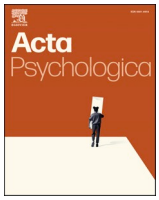
Acta Psychologica 250 (2024) 104500

Contents lists available at ScienceDirect

Acta Psychologica

journal homepage: www.elsevier.com/locate/actpsy



A serial mediation model of Big 5 personality traits, emotional intelligence, and psychological capital as predictors of teachers' professional well-being

Girum Tareke Zewude [a,*], Yikunoamlak Mesfin [b], Fatiha Sadouki [c], Abate Getahun Ayele [d], Solomon Goraw [e], Tesfaye Segon [f], Mária Hercz [g]

[a] Department of Psychology, Wollo University, Dessie 1145, Ethiopia
[b] Doctoral School of Philosophy, University of Szeged, Szeged 6728, Hungary
[c] Doctoral School of Linguistics, University of Szeged, 6720 Szeged, Hungary
[d] Department Amhara Region War-Affected Areas Rehabilitation and Reconstruction Fund Office, Bahirdar University, Bahir Dar 79, Ethiopia
[e] School of Law, Wollo University, Dessie, Ethiopia
[f] Department of Psychiatry, Mettu University, Mettu, Ethiopia
[g] Faculty of Primary and Pre-School Education, Eötvös Loránd University, 1126 Budapest, Hungary

ARTICLE INFO

Keywords:
Big Five personality traits
Emotional intelligence
Psychological capital
Teachers' professional well-being
Serial mediation analysis
University teachers

ABSTRACT

This study aimed to explore the relationship among the Big Five personality traits, emotional intelligence (EIQ), psychological capital (PsyCap), and teacher well-being (TPWB) within the context of higher education. The objective was to predict TPWB in university teachers by utilizing the Big Five personality traits and PsyCap while considering EI as a mediator. Data were collected from 708 teachers in Ethiopian higher education institutions. Participants completed the Emotional Intelligence Scale (EIS-16), Big Five Personality Inventory (BFI-10), Psychological Capital Questionnaire (PCQ-12), and Teacher Professional Well-Being Scale (TPWBS). The analysis included reliability tests, correlation analysis, validity assessment, measurement invariance, and serial mediation testing. The findings unveil a significant direct positive effect of Big Five personality traits on EIQ, PsyCap, and TPWB. Furthermore, PsyCap demonstrates a direct positive effect on TPWB. PsyCap fully mediates the relationship between the Big Five personality traits, EIQ, and TPWB, while EIQ partially mediates the relationships between the Big Five personality traits and PsyCap/TPWB, accentuating a serial mediation effect. Moreover, the personality trait of openness to experience positively predicts EIQ, PsyCap, and TPWB. Conscientiousness and agreeableness also positively predict EIQ, while extraversion directly influences PsyCap in a positive manner. However, neuroticism exerts a negative direct impact on EIQ, PsyCap, and TPWB. Additionally, emotional intelligence partially mediates the relationship between the five dimensions of the Big Five personality (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism) and TPWB. In conclusion, PsyCap fully mediates the relationship between the Big Five personality traits, EIQ, and TPWB, while EIQ partially mediates the relationships between the Big Five personality traits and PsyCap/TPWB. These findings hold significant implications for enhancing well-being among teachers.

1. Introduction

Teaching is a highly stressful profession, and the levels of stress that teachers experience are on the rise globally. Educators are grappling with various novel challenges in their work, interactions with students and colleagues, and maintaining their professional well-being (Collie & Martin, 2023; Yildirim, 2014). These strains can significantly impact teachers' ability to work, how they feel, and their overall professional well-being.

Positive psychology is a promising theoretical model that has the potential to boost teachers' Professional Well-Being (TPWB). Emotional Intelligence (EIQ) and Psychological Capital (PsyCap) are positive psychology constructs that have received relatively little research attention in educational settings. PsyCap refers to positive psychological states of hope, self-efficacy, resilience, and optimism (HERO) that are open to development and focused on "who the individual is becoming" as

* Corresponding author.
E-mail addresses: girum.tareke@wu.edu.et (G.T. Zewude), yikunoamlak.m.alemu@philo.u-szeged.hu (Y. Mesfin), h241949@stud.u-szeged.hu (F. Sadouki), abate@wu.edu.et (A.G. Ayele), solomon.goraw@wu.edu.et (S. Goraw), hercz.maria@tok.elte.hu (M. Hercz).

https://doi.org/10.1016/j.actpsy.2024.104500
Received 19 April 2024; Received in revised form 15 August 2024; Accepted 18 September 2024
Available online 23 September 2024

opposed to "who the individual is" (Luthans et al., 2015). Emotional Intelligence is also a positive psychology construct that can improve psychological health, as it is the ability to recognize, understand, and regulate emotions and use them effectively in life (Moradian, Movahedi, Rad, & Saeid, 2022). Both PsyCap and EIQ have been identified as the most effective positive psychological resources for safeguarding mental health and boosting the professional well-being of teachers (Zewude & Hercz, 2024). However, these factors remain under-researched in this context, despite their potential to enable teachers to teach effectively and remain in the profession.

Regarding the use of these constructs, whether researchers use the general construct or the specific dimensions, especially on the Big Five personality model, there is no consensus among researchers. The Big Five traits exhibit interrelatedness, forming broader super factors, and the Big Five domains correlate with each other, indicating the presence of higher-level factors (Johnson, 2017). Building on this, Musek (2007) conducted Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) using the Big Five personality and other measures in three samples from Slovenia. The results not only confirmed the existence of a general factor of personality but also supported the subfactor loadings from the general factor, providing further evidence for the presence of higher-order dimensions within the Big Five personality domain. On the other hand, although the Big Five personality is often treated as separate factors associated with various psychological variables, it is also considered as an individual construct (Giluk, 2009; Giluk & Postlethwaite, 2015; Mak & Tran, 2001). For instance, studies found that the Big Five traits, such as openness, conscientiousness, extraversion, agreeableness, and neuroticism, are related to academic motivation and achievement and examined through a pathological lens (Johnson, Batey, & Holdsworth, 2009; Komarraju, Karau, & Schmeck, 2009; MacIntyre et al., 2019). In light of the inconclusive controversies among scholars regarding whether to use the general factor of personality or the individual subfactors, further investigation is needed. Accordingly, we employed both the general factor and the specific five-dimensional factors to predict the dependent variables.

Moving beyond the Big Five, PsyCap is recognized as a higher-order core construct that surpasses the sum of its individual parts (Rabenu, Yaniv, & Elizur, 2016). PsyCap acts as individual motivation and effort tendencies, leading to improved performance (Avey, Reichard, Luthans, & Mhatre, 2011) and predicting work attitude and behavior (Avey, Luthans, & Youssef, 2010). Thus, the general construct of PsyCap is considered a potent resource compared to focusing solely on individual constructs (Avey et al., 2010, 2011; Rabenu et al., 2016; Rabenu & Yaniv, 2017). Similarly, emotional intelligence (EIQ) is acknowledged as a powerful general construct applicable in various settings. Its effectiveness has been observed in Spain (Pacheco, Rey, & Sánchez-álvarez, 2019), Peru (Acosta-prado & Torres, 2020), China (Kong, 2017; Wong, Wong, & Law, 2007), Belgium (Libbrecht, De Beuckelaer, Lievens, & Rockstuhl, 2014), USA, Canada and China, South Korea (Park & Yu, 2021), as well as India (Traymbak, Sharma, & Dutta, 2022).

