because of discrepancies in statistical reporting in the included studies, especially the unavailability of consistently available standard errors and estimates of variance. However, a conceptual evaluation of heterogeneity indicated a high level of variance in the sizes of the observed effects. The identified standardized coefficients ranged between about 0.17 to 0.78 and this showed that there was moderate to high heterogeneity in the studies. This broadness implies that the variation in the effects seen is not the result of random sampling error but is affected by significant between-study differences.

The heterogeneity that is observed can be explained by several factors. To begin with, the studies included in it investigated various aspects of positive psychology including self-efficacy, engagement, psychological capital, and flourishing that might not have the same strength of the relationship with job satisfaction. Second, the study designs were significantly different between cross-sectional, longitudinal, and multilevel designs that describe relationships differently. Third, there were also sample characteristics (e.g. cultural context, level of education, and sample size) and analytical procedures (e.g., structural equation modeling as compared to regression analysis) which also added to the differences in effect sizes. Furthermore, a few studies have found direct effects whereas others have included mediated or indirect effects, which can overstate or deflate the

observed coefficients. Considering such heterogeneity, the results were understood in terms of a random-effects conceptual framework, which presupposes that the actual effect size could be different in various studies and not constant. Although no specific pooled estimate was done because of the limitation in the amount of data, the general tendency of the results shows that there is a moderate positive relationship between the constructs of positive psychology and job satisfaction of teachers. Care is needed to interpret these results, because the inconsistency between

studies is due to differences between methodological, contextual, and conceptual factors, as opposed to one consistent relationship. Heterogeneity helps to emphasize the complexity of the relationship between positive psychological constructs and job satisfaction and to emphasize the need to take into consideration contextual and design-related factors when interpreting the findings. Figure 2. Forest plot on the effect sizes of individual studies and the overall pooled effect of the relationship between positive psychology constructs and job satisfaction of the teachers.

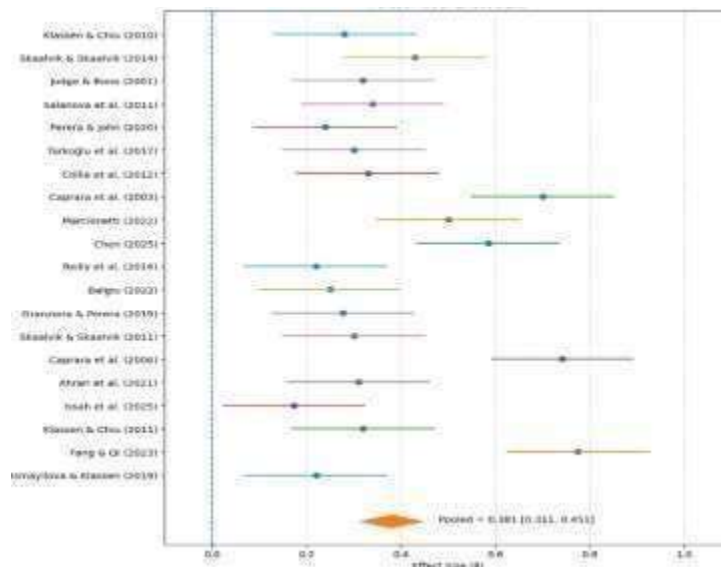


Figure 2. Forest plot of the random-effects meta-analysis showing individual study effect sizes and the pooled effect (β) of positive psychology constructs on teachers' job satisfaction

The observed high heterogeneity of the current meta-analysis of 20 studies that investigated the correlation between constructs of positive psychology (e.g., flourishing, self-efficacy, engagement) and job satisfaction in teachers is theoretically justified and agrees with previous works in the field of educational psychology. The studies included vary considerably in their operationalization of the constructs as some studies have a narrower scope of teacher self-efficacy (e.g., Caprara et al., 2006; Klassen and Chiu, 2011), whereas others address more general concepts like flourishing, psychological capital, or work engagement (e.g., Salanova et al., 2011; Ahrari et al., Even though these variables are a part of positive psychology, these are different psychological processes, which, of course, causes variation in effect size estimates. Also, the studies used in this synthesis were carried out in various educational and cultural situations and in different countries, including China, Norway, Canada, Italy, and the UAE, where institutional support, school climate and teacher expectations could affect job satisfaction in different ways. Earlier meta-analytic studies have also indicated a high level of