Teachers with high scores on the Big Five personality traits and EIQ characteristics are typically able to manage stress, communicate effectively, regulate emotions, enjoy talking to people on a personal level, be focused on new ideas and novelty, pay attention to others, and remain open-minded (Petrides & Furnham, 2001). Furthermore, the well-being of higher education teachers' may also be influenced by positive PsyCap (Zewude & Hercz, 2024). The research on PsyCap is still in its early stages, so further inquiry is needed to determine its role in teachers' professional well-being and its connection to other significant variables. Despite this, the influence of the Big Five personality traits and EIQ on teachers' professional well-being, as mediated through PsyCap in higher education, has not yet to be explored empirically. Consequently, additional research is comprehensively needed to explore the potential role that other potential constructs have in various cultural settings (Alegre, Pérez-Escoda, & López-Cassá, 2019; Gong, Chen, & Wang, 2019; Petrides et al., 2010). This will help to enhance confidence when investigating mediation models.

Through the mediating role of PsyCap, this study expands our understanding of the possible effects that the EIQ and Big Five personality traits have on teachers' professional well-being in the Ethiopian higher education context. Previous research has suggested that these constructs have a potential influence on a range of psychological variables, including self-efficacy, job satisfaction, and recognition, which are mediated by PsyCap (Luthans et al., 2015; Zewude & Hercz, 2024). These traits, along with those of PsyCap, are all positive constructs that have been found to have the greatest potential to improve work life and well-being. Additionally, the Big Five attributes, EIQ, and PsyCap have some conceptual similarities, in that they are all positive constructs that have great potential for enhancing work life and well-being (Bozgeyikli, 2017; Carmeli, Yitzhak-Halevy, & Weisberg, 2009; Choi & Lee, 2014; Karimi et al., 2021; Kyriazopoulou & Pappa, 2021; Landa, Martos, & López-Zafra, 2010).

Second, we note that the present research on the Big Five, EIQ, and PsyCap has been almost completely focused on direct and indirect impacts on teacher professional well-being (TPWB) and has significantly neglected the higher education setting. According to recent research, the outcomes in higher education may be influenced by the Big Five personality traits and EIQ because these may encourage favorable work attitudes and psychological well-being among employees (Zhao & You, 2021). Additionally, PsyCap is a fundamental construct in positive psychology that may be used in educational psychology and is pertinent for today's higher education teachers' (Zewude & Hercz, 2024). To fully understand the impact of the Big Five personality traits, EIQ, and PsyCap on the professional well-being of higher education teachers, it is essential to examine the constructs comprehensively, using cutting-edge scientific methods to develop functional variables for enhancing well-being and fundamental psychological capacity for teachers.

Third, most of the research on the Big Five personality traits, EIQ, and the PsyCap on various psychological variables has been done in North American, European, and Asian contexts. Little research has looked at the Big Five personality, EIQ, and PsyCap in African cultural contexts (Laher & Quy, 2009; Maree & Meijer, 2010; Van Zyl & De Bruin, 2012; Zewude & Hercz, 2024), and the results of these multinational contexts are often inconsistent. Therefore, this study explored the roles of the Big Five personality traits (Rammstedt & John, 2007) and EIQ (Wong & Law, 2002) on TPWB (Yildirim, 2014), and as a mediator of PsyCap (Luthans et al., 2015). This was done using self-report measures of the Emotional Intelligence Scale (EIS-16; Wong & Law, 2002); Big Five Personality Inventory (BFI- 10; Rammstedt & John, 2007), Psychological Capital Questionnaire (PCQ-12; Luthans, Avolio, Avey, & Norman, 2007), and Teacher Professional Well-Being Scale (TPWBS; Yildirim, 2014).

1.1. *Theoretical framework*

Positive Psychology Theory (PPT), developed by Seligman., 2011 emphasizes the positive psychological resources individuals possess, enabling them to flourish, optimize, and boost their potential. Seligman and Csikszentmihalyi (2000) argued that earlier studies overlooked two crucial goals for human flourishing in the field of positive psychology: (a) helping healthy people to be happier and more fruitful; and (b) realizing human potential. Due to this, the authors emphasize positive psychological constructs to foster well-being and boost human potential (Seligman. (2011). Positive psychology is also a contemporary, applicable, and fresh model that has the potential to boost teachers' Professional Well-Being (TPWB) and connect the relationship among the Big Five Personality Traits, Emotional Intelligence (EQ), Psychological Capital (PsyCap), and TPWB.

Within the framework of PPT, EQ is conceptualized as a potential positive factor that focuses on the ability to recognize, understand, and manage one's own emotions while also being attuned to the emotions of others and its impact on well-being outcomes (Alegre et al., 2019;

Löckenhoff, Duberstein, Friedman, & Costa, 2011; MacIntyre et al., 2019; Robinson, Hull, & Petrides, 2020; Szcześniak, Rodzeń, & Malinowska, 2020). Similarly, positive psychological capital and the Big Five Personality traits involve an individual's psychological resources and traits that play a role in teachers' professional well-being (Bozgeyikli, 2017; Carmeli et al., 2009; Choi & Lee, 2014; Karimi et al., 2021; Kyriazopoulou & Pappa, 2021; Landa et al., 2010).

The broaden-and-build theory of positive emotions (BBPE) is another applicable theory that indicates that positive emotions act as a resource for increasing psychological capital and well-being. Teachers must make use of their personal, positive, and social capital to effectively address issues, cope with challenges, enjoy a fulfilling life, perform at their best, increase teaching satisfaction, and reduce stress (Fredrickson, 2004). Additionally, BBPE theory (Fredrickson, 2004) suggests that well-being and psychological capital are closely related to positive emotions (Rabenu and Yaniv, 2017). Additionally, BBPE theory suggests that well-being and psychological capital are closely related to positive emotions Other studies also established a connection between the Big Five personality traits to a variety of work-related factors for teachers, including psychological capital (Udin & Yuniawan, 2020), EIQ (Siegling, Furnham, & Petrides, 2015), and TPWB (MacIntyre et al., 2019). For instance, research has shown that extraversion and neuroticism are the two personality traits most closely associated with well-being and are the greatest indicators of psychological well-being (Bozgeyikli, 2017; Soto, John, Gosling, & Potter, 2011). Other studies also established a connection between the Big Five personality traits to a variety of work-related factors for teachers, including psychological capital (Udin & Yuniawan, 2020), EIQ (Siegling et al., 2015), and TPWB (MacIntyre et al., 2019). For instance, research has shown that extraversion and neuroticism are the two personality traits most closely associated with well-being and are the greatest indicators of psychological well-being (Bozgeyikli, 2017; Soto et al., 2011). For instance, research has shown that extraversion and neuroticism are the two personality traits most closely associated with well-being and are the greatest indicators of psychological well-being (Bozgeyikli, 2017; Soto et al., 2011).

This study introduces a serial mediation role of EIQ and a mediator role of PsyCap between the Big Five personality traits and TPWB. Therefore, this theory is particularly pertinent to the present study as it underscores the roles of the Big Five Personality traits, EIQ, and PsyCap in influencing TPWB and is vital for teachers to cope with negative life events, build a flourishing life, and optimize their tasks.