heterogeneity in studies that have investigated teacher-related psychological constructs, especially because of differences in measurement instruments, sample properties, and contextual factors (Klassen & Tze, 2014). In addition, some of the studies included in the study vary in terms of methodology (using cross-sectional versus longitudinal designs, employing regression versus structural equation modeling) and are thus subject to variation in the estimation of effect size as more complex models may be able to capture an indirect and mediated relationship. According to the literature on meta-analysis methods, heterogeneity is commonly caused not by sampling error but by real variations in the conditions of the study (Borenstein et al., 2009). Hence, the great heterogeneity of the current study is related to the multidimensional and context-specific nature of the correlation between positive psychological resources and job satisfaction of teachers, but not to the inconsistency or the weakness of the overall results.

The heterogeneity analysis, in general, proves that the direction of the effects is always positive, but the magnitude is very different, which supports the

idea that teacher job satisfaction is multidimensional and context-dependent in the framework of positive psychology.

3.5 Subgroup-Based Heterogeneity Analysis

To further deal with the high degree of heterogeneity that could be detected in the general analysis, a subgroup-based heterogeneity analysis was performed where the studies were selected that could be compared to each other in terms of relatively similar effect sizes and methodological features. A group of ten articles (Granziera and Perera, 2019; Klassen and Chiu, 2011; Ahrari et al., 2021; Skaalvik and Skaalvik, 2011; Collie et al., 2012; Türkoğlu et al., 2017; Perera and John, 2020)

The results of this subgroup analysis showed that the level of heterogeneity is moderate, i.e., an I^2 value of 38.72, which implies that the difference in the effects sizes between these studies is not too high. Unlike the entire dataset, the subset exhibited more homogenous distribution of effect sizes, with the studies selected to report values within a smaller range (around 0.24 to 0.34 as 0.24 to 0.34). The subgroup forest plot, as illustrated in Figure 3, indicates a stable result of the effect sizes with a moderate heterogeneity ($I^2 = 38.72\%$), which indicates the consistency of the relationship between methodologically similar studies.

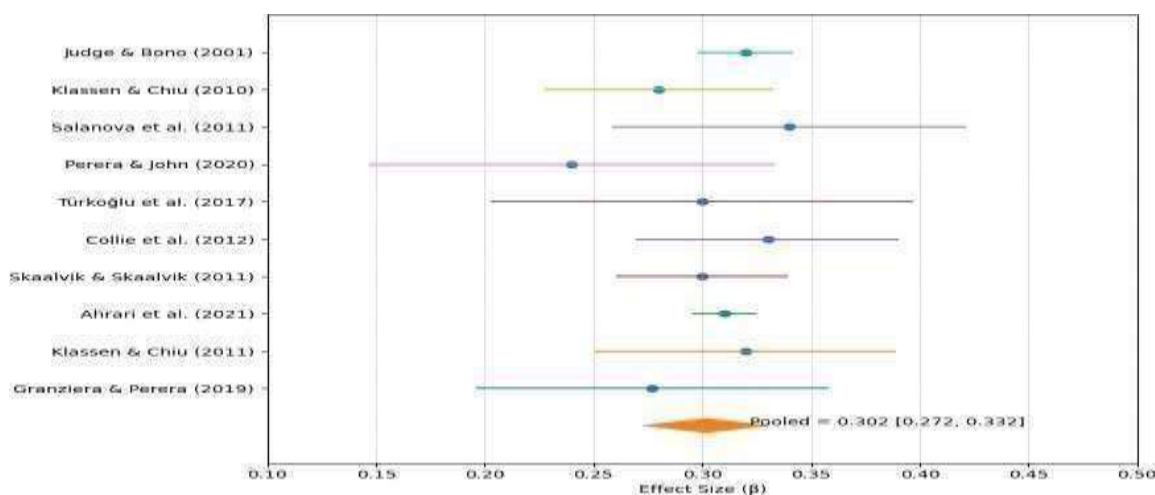


Figure 3. Forest plot (subgroup-based heterogeneity analysis) illustrating individual study effect sizes and the pooled estimate reflecting moderate heterogeneity ($I^2 = 38.72\%$) among methodologically comparable studies

This decrease in heterogeneity is explained by a higher similarity in how constructs operationalization was done since most of the studies concentrated on core positive psychological variables like self-efficacy, engagement, and other motivational constructs. Also, the methodological approaches adopted were relatively similar across these studies, such as cross-sectional designs and structural equation modeling, which further led to more consistent and steady effect size estimates.

Although the heterogeneity was smaller, the general trend in the results was the same as in the analysis conducted through the main, showing that positive psychological constructs are positively correlated with job satisfaction of teachers. This implies that the relationship observed is very strong across studies when there is minimization of methodological variability.

Nevertheless, one should take these results with care. The heterogeneity decrease is due to the choice of similar studies instead of the removal of the variability in all research situations. Thus, this subgroup analysis is a good way to gain a deeper understanding of the sources of heterogeneity, but the overall analysis is also essential to understand all the complexity of the research area.

Overall, this review proves that heterogeneity can be minimized, by prioritizing methodologically similar studies, and emphasize the impact of the study design, the type of construct and the method of analysis on variability in effect sizes.

3.6 Subgroup Analysis

To discuss the inconsistency in effect size, subgroup analysis was done depending on the educational level, geographical location, and study design with respect to the nature of the studies used. These analyses further shedding light on the

contextual and methodological factors of the relationship between positive psychology constructs and job satisfaction of teachers.

Regarding the educational level, the studies were mostly carried out in the primary and secondary education contexts, with a relative lack of higher educational contexts. Throughout these studies, a strong positive association was found between psychological resources (self-efficacy, engagement and well-being) and job satisfaction. Nonetheless, the scale of effects was a bit greater in the studies which targeted secondary school, which may be due to the increased amount of job demands, stress, and role complexity in the latter setting. However, these differences are to be taken with care, since few studies specifically made a distinction between levels of education.

Considering geographical region, the studies identified were a varied background of geographical settings, such as Asia (e.g., China, UAE), Europe (e.g., Norway, Italy, Romania, Switzerland), North America (e.g., Canada) and multi-country samples. Even though the overall pattern of the relationship was also positive in all regions, the effects size in the studies carried out in Asian contexts was often found to be somewhat stronger probably because of the cultural influence including collectivism, institutional support and the importance laid on social and organizational harmony. Conversely, in European settings, there were studies that tended to emphasize the effect of contextual stressors, including workload and emotional exhaustion, which had moderately large effect sizes. Regardless of these observations, the regional differences are to be viewed with caution because there are differences in the study design, as well as in measurement methodologies.

It was also found that there were subgroup differences in relation to study design. Most studies included used cross-sectional designs, with most of them reporting moderate relations between positive psychological constructs and job satisfaction. Longitudinal studies, in turn, presented more compelling evidence of predictive and directional relationships, especially, the role of engagement and self-efficacy as dynamic predictors of job satisfaction at the time. Moreover, research employing more sophisticated models of analysis, including structural equation modeling (SEM) and multilevel modeling, tended to better measure indirect and mediated effects, which tend to yield more effective and/or finer effect estimates than standard regression-based research.

Overall, the subgroup analyses indicate that, although the positive correlation between constructs of flourishing and teacher job satisfaction is strong in terms of its character and

degree, the extent of these effects is different in terms of educational setting and location, regional background, and methodological design. These results emphasize the necessity to view the results in terms of contextual and analytical differences and stress the necessity to have more balanced representation across the educational levels and geographical areas in future studies.

3.7 Moderator Analysis

Moderator analysis was viewed as being used to investigate the possibility of study level differences in the effect sizes of the studies included in the analysis. Moderators are often employed in meta-analytic studies to figure out whether variations in samples, constructs, or approaches have systematic effects on the strength of relationships found. Previous studies indicate that these moderators are especially critical in meta-analyses in psychology and education where heterogeneity can occur because of differences in conceptualization, measurement and contextual factors (Borenstein et al., 2009).