1.2. The relationship between Big Five personality traits, emotional intelligence, and psychological capital

The Big Five personality traits describe five broad areas of personality traits, given in the acronym **OCEAN: openness** (sense of aesthetics, appreciation, and creativity), c**onscientiousness** (strength in delayed gratification and organization), **extraversion** (positive emotion and sociability), **agreeableness** (exemplified by kindness and friendliness), and **neuroticism** (avoidance and stress-related activity) these traits seem likely to be highly significant for university teachers' professional well-being (Goldberg, 1990). For instance, extraversion (Soto, 2018) encompasses individual variations in social involvement, assertiveness, and energy level. By contrast with *introverted* people, who are often socially, and emotionally reticent, highly extroverted people are more likely to interact with others and feel comfortable expressing themselves, and they also tend to experience positive feelings such as exhilaration and enthusiasm (Soto, 2018). Differences in empathy, deference, and acceptance of others are captured by *agreeableness* (Angelini, 2023). Individuals who are agreeable typically show emotional concern for others' well-being, respect others' rights and preferences, and hold generally favorable views of other people. People with lower values of agreeableness, on the other hand, tend to show less consideration for others and for socially acceptable politeness. Different levels of organization, productivity, and responsibility are represented by *conscientiousness* (Maluenda-albornoz, 2023; Soto, 2018). People who are low in conscientious are more comfortable with chaos and are less driven to finish activities, while highly conscientious people prefer order and structure, work tirelessly to accomplish their objectives, and are devoted to meeting their duties and commitments (Maluenda-albornoz, 2023). *Neuroticism* captures differences in the frequency and strength of unpleasant feelings, often referred to by its socially ideal pole, emotional stability (Angelini, 2023; Soto, 2018). Highly neurotic people often experience worry, melancholy, and mood swings, whereas while emotionally stable people are more likely to maintain composure and fortitude under pressure. Finally, *openness to experience* indicates degrees of intellectual curiosity, artistic sensitivity, and imaginative capacity (Maluenda-albornoz, 2023; Soto, 2018).

EIQ offers a new perspective, altering psychological resources (PsyCap) and promoting TPWB by providing an approach that can be used to deal with challenges in daily life. EI has been found to impact employees' well-being and satisfaction. The significance of EIQ has been confirmed by researchers and experts in the fields of mental health and organizational settings in numerous studies. According to the recent literature, EIQ and the Big Five personality traits are strongly correlated. According to Vernon, Villani, Schermer, and Petrides (2008), EIQ is positively correlated with the Big Five personality qualities of openness to experience, conscientiousness, extraversion, and agreeableness.

By contrast, neuroticism was negatively correlated with it (Hjalmarsson & Dåderman, 2022). Studies have also indicated that the Big Five personality traits may have a positive effect on an individual's PsyCap (Bozgeyikli, 2017; Choi & Lee, 2014; Hong, Dyakov, & Zheng, 2020; Maluenda-albornoz, 2023) and EIQ (Alegre et al., 2019; Löckenhoff et al., 2011; MacIntyre et al., 2019; Robinson et al., 2020; Szcześniak et al., 2020).

Furthermore, several studies have established strong positive associations between the Big Five personality traits and Psychological Capital (PsyCap) (Hong et al., 2020; Maluenda-albornoz, 2023). Specifically, the values of hope, efficacy, resilience, and optimism, which are components of PsyCap, have been found to be positively correlated with the Big Five personality traits of openness to experience, conscientiousness, extraversion, and agreeableness. Conversely, the component of neuroticism has shown a negative correlation (Bozgeyikli, 2017; Choi & Lee, 2014; Hong et al., 2020). In addition to the associations between the Big Five personality traits and PsyCap, recent studies have also explored the general construct associations of the Big Five personality traits with various aspects such as health, well-being, psychological capital, and emotional intelligence (EIQ). For instance, studies have found significant positive associations between the Big Five personality traits and health (Johnson et al., 2009), well-being (Arshad & Rafique, 2016), psychological capital (Bozgeyikli, 2017; Choi & Lee, 2014; Hong et al., 2020; Zewude, Oo, Gabriella, & Józsa, 2024) and emotional intelligence (EIQ) (Dirzyte & Patapas, 2022; D'Souza, Irudayasamy, Usman, Andiappan, & Parayitam, 2021; Gong et al., 2019; Karimi et al., 2021; Petrides et al., 2010; Pradhan, Jena, & Bhattacharya, 2016; Van der Zee, Thijs, & Schakel, 2002). These studies have aimed to understand the association among these general study variables and shed light on their interconnectedness.

Drawing from the foundation laid by these previous studies, our research aims to further understand the association between the Big Five personality traits, Emotional Intelligence (EIQ), and Psychological Capital (PsyCap) in higher education settings. By focusing on this specific context, we seek to contribute to the existing literature and gain insights into the relationships among these variables in an educational setting.

1.3. Big Five personality traits to teacher professional well-being

Big Five personality trait have been identified as a powerful predictor of professional well-being among teachers. Various studies have found that Big Five is the most significant direct predictor of employees' well-

being, performance, and psychological capital; Arshad & Rafique, 2016; Choi & Lee, 2014; Gong et al., 2019; Hjalmarsson & Dåderman, 2022; Homayouni, 2011; Maluenda-albornoz, 2023; Othman, Yusof, Din, & Zakaria, 2016). In addition, the Big Five predict EI and psychological well-being (Landa et al., 2010).

Furthermore, previous studies have found that an individual's psychological well-being and mental health are positively impacted by the Big Five personality traits (Arshad & Rafique, 2016; Löckenhoff et al., 2011; MacIntyre et al., 2019). Research suggests that individuals with higher scores on the Big Five personality traits tend to have better mental health at work and show the most positive outcomes (Homayouni, 2011). It has been suggested that the Big Five can be used to manage demands created by stressful events (Lazarus & Folkman, 1984), and is a vital predictor of PsyCap and EIQ (Alegre et al., 2019; Bozgeyikli, 2017; Choi & Lee, 2014; Hjalmarsson & Dåderman, 2022; Petrides et al., 2010).

1.4. PsyCap and teachers' professional well-being

Luthans et al. (2015, p. 3) defined PsyCap as "an individual's positive psychological resources is characterized by: persevering toward goals and, when necessary, redirecting paths to goals to succeed (hope); having the self-confidence to take on and exert the required effort to succeed at challenging tasks (self-efficacy); when faced by challenges and adversity in life and work, sustaining and bouncing back and forth until success is achieved (resilience); and making a positive attribution about success (optimism)." A previous study was conducted in Ethiopian higher education settings on the role of PsyCap in TPWB as mediated through coping with stress. More research is needed, however, to understand whether the PsyCap is a significant and crucial variable in relation to EIQ, the Big Five personality traits, and teachers' professional well-being on teachers' professional lives.

1.5. The mediating role of emotional intelligence

The newly established concept of EIQ has attracted attention among academics and professionals in the fields of mental health and industrial settings but and rarely in educational settings. EIQ can be defined in different ways. It can be understood as the capacity to manage one's own and other people's emotions, recognizing how people differ from one another, and using this knowledge to shape one's own thoughts and behavior (Gong et al., 2019; Salovey et al., 1990). Bar-On and Parker (2000) defined EIQ as a series of non-cognitive, competent skills that affect the individual's ability to successfully respond to environmental needs and pressures. EIQ features four key components: (1) Self-Emotion Appraisal (SEA) is the capacity to accurately perceive, evaluate, and express one's own emotions, (2) Use of Emotion (UOE) is the capacity of using emotion to advance thinking, (3) Others' Emotion Appraisal (OEA) indicates the capacity to comprehend emotion and emotional knowledge, and (4) Regulation of Emotion (ROE) is the capacity to control and manage emotions (Fiori & Vesely-Maillefer, 2019; Gong et al., 2019).