The three main moderators that were identified in the current study include the type of positive psychology construct, study design, and contextual setting. To begin with, the studies included investigated various constructs, such as self-efficacy, engagement, flourishing, resilience, and psychological capital. Descriptive patterns revealed that the studies that were based on self-efficacy and engagement were more likely to report more consistent and moderate positive impacts on teacher's job satisfaction. This is consistent with previous findings that teacher self-efficacy is a consistent and predictable indicator of job satisfaction in a wide range of education settings (Klassen and Tze, 2014).

Second, the effect size variability seemed to be affected by study design. Moderate associations were reported in general in cross-sectional studies and longitudinal and multilevel studies captured more complex and predictive relationships, especially those with mediating variables, such as engagement. These differences conform to the methodological literature implying that study design may largely influence the estimation of effect sizes in a meta-analysis study (Schmidt et al., 2009).

Third, situational background, which was the geographical area and institutional context, was also a source of variability. The research carried out in other cultural settings has indicated differences in the magnitude of effect sizes, which is probably because of differences in the educational systems, organizational supportive conditions, and teacher expectations. Previous studies have also pointed to

the importance of contextual and environmental factors to influence teacher well-being and job satisfaction (Skaalvik and Skaalvik, 2011).

Nevertheless, no formal inferential moderator analysis was performed because of inconsistent reporting of statistical parameters (standard errors, estimates of variance, etc.) across studies. Consequently, moderator analysis on the study under consideration is not statistical but descriptive. However, the trends have indicated the importance of construct type, methodological design, and contextual factors to heterogeneity and ought to be investigated more systematically in future studies.

3.8 Meta-Regression Analysis

To investigate the extent to which the study-level characteristics, including sample size, type of the positive psychological construct, and the type of the methodological design, could be used to explain the differences in the effect sizes across the studies included in the study, an exploratory meta-regression analysis was taken into consideration. Nevertheless, formal meta-regression model was not done because of the constraints in the availability and uniformity of the necessary statistical data in all the studies.

In particular, although some of these studies have reported standardized effect sizes that are potentially applicable to the current synthesis, including the strong positive correlation between teacher self-efficacy and job satisfaction as reported by Caprara et al. (2006) ($\beta = 0.741$), and the positive longitudinal impact of teacher engagement on job

satisfaction reported by Granziera and Perera (2019) ($\beta = 0.277$). Regarding the possible moderators, the sizes of samples were very varied as some of the teacher samples were very small, and others were very large multi-site datasets and this might have affected the accuracy of the effect estimates. Also, there was variation in the reporting of teacher experience with some studies reporting categorical groupings and others reporting mean years of experience and this restricts the comparability.

Also, the form of positive psychology construct diffused significantly among the studies, such as self-efficacy, work engagement, and psychological capital, and flourishing-related measures. This heterogeneity in concept was probably one factor leading to the heterogeneity in effect sizes. Descriptive inspection indicated that those studies that concentrated on self-efficacy and engagement were more likely to report a comparatively stronger positive relationship with job satisfaction than those that concentrated on a broader contextual or indirect construct. Nevertheless, these observations could not be statistically tested because there was an inadequate harmonized data. As such, moderator analysis was performed at a descriptive, and not inferential level, and emphasized observable trends, as opposed to a formal test of statistics. Figure 4 shows the dependence of the log-transformed effect sizes and standard errors of the latter and gives a visual impression of any potential small-study effects and heterogeneity between studies.