EIQ and PsyCap, together and separately, have a positive impact on TPWB. A study by Homayouni (2011) indicated that high EIQ scores are positively associated with Big Five personality traits. By contrast, low EIQ levels were found to raise stress, lower personality traits, and worsen performance. According to Landa et al. (2010), EIQ is the most promising predictor for psychological well-being, and it is positively correlated with all dimensions after controlling for the Big Five personality traits. PsyCap and well-being can be considered to reflect good mental functioning among teachers (Zewude and Hercz, 2022a, b). If teachers have a high degree of PsyCap, they tend to have higher self-efficacy, job satisfaction, and recognition of one's job, which contribute to improved TPWB. Studies have found that high EIQ scores are associated with better PsyCap and higher levels of well-being, while low EIQ scores are associated with lower levels of both (Dirzyte & Patapas, 2022; Gomes da Costa, Pinto, Martins, & Vieira, 2021; Gong et al., 2019; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016). Carmeli et al. (2009) also indicated that teachers with high EIQ scores tend to report higher levels of TPWB than those with lower EIQ scores.

1.6. The current study and research hypotheses

This study aims to explore the association among the Big Five personality traits (both as a total construct and across the five dimensions), emotional intelligence, psychological capital, and teachers' professional well-being (TPWB). The study hypothesizes that the Big Five personality traits positively impact teachers' professional well-being, while emotional intelligence and psychological capital play a mediating role in this relationship. The study further proposes that traits such as openness to experience, conscientiousness, extraversion, and agreeableness are expected to positively predict both psychological capital (PsyCap) and TPWB, while neuroticism is expected to have a negative prediction. This examination will help in understanding potential personality traits associated with the dependent variables and provide insights for interventions. In accordance with the literature, the Big Five personality traits, EIQ, and PsyCap are all related to one another as well as to professional well-being of employees (MacIntyre et al., 2019; Siegling et al., 2015; Udin & Yuniawan, 2020). Moreover, research in non-teaching populations has identified an association between Big Five personality traits and EIQ (Alegre et al., 2019; Petrides et al., 2010; Siegling et al., 2015) as well as well-being (Petrides et al., 2010; Siegling et al., 2015; Szcześniak et al., 2020). Accumulating evidence suggests that Big Five, EIQ and PsyCap have positive impacts on employees' well-being and job satisfaction (Alegre et al., 2019; Dwan & Ownsworth, 2019; Evans, Martin, & Ivcevic, 2018; Manzano-García & Ayala, 2017; Sanchez-Ruiz et al., 2021; Zeidner, Matthews, & Roberts, 2012; Zewude & Hercz, 2024). The theory of positive psychology theory has been linked to the Big Five personality traits, PsyCap, EIQ and TPWB. Thus, positive psychology theory provides a practical framework for testing hypotheses on the effects of Big Five, and PsyCap on TPWB (Seligman., 2011). An understanding of the relationships among the Big Five, EIQ, PsyCap, and TPWB will help university teachers' better understand the issues that they face at work and will present solutions to improve their well-being.

Little research has been done in Ethiopia to identify the connections between PsyCap, stress management, and teacher well-being (Zewude & Hercz, 2024). This study is novel in that, to our knowledge, no previous studies have examined the role of mediation by PsyCap in the relationships among the Big Five, EIQ, and TPWB in a non-Western of an Ethiopian cultural setting. Moreover, outside of the context of education, many studies have examined the relationship between the study variables (Big Five, EIQ, PsyCap, and well-being) in the context of industry and health. We began by examining a topic that has received little attention in Ethiopian higher education to assess the possible impact of EIQ and the Big Five personality traits on TPWB via PsyCap in a novel strategy tailored to the academic setting. We then examined the psychometric properties of the scales such as the EIS-16 (Wong & Law, 2002), BFI-10 (Rammstedt & John, 2007), PCQ-12 (Luthans et al., 2007), and TPWBS (Yildirim, 2014) to ensure the suitability of these measures within the broader and expanding theory of positive psychology in Ethiopian context. Consequently, the scientific literature confirms that the Big Five personality traits, emotional intelligence, and psychological capital are potential predictors of teachers' professional well-being. Based on the concrete evidence from the most recent scientific literature and the constructed theoretical framework depicted in Figs. 1 and 2, this study addresses the following research questions:

RQ1: What is the relationship between the Big Five personality traits, EIQ, PsyCap, and TPWB among teachers?

RQ2: Do the Big Five personality have a direct effect on PsyCap, EIQ, and TPWB?

RQ3: Does EIQ positively and directly affect PsyCap and TPWB?

RQ4: Do EIQ and PsyCap fully and partially mediate the relationship between the Big Five personality traits and TPWB?

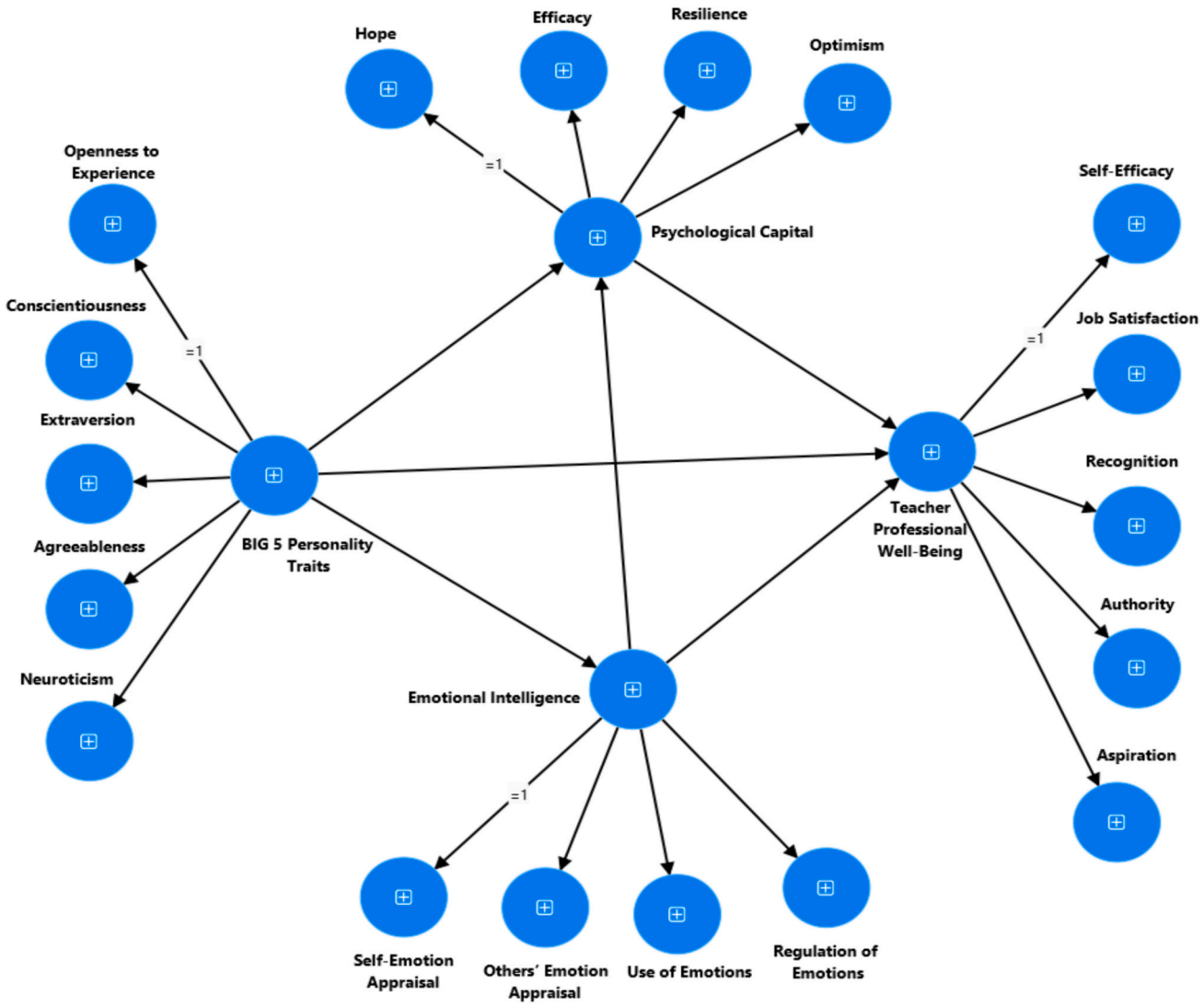


Fig. 1. Proposed serial mediation model to explain the association between Big Five Personality traits, Emotional Intelligence and PsyCap and teachers' Professional Well-being