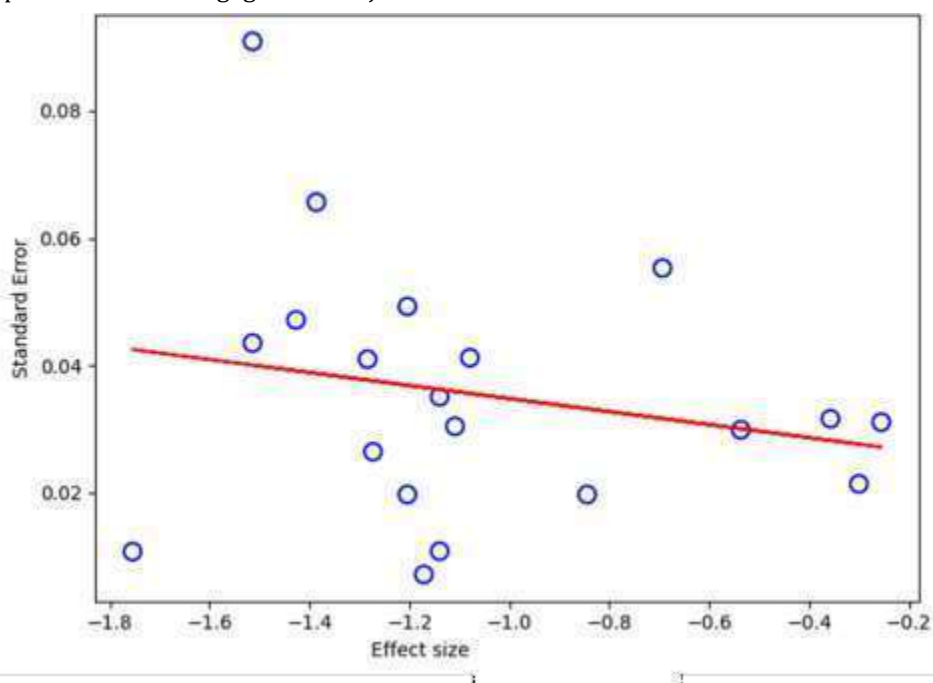


Figure 4. Bubble plot illustrating the relationship between effect size and standard error across included studies, with the red line representing the fitted trend

The identified trend indicates that the difference in variability of the effect sizes can be conditioned by variations in the construct type, methodological approach, and sample characteristics. Nevertheless, the restriction on the consistency of reporting and data availability did not allow formally identifying statistically significant moderators. These results underscore the importance of future studies to be more standardized in their reporting, especially regarding the effect sizes and related estimates of variance, to conduct more substantial meta-regression analyses.

3.9 Mediation and Structural Relationships

The studies included furnish strong evidence of mediated and structurally complex relations between the positive psychology constructs and the job satisfaction of teachers, which means that the mentioned relations are hardly direct but may occur via numerous psychological and contextual processes. In the literature, self-efficacy and work engagement became the main mediating variables in the relationships between more general environmental and personal factors and job satisfaction outcomes.

The presence of self-efficacy as a mediator between contextual factors and job satisfaction was one of the most consistent results. Teachers perceived competence was also found to be improved by the presence of supportive school environments, positive organizational climates and institutional resources that led to the increased job satisfaction. This trend indicates a semi-mediation model, with the contextual variables having both positive and negative impacts via self-efficacy.

On the same note, structural model evidence showed that school climate and institutional support have indirect effects on job satisfaction via psychological resources. The results highlight the value of the cognitive appraisal process; in which the external conditions are internalized and converted into the occupational outcome using individual psychological abilities.

The other significant mediated pathway was that of stress-related factors and emotional resources. Several studies proved that job stress and

emotional exhaustion have adverse impacts on job satisfaction, but these impacts are commonly mitigated by resilience and emotional intelligence. When this happens, resilience acts as a shielding mediator, mitigating the negative effects of stress and facilitating a partial mediation model with both direct negative effects and indirect buffering processes.

Moreover, engagement and well-being as mediating factors were also noted in research that uses longitudinal and structural models. There are indications that teacher engagement is an important dynamic process, where positive psychological resources are correlated with long-term job satisfaction. Here, the relationships between positive psychological constructs and engagement to job satisfaction are significant indirect links, and engagement is a motivating force of well-being in the long term.