2. Methods

2.1. Design

In collecting data for a large-scale study, cross-sectional design with paper and pencil tests were employed to measure the EIQ (SEA, OEA, UOE, and ROE), the Big Five personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism), psychological capital (hope, efficacy, resilience, and optimism), and a TPWB model (self-efficacy, job satisfaction, recognition, authority. and aspiration).

2.2. Participants

The sample included 708 university teachers, 529 (74.7 %) of whom were men, and 179 (25.3 %) of whom were women. The samples were from Ethiopia's Amhara Regional State's public universities. Initially, 739 teachers' were randomly selected and invited to complete the surveys. Missing information or mistakes in data entry resulted in the exclusion of 21 participants, resulting in an effective response rate of 95.8 %. The remaining participants were 529 male public university (74.7 %) and 179 female (25.3 %), with a mean age of 32.68 (SD = 6.21) years and. In all, 227 (32.1 %) of the sample participants had attended research universities (Gondar), 191 (27.0 %) attended applied universities (Wollo University), and 290 (41.0 %) attended comprehensive universities (Debre-Tabor university). The overall socio-demographic data for each participant are presented in Table 1.

2.3. Instruments

The main instruments included in this study were a) socio-demographic factors (gender, university type, age, and experience in teaching), and (b) major tools to measure the research variables.

2.3.1. Emotional Intelligence Scale (EI Scale)

EIQ was assessed using the 16-item EIS-16 (Wong & Law, 2002) based on the Salovey Mayer EIQ framework (Salovey & Mayer, 1990). Respondents rated each item on a 7-point Likert scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree). EIS includes four main dimensions: SEA, OEA, UOE, and ROE, each of which are measured on four items. In this study, the Cronbach's alpha coefficient, composite reliability (CR), construct validity, and measurement invariance was acceptable based on global cut-off points.

2.3.2. The Big Five Personality Inventory

The BFI-10 (Rammstedt & John, 2007) was used to measure the Big Five personality dimensions of the university teachers' (Gosling,

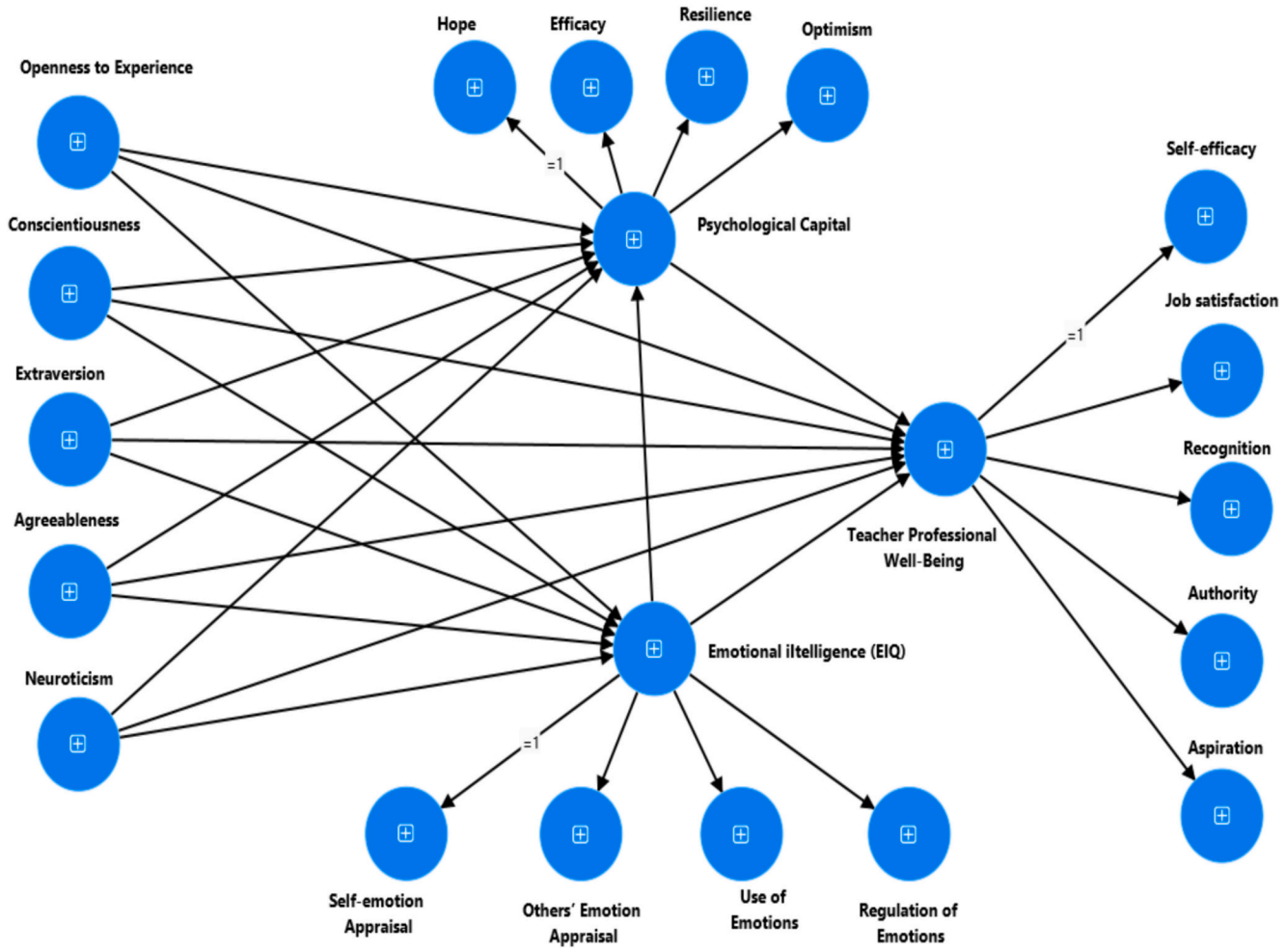


Fig. 2. Proposed serial mediation model to explain the association between Big Five Personality trait types, Emotional Intelligence and PsyCap and teachers' Professional Well-being.

Table 1
Socio-demographic characteristics of the respondents.

No.	Variables	Categories	N (% of the sample)
1	Gender	Female	179 (25.3)
		Male	529 (74.7)
2	Age	25–35	395 (55.8)
		36–45	270 (38.1)
		46 and above	43 (6.10)
3	University type	Research university	227 (32.1)
		Applied university	191 (27.0)
		Comprehensive university	290 (41.0)
4	Experience in teaching	Below 5	205 (29.0)
		6–10 years	201 (28.4)
		11 + Years	302 (42.7)

Rentfrow, & Swann, 2003). The authors only used two items for each subscale; however, the reliability of the sub-scales was low although the construct validity was acceptable (Gosling et al., 2003). Thus, the construct reliability and validity of the measure were sufficient. The Cronbach's alpha coefficient and CR of the scale, as well as the construct validity, was satisfactory and acceptable in an Ethiopian higher education setting.