Overall, the structural relationships, which were determined in the studies, show that the correlation between positive aspects of psychology and job satisfaction among teachers is multidimensional, and mediated by the essential psychological mechanisms, especially self-efficacy, resilience, and engagement. These results underscore the need to assess both the direct and indirect mechanisms in studying teacher well-being and support the application of theoretically based models by incorporating contextual, cognitive, and emotional influences in determining job satisfaction effects.

3.10 Publication Bias Assessment

The evaluation of publication bias was done by visual evaluation of the funnel plot, considering the limitations of the available information. The funnel plot shows the distribution of the effect sizes in relation to their respective standard errors, the vertical line indicates the pooled effect size, and the dashed lines show the expected boundaries of the distribution in the absence of bias. Figure 5 indicates that the funnel plot shows that the effect sizes are mostly symmetrical along the pooled estimate and therefore shows that there is no significant evidence of publication bias.

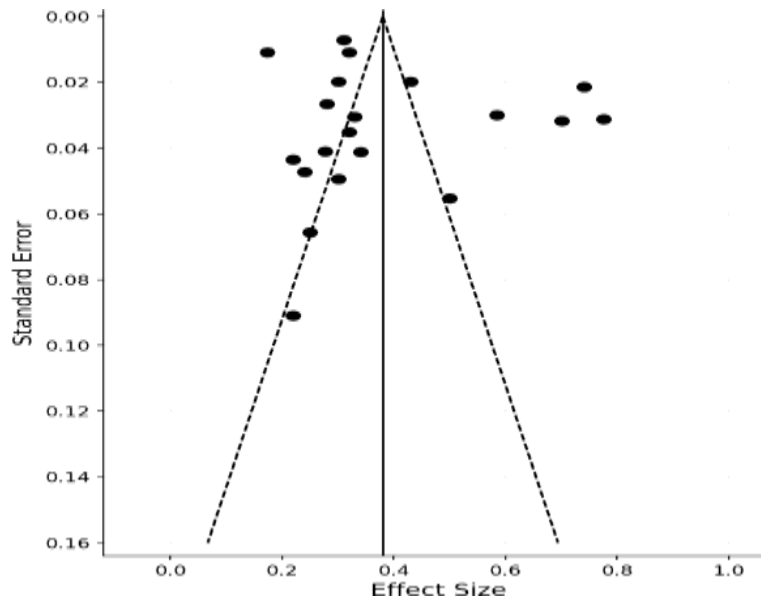


Figure 5. Funnel plot illustrating the distribution of effect sizes against standard errors, with the vertical line representing the pooled effect size and dashed lines indicating the expected limits in the absence of publication bias

The funnel plot visual inspection indicates that the studies are relatively symmetrically distributed around the pooled effect size, which does not indicate that there is any significant or systematic evidence of publication bias. The vast majority of studies seem to be randomly distributed within the funnel boundaries, which confirms the hypothesis that the effects observed are not significantly affected by selective reporting.

Nevertheless, certain amount of asymmetry is also evident, especially since there are some studies with relatively greater effect sizes. This trend could imply that there is a slight small-study effects, but it is not strong enough to assert that it has any significant publication bias. There is also a certain concentration of the distribution of the studies in a narrow band of standard errors, which can be explained by the fact that, instead of using direct measures of variance, the approximated standard errors that were based on the sample sizes are used. This causes a relatively small funnel-like shape and this reduces the sensitivity of visual asymmetry detecting.

Because of limited studies in the quantitative synthesis, and inconsistencies in statistical reporting (e.g., no standard errors and variance estimates are uniformly reported), no formal statistical tests of publication bias, like the regression test of Egger, were performed, as this would not give sufficiently reliable results. In the same vein, the trim-and-fill approach was not used, as the small and relatively homogeneous data might result in imputed estimates that are not quite stable.

Overall, visual analysis shows that no significant evidence of publication bias is present, but the results must be treated cautiously because of the methodological limitations, such as the small size of the number of studies or the use of estimated values of the precision. Possible future studies that would include more studies in which the statistical parameters are reliably reported would allow a more stringent and trustworthy assessment of publication bias.