2.3.3. *Psychological Capital Questionnaire*

We used a validated Amharic version of the PCQ-12 to assess university teachers' overall psychological capital on a 12-item self-report questionnaire (Zewude & Hercz, 2024). The PCQ-12 scale was originally developed by Luthans et al. (2007). This scale includes four subscales: hope (four items), self-efficacy (three items), resilience (three items), and optimism (two items). The Amharic version of the PCQ-12 had strong reliability, with Cronbach's alpha values ranging from 0.79 to 0.88, and acceptable construct validity (Zewude & Hercz, 2024). In this study, the PsyCap construct had a good Cronbach's alpha value (α) and good CR, construct validity, and measurement invariance for all sub-constructs.

2.3.4. *Teacher professional Well-Being Scale (TPWBS)*

The TPWBS (Yildirim, 2014) was used to measure professional well-being, which was conceptualized to have the following three core dimensions: (i) **self-efficacy**, measured with seven items (e.g., "I have knowledge and skills to carry out my profession adequately"), (ii) **job satisfaction**, with six items (e.g., "Students in this class take care to create a pleasant learning environment"), (iii) **recognition**, with four items (e.g., "I receive appreciations because of my professional achievement"), (iv) **authority**, with five items (e.g., "I have productive talks with the school administrators on professional issues"), and (v) **aspiration**, with four items (e.g., "I always have enthusiasm for doing professionally new things"). Items were scored using a 7-point Likert scale (1 = very strongly disagree; 7 = very strongly agree) and exhibited satisfactory construct validity and good internal consistency. In a

previous study, the TPWBS was found to have acceptable reliability, with Cronbach's alpha ranging from authority to recognition in the range of 0.65 to 0.81. With the exception of the authority sub-scale, the four sub-scales were acceptable but needed further psychometric investigation (Yildirim, 2014). The reliability and construct validity of the Amharic version tested in this study was acceptable (see details under the measurement model). In this study, the Cronbach's alpha, CR, construct validity, and measurement invariance were found to be acceptable for the Ethiopian cultural context.

2.4. Statistical analyses

IBM SPSS 26.0 and Smart PLS 4.1.0.4 were used to perform the analyses. The psychometric properties and the mediation analyses were two essential aspects of this study. To test an instrument for psychometrically suitability, it is recommended to apply several methods and follow a scientific procedure in their assessment. However, cross-cultural validation is threatened by methodological difficulties, including those stemming from the translation of the questionnaire and the measurements of other instruments (Hedrih, 2020). Therefore, in this study, validation was done following the guidelines proposed by Beaton, Bombardier, Guillemin, and Ferraz (2000): (a) initial translation/forward translation, (b) translation synthesis, (c) back translation, (d) expert/translator review, and (e) administration and validation. In addition, the instruments were validated based on the recommendation of Davidov, Schmidt, Billiet, and Meuleman (2018) and Hair, Black, Babin, and Anderson (2019). Overall, the validation and the mediation findings were obtained through five processes.

i) *Multi-collinearity*. VIF and tolerance were used to identify multicollinearity in statistical data, following the recommendations of Hair et al. (2019) and Zewude, Beyene, Taye, Sadouki, and Hercz (2023). In addition, the Harman single-factor test was used to examine common method variance bias.
ii) *Evidence of reliability*. CR and the Cronbach's alpha coefficient were used to test the internal consistency of the subscales. Excellent internal consistency is shown by values over 0.90, good internal consistency is indicated by values between 0.80 and 0.90, and acceptable internal consistency is demonstrated by values between 0.70 and 0.80 (George & Mallery, 2020; Hair et al., 2019; Zewude and Hercz, 2022a, b).
iii) *Confirmation of construct validity through convergent, divergent, and discriminant validity*. Average variance extracted and maximum shared variance were used to assess convergent and discriminant validity. AVE values >0.5 are indicative of good convergent validity in a factor. Additionally, variables with a sufficient level of discriminant validity have an MSV value is lower than their AVE value (Hair et al., 2019).
iv) *Serial mediation analysis (SMA)*. SMA is a valuable statistical technique employed to explore the indirect effects of an independent variable on a dependent variable through a series of mediators (Hair et al., 2021; Hayes, 2022). It proves particularly advantageous when there exists a sequential chain of mediators that operate in a specific order, where the independent variable influences the first mediator, subsequently influencing the second mediator, and so forth, until the final mediator impacts the dependent variable (Hair et al., 2021; Hayes, 2022). By employing SMA, researchers can effectively investigate the intricate relationships between variables and uncover the underlying mechanisms through which the independent variable influences the dependent variable (Agler & De Boeck, 2017; Wang, Jia, & Wang, 2024). To assess the factorial validity for the measurement and structural models, Confirmatory Factor Analysis (CFA) and structural equation modeling (SEM) were utilized. The CFA and SEM employed maximum likelihood estimation to identify the structural relationships within the proposed model. To evaluate the goodness-of-fit, several indices were considered, including the normed chi-square ($\chi 2/df$), the Tucker Lewis Index (TLI), Comparative Fit Index (CFI), Standardized Root Mean Residual (SRMR), and Root Mean Squared Error of Approximation (RMSEA). Generally, measurement and structural models are considered to exhibit excellent and sufficient fit when the $\chi 2/df$ is below 3 or 5, and the RMSEA and SRMR are below 0.08 and 0.01, respectively. Moreover, the TLI and CFI should exceed 0.95 and 0.90, respectively (Hu et al., 1999). The utilization of CFA and SEM further enhances the rigor and robustness of the analysis, ensuring that the proposed model adequately captures the complex interplay among the variables. The evaluation of goodness-of-fit measures offers valuable insights into the overall quality of the model, determining whether the observed data adequately align with the hypothesized relationships (Zewude and Hercz, 2022a, b).
v) *Measurement invariance*. We used CFA to examine the psychometric equivalence of the variables across distinct groups for measurement invariance (MI) Putnick & Bornstein, 2016. In this work, a single-group CFA and multi-group CFA with four MI phases were used in accordance with accepted scientific practices (Millsap, 2011; Putnick & Bornstein, 2016). Stage 1 involved conducting a configural invariance to create a baseline model that could be used for all groups without restriction, with the tested construct being the same in each group. Stage 2 of the analysis looked at the metric measurement invariance (MMI), which observed how indicators were reacted to by various groups using the same constrained factorial loadings. Stage 3 involved scalar MI, often known as strong invariance (SMI). In this test, factor loadings and indicator intercepts were limited uniformly across groups. In the fourth stage, strict invariance (RMI), or residual measurement invariance (RMI), was assessed. RMI represents the similarity of metric and scalar invariant items' residuals Putnick and Bornstein (2016). Following Millsap (2011) and Putnick and Bornstein (2016). Using multi-group CFA, the MI four sequential-staged analysis in the current study produced the following recommendation criteria. For metric, scalar, and residual invariance, the CFI and TLI ranged from 0 (perfect) to 0.01 (acceptable), and 0.015 (RMSEA) (Chen, 2007; Putnick & Bornstein, 2016). We employed 95 % bias-corrected and accelerated confidence intervals to examine indirect effects using the bootstrap method and 5000 resamples.

2.5. Procedures and ethics

The questionnaire applied incorporated 64 questions, measuring the EI (16 questions), the Big Five personality traits (10 questions), PsyCap (12 questions), TPWB (26 questions), and four socio-demographic factors. Paper and pencil were used by every participant to complete the surveys. The American Psychological Association's ethical guidelines and standards, the Institute of Teachers Education and Behavioral Sciences at Wollo University, Ethiopia, the Internal Review Board, and standard data collection process were all followed. Participation was voluntary, and the researchers assured the participants that their data would be anonymized. The 1964 Helsinki Declaration items 21 CFR 56 (Institutional Review Boards, IRB) and 21 CFR 50 (Protection of Human Subjects) were adhered in this study. This study received an ethical approval letter from the university ethical approval committee (Ref number 217–2021).

3. Results

3.1. Results of preliminary analysis

3.1.1. Descriptive statistics, skewness, and kurtosis

Table 2 presents the relationships for each of the major constructs,

Table 2
Descriptive statistics, skewness, and kurtosis.

Variables	Min	Max	Mean	Std. Dev	Skewness	Kurtosis
Openness to Experience	3.00	12.00	8.655	1.721	−0.362	0.119
Conscientiousness	4.00	12.00	8.946	1.697	−0.670	−0.051
Extraversion	2.00	12.00	7.792	1.754	−0.53	0.340
Agreeableness	2.00	12.00	7.662	1.789	−0.41	0.544
Neuroticism	2.00	12.00	6.247	2.539	0.195	−0.658
Big Five personality	23.00	55.00	39.304	4.890	−0.228	0.251
Self-efficacy	10.00	42.00	30.562	5.565	−0.338	0.012
Job satisfaction	8.00	53.00	26.600	5.034	−0.348	1.014
Recognition	4.00	24.00	15.614	4.125	−0.315	−0.418
Authority	5.00	30.00	18.106	5.184	−0.308	−0.301
Aspiration	4.00	24.00	14.743	4.485	−0.430	−0.424
TPWB	13.20	30.80	21.125	2.828	−0.081	−0.087
Hope	4.00	24.00	17.672	3.384	−0.480	0.301
Efficacy	3.00	18.00	13.257	2.620	−0.311	0.094
Resilience	6.00	18.00	13.232	2.742	−0.498	0.084
Optimism	2.00	12.00	9.172	1.815	−0.693	0.548
PSYCAP	28.00	72.00	53.333	7.974	−0.069	0.170
SEAT	4.00	28.00	16.805	4.999	0.347	0.459
OEAT	4.00	28.00	16.901	4.7182	−0.186	0.459
UOET	4.00	24.00	16.864	4.326	−0.700	0.214
ROET	4.00	28.00	15.747	4.593	−0.253	−0.306
EI	16.00	106.00	66.318	13.156	−0.158	1.498

Notes: EI = Emotional intelligence; Ax = maximum; Min = minimum; PsyCap = psychological capital; ROE = regulation of emotions; SEA = self-emotion appraisal; Std. Dev = standard deviation; TPWB = teacher professional well-being; OEA = others' emotion appraisal; OEA = use of emotions.

reliability, descriptive statistics (mean and standard deviation), and kurtosis and skewness as indicators of distribution normality. Where the data had a skewness of 2 or a kurtosis of 4, the data were considered to be regularly distributed (Kim, 2013; Mishra et al., 2019.; Zewude et al., 2023). All the constructs in this study had normal distribution, as seen by the study's skewness values, which ranged from −0.081 to −0.670, and kurtosis scores, which ranged from 0.012 to 1.014.

3.1.2. Multi-collinearity

No issue is present with multi-collinearity if each predictor variable's tolerance values are close to that in the model, and the opposite is true if they are close to zero (Hair et al., 2019). The VIF statistic should therefore fall between 0 and 5, with lower numbers being more desirable, up to 0. The data were strongly correlated, and a multi-collinearity concern is identified if the VIF score is higher than five (Hair et al., 2019). High VIF values show that particular predictor variables are a linear combination of other predictor variables (Hair et al., 2019). This study's VIF was under 5, and the tolerance limits for each independent variable were all greater than or equal to 0.01. Therefore, we concluded that the independent variables were free of multi-collinearity issues as measured by VIF and tolerance.

In addition, the Harman single-factor test was conducted to see whether our study exhibited any common method bias. The results showed that all constructs had a 15.9 % rate of common method bias, below the advised fit requirements. As We concluded that it was unlikely for the study's findings to have impacted by bias resulting from common method bias. Additionally, the results of the Pearson correlation show that there was no relationship among the main constructs and gender, age, university type, and teaching experience (see Table 3). Therefore, no additional examination of socio-demographic factors was done among the main constructs.

3.1.3. Pearson correlation among the study variables

Table 4 shows the relationship between study variables. For all study variables, Cronbach's alpha and CR (i.e., >0.70) were acceptable (Cronbach, 1951). Following the guideline of Kim (2013) and Zewude et al. (2023), correlation analysis was done to test the first hypothesis and determine whether there was any relationship between the independent factors and the dependent variable. The findings found a positive relationship between emotional intelligence (EI) and the Big Five personality traits, psychological capital (PsyCap), and total psychological well-being (TPWB). Conversely, EI showed a negative correlation with age and university type. Additionally, the Big Five personality traits had a significant positive correlation with PsyCap, TPWB, and university type (See Table 4). PsyCap also exhibited a positive correlation with TPWB and a negative relationship with age. Finally, TPWB demonstrated a positive correlation with age and a negative one with experience (Tables 5 and 8).

3.1.4. Reliability and validity evidence of the main variables

Before verifying the research hypotheses, we examined the construct validity, construct reliability, and internal consistency of the study variables used in Ethiopian higher educational settings. Scores above 0.90 indicate high reliability, those between 0.80 and 0.90 suggest good reliability and those between 0.70 and 0.80 indicate adequate reliability (Hair et al., 2019; Zewude et al., 2023; Zewude & Hercz, 2022a). As a result, this study demonstrated the high reliability and validity of the key constructs examined in the context of Ethiopian higher education. The emotional intelligence (EI) scale showed excellent reliability, with the four aspects (self-emotional appraisal, others' emotional appraisal, use of emotions, and regulation of emotions) all exhibiting strong internal consistency and composite reliability. The five-factor model of personality (the Big Five) also displayed adequate to excellent reliability

Table 3
Tolerance and VIF of multi-collinearity statistics.[a]

Model	Unstandardized coefficients	Standardized coefficients	t	Sig.	Collinearity statistics	
	Beta	Beta			Tolerance	VIF
Emotional intelligence	0.025	0.115	2.944	0.003	0.906	1.104
BIG Five	0.009	0.015	0.402	0.688	0.957	1.045
PsyCap	0.035	0.098	2.558	0.011	0.944	1.060

[a] Dependent Variable: Teachers' Professional Well-Being

Table 4
Pearson correlations (r) among the socio-demographic factors and the main constructs ($N = 708$).

Variables	Correlations							
	1	2	3	4	5	6	7	8
1.Gender	1	−0.037	0.053	−0.002	−0.058	−0.061	−0.025	0.007
2.Age		1	0.141**	0.045	−0.036	0.092	−0.105	−0.094
3.University			1	0.119**	0.101	0.008	−0.035	0.087
4.Experience				1	0.043	−0.079	−0.106	−0.051
5.BIG 5 Personality					1	0.122**	0.128**	0.201**
6.TPWB						1	0.124**	0.141**
7.PsyCap							1	0.232**
8.EI								1

** Correlation is significant at the 0.01 level (2-tailed).

for the traits of neuroticism, extraversion, agreeableness, openness to experience, and conscientiousness. The dimensions of psychological capital (PsyCap), including hope, efficacy, resilience, and optimism, demonstrated good to excellent reliability. Similarly, the various aspects of teacher professional well-being, such as self-efficacy, job satisfaction, recognition, authority, and aspiration, were found to be highly reliable.