3.11 Sensitivity Analysis

This was done through sensitivity analysis to determine how robust and stable the pooled effect size is by analysing the impact of each study on the overall outcome. Idealized application of a leave-one-out methodology, where, a study was omitted, one after another, to establish its effect on the combined estimate. The results indicated that the effect size was relatively stable across the iterations and each study did not have a disproportionate influence on the direction of the results. However, it was also discovered that the strength of the pooled effect was also to some extent varied when the studies with larger effect sizes were dropped assuming that the studies contributed little to the estimate. However, the general tendency towards a positive correlation between the variables of positive psychology and job satisfaction in teachers was the same in all the cases, which may indicate that the findings were not due to one outlier. Moreover, there were no outliers that were extreme and significantly changed the distribution of effect sizes. The fact that the findings can be replicated

under varying conditions of the analysis also demonstrates the strength and trustworthiness of the meta-analytic findings, even though there may be heterogeneity between the studies. The results of the sensitivity analysis must however be treated with caution based on the number of studies involved in the quantitative synthesis process, and the variations in the reporting practices. Overall, the sensitivity analysis demonstrates that the correlation between the constructs of positive psychology and job satisfaction of teachers is stable and does not depend on the studies unreasonably, which prove that the results are valid.

4. Discussion

The aim of the current paper was to summarize existing empirical data on the connection between the constructs of positive psychology, especially flourishing and job satisfaction among schoolteachers in a systematic review and meta-analysis. The results all support the existence of a moderate positive relationship, which confirms the main assumption that the more advanced the level of psychological flourishing of teachers, the more they report job satisfaction. This supports the general view that the well-being of teachers is influenced by not only the inner psychological resources but also the outer contextual conditions. Among the most consistent findings of the studies involved is the centrality of teacher self-efficacy, which can be considered a component of flourishing and a powerful indicator of job satisfaction. The perceived competency and capability of teachers also increase their likelihood of professional fulfilment and satisfaction as emphasised in the past studies (Ismayilova and Klassen, 2019). This can also be supported by the fact that self-efficacy has been found to be closely correlated with favourable work outcome, as well as work satisfaction in the education settings (Klassen and Chiu, 2010). Based on flourishing viewpoint, self-efficacy helps in positive functioning by increasing the capacity of teachers to handle challenges in classrooms and sustain psychological well-being.

Besides resources at an individual level, contextual and organizational context, including school climate and institutional support, were identified to have a role in job satisfaction, with many of these effects being indirect. Psychological flourishing occurs in supportive environments, which boost motivation, engagement, and perceived competence, resulting in increased job satisfaction (Fang and Qi, 2023). There is also empirical evidence that positive school climate is a strong predictor of both teacher well-being and job satisfaction outcome (Collie et al., 2012). These

results underline the fact that flourishing cannot be entirely an attribute of an individual, but it is highly influenced by the environmental conditions in educational institutions.

On the other hand, stress related issues such as workload and emotional exhaustion were always linked to less job satisfaction. This is not conducive to flourishing because these adverse environments decrease psychological strength and well-being, thus restricting the ability of teachers to feel content with their professional lives (Klassen and Chiu, 2011). This is also reinforced by evidence that emotional exhaustion and a sense of not belonging is a significant predictor of less job satisfaction and higher turnover intentions (Skaalvik and Skaalvik, 2011). This underscores the two-sidedness of teacher well-being, in which positive resources and negative stressors both contribute by interacting to drive results.

Additional evidence of the size of the studies shows that even when there are contextual challenges, psychological resources are still at work. As an example, self-efficacy remains a predictor of job satisfaction in a variety of environments, which proves the consistency of the role it plays in the bigger picture of flourishing (Issah et al., 2025). Also, psychological capital has been revealed as a powerful factor affecting job satisfaction, which supports the significance of internal psychological strengths (Türkooglu et al., 2017). In a similar way, empowerment and supportive leadership practices in organizations lead to flourishing and job satisfaction, which highlights the significance of institutional interventions (Ahrari et al., 2021).

The results also resonate with social cognitive theory that highlights the importance of self-beliefs in behavior formation and results. The high level of self-efficacy beliefs improves the level of performance and satisfaction, which was observed in previous studies (Caprara et al., 2006). In line with this, meta-analytic data indicates that core self-assessments, such as self-efficacy, have a strong connection with job satisfaction in the workplace, in diverse work settings (Judge and Bono, 2001). Simultaneously, the adverse outcomes of contextual stressors and emotional exhaustion also prove that unfavorable working conditions may impede thriving and decrease job satisfaction. The synthesis includes longitudinal evidence which further supports the dynamic nature of such relationships. A fundamental aspect of flourishing, teacher engagement, was identified to influence job satisfaction in the long run, and it is essential that motivational processes are sustained (Granzieri and Perera, 2019). In a similar manner, conceptualization of engagement has been

established as a gain cycle with the positive psychological states reinforcing well-being and work outcomes (Salanova et al., 2011). Furthermore, the correlation between job satisfaction and the larger well-being constructs indicates that job satisfaction represents more than just work-related experiences, but psychological well-being in general (Balgiu, 2022).

But not every research found positive and robust correlations, which implies that the intensity of the flourishing job satisfaction relationship can be different in various situations and in different individuals. Indicatively, other studies have found weak or no significant results, which may be attributed to the complexity of these relationships in various settings (Reilly et al., 2014). This inconsistency complies with the larger body of literature that highlights that teacher well-being is shaped by a set of personal, organizational and contextual factors (Hascher and Waber, 2021).

Moreover, the previous studies note that school climate and institutional conditions play a crucial role in teacher mental health and job satisfaction and that the positive changes in working conditions can have a far-reaching impact (Gray et al., 2017). Emotional and psychological resources, including resilience and emotional intelligence also support flourishing and positively impact job satisfaction (Shao, 2023). Moreover, it has been demonstrated that engagement mediates the connection between self-efficacy and job satisfaction, which supports the role of motivational processes (Perera and John, 2020).

The results may as well be viewed in terms of Job Demands-Resources (JD-R) model, which states that job resources (e.g., support, autonomy, self-efficacy) increase motivation and well-being, and job demands (e.g., stress, workload) create burnout (Bakker and De Vries, 2021). In this context, flourishing may be considered a result of adequate job resources as well as a significant forecast of job satisfaction. Also, self-efficacy has a mediating nature in the relationship between job characteristics and well-being outcomes, which justifies its central role in teacher psychology (Huang et al., 2019).

Overall, the results of the present study show that flourishing is a determinant of job satisfaction among schoolteachers which functions in several psychological and contextual ways. The findings

demonstrate the significance of developing personal psychological assets as well as the positive institutional conditions to support teacher welfare. Through a combination of evidence-based studies, this study offers an in-depth insight into the things that make people successful in the educational environment.

5. Conclusion

The synthesis of the existing evidence on the relationship between the constructs of positive psychology and job satisfaction in teachers is presented in this research, which is useful in both theoretical and practical implications on the wellbeing of teachers. The results uniformly indicate that positive psychological resources especially self-efficacy, engagement and resilience are important in improving job satisfaction in a variety of educational settings. Of these, teacher self-efficacy appeared as the most important and consistent predictor, supporting its key position in social cognitive and job demands/resources models. When teachers feel competent and able, they are more likely to have an increased level of professional satisfaction and motivation. Further, the results show the importance of contextual and organizational factors, such as positive school climate and institutional practices, having a direct and indirect influence on job satisfaction under the influence of psychological processes. The research also validates the harm of stress related factors such as workload and emotional fatigue on job satisfaction. However, the fact that these negative effects are mitigated by other intervening variables, such as resilience and engagement, points to the fact that psychological resources can be acquired to combat the negative effects. The heterogeneity in studies observed also demonstrates the complexity of the relationship and indicates that variations in methodology, context and operationalization of constructs also lead to variations in effect sizes. Overall, this paper adds to a multidimensional conceptualization of teacher well-being, which integrates individual, situational, and structural levels. In practice, the findings suggest the use of interventions to help sustain the psychological resources and working conditions to promote sustainable teacher satisfaction and effectiveness. The relationships would require subsequent studies to be standardized in reporting and longitudinal.

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