The convergent and discriminant validity of these constructs were also assessed and confirmed. The average variance extracted (AVE) values for the sub-constructs were higher than their maximum shared variance (MSV) values, indicating acceptable discriminant validity. Additionally, the AVE for each sub-construct was greater than the squared inter-item correlations, further supporting the discriminant validity of the measures (See Table 6).

Overall, the study provides strong evidence for the reliability and validity of the EI, Big Five personality traits, PsyCap, and teacher professional well-being constructs in the context of Ethiopian higher education. These findings suggest that the instruments used in this research are appropriate and suitable for use in this setting.

3.1.5. Measurement Invariance (MI)

In a four-step process of testing MI, more strict equality constraints were specified for model parameters between or among groups (for example, men vs. women; research universities vs. applied universities vs. a general university; experience in teaching: 5 years or below vs. 6–10 years vs. 11 and above years) within a multiple-group CFA (MGCFA) following the guidelines of (Davidov, Meuleman, Cieciuch, Schmidt, & Billiet, 2014; Putnick & Bornstein, 2016; Zewude and Hercz, 2022a, b).

The configural model served as a starting point for subsequent tests and did not impose any equality constraints on parameters in the initial stage (Cheung & Rensvold, 2009). Configurational invariance holds that comparable groups (same gender, university type, and experience in teaching) should exhibit the same underlying factor structure. The metric model then looked at how similar the factor loadings were across groups for each item. Valid group comparisons require invariant factor loadings (Cheung & Rensvold, 2009). Following this, the scalar model looked for evidence of equal item intercepts, referring to the assessment whether mean differences at the item and factor levels can completely equal one another's variances. Finally, the rigorous model, or residual invariance, was used as the last step to determine whether the variances of each item's regression equations were equal across groups (Putnick & Bornstein, 2016).

We established that at least three fit indices (the TLI, CFI, or RMSEA) had to meet predetermined cut-points for a model's fit to be adequate. The cut criteria for changes in model fit indices were 0.10 for CFI and TLI and 0.15 for RMSEA (Cheung and Rensvold, 2009). The findings of this study on the Big Five personality traits, EI, PsyCap, and TPWB by gender, university type, and experience in teaching were therefore interpreted using a TLI and CFI threshold of points $\Delta CFI = 0.02$ and of $\Delta RMSEA = 0.03$ for RMSEA (Putnick & Bornstein, 2016).

According to model fit comparison indices, the configural MI model on the Big Five personality traits, EIQ, PsyCap, and TPWB demonstrated the best model fit, with TLI = 0.968, CFI = 0.982, RMSEA = 0.04, TLI = 0.936, CFI = 0.948, RMSEA = 0.065, TLI = 0.948, CFI = 0.962, RMSEA = 0.49, and TLI = 0.928, CFI = 0.936, and RMSEA = 0.43, respectively.

For the Big Five personality traits, $\Delta TLI = 0.003$, $\Delta CFI = 0.000$, and $RMSEA = -0.001$, for EI, $\Delta TLI = -0.003$, $\Delta CFI = -0.001$, and $\Delta RMSEA = -0.003$, for PsyCap, $\Delta TLI = -0.005$, $\Delta CFI = -0.001$, and $\Delta RMSEA = -0.003$, and for TPWB, $\Delta TLI = -0.002$, $\Delta CFI = -0.001$, and $\Delta RMSEA = 0.001$ were the best fits in to the metric invariance model in the data. Additionally, we assessed the residual invariance due to scalar invariance by gender as well as assessing scalar invariance from metric invariance. The results demonstrated that the model satisfactorily fits the data in terms of scalar and residual invariance for the Big Five personality traits, with $\Delta TLI = -0.003$, $\Delta CFI = -0.001$, and $\Delta RMSEA = -0.003$ respectively. The EIQ scores were TLI (−0.005 and − 0.004), ΔCFI (0.000 and − 0.003), and ΔRMSEA (−0.002 and 0.000) in scalar and residual invariance, respectively. In terms of scalar and residual invariance across gender, the following values were fitted for PsyCap: $\Delta TLI = -0.005, -0.001$; $\Delta CFI = 0.000, -0.002$, and $RMSEA = -0.002$; 0.001, and for TPWB: $\Delta TLI = -0.002, 0.013$, $\Delta CFI = 0.001, 0.010$, and $\Delta RMSEA = 0.000, -0.00$, respectively.

Regarding the university type, the configural MI demonstrated an acceptable model fit to the data for the four major constructs (the Big Five personality traits, EIQ, PsyCap, and TPWB) (see Table 7). For the Big Five personality traits, the model comparison test by university type (configural vs. metric; metric vs. scalar, scalar vs. residual) provided metric, scalar, and RMI results, respectively: ΔTLI (−0.002, −0.001, 0.010), ΔCFI (−0.004, 0.005, 0.015), and $\Delta RMSEA = -0.001, -0.001, -0.004$), respectively.

Configural MI was examined with respect to the construct of EIQ, PsyCap, and TPWB, and the result was considered conventionally acceptable (see Table 6). The second step was to perform MMI testing by demanding that factor loadings be constant across levels (i.e., within-factor loadings are equal to between-factor loadings for all items). The overall model fit for EI, PsyCap, and TPWB were adequate, ΔTLI (−0.002, −0.002, −0.003), ΔCFI (−0.003, −0.001, 0.001), and $\Delta RMSEA = 0.001, -0.004, 0.000$), respectively.

The second phase involved identifying MMI testing by requiring that factor loadings be constant across levels (i.e., within-factor loadings are equal to between-factor loadings for all items).Values for ΔTLI (−0.002, −0.002, −0.003), ΔCFI (−0.003, −0.001, 0.001), and ΔRMSEA (0.001, −0.004, 0.000), respectively, indicated that the overall model fit for EI, PsyCap, and TPWB was sufficient. For EIQ, PsyCap, and TPWB, values for scalar MI had good model fits across university types ($\Delta TLI = -0.004, -0.003, 0.003$; $\Delta CFI = 0.004, 0.006, 0.001$; and $\Delta RMSEA = 0.002, -0.004, 0.000$; respectively). In the last step, the RMI across university. The final step revealed RMI for EIQ, PsyCap, and TPWB, (ΔTLI 0.004, −0.009, 0.015; $\Delta CFI = 0.003, 0.010, 0.014$; and $\Delta RMSEA = 0.000, -0.004, -0.006$; respectively). From these findings we can conclude that the estimated four main constructs factor means varied across university types.

The four steps (configural, metric, scalar, and residual) for MI were tested for university teachers' teaching experience for all four main

Table 5
Displays the Pearson correlations (r) between the major constructs and their dimensions (N = 708).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
O	1	0.379**	0.343**	0.231**	−0.308**	0.129**	0.103**	0.199**	−0.137**	−0.229**	0.292**	0.309**	0.106**	0.132**	0.271**	0.231**	0.192**	−0.010	
C		1	0.292**	0.282**	−0.124**	0.110**	0.190**	0.110**	0.010	−0.084*	0.159**	0.113**	0.073	0.042	0.217**	0.205**	0.093*	0.105**	
E			1	0.470**	−0.221**	0.096*	0.045	0.142**	0.006	−0.082*	0.027	0.062	0.046	0.096*	0.274**	0.163**	0.056	0.098**	
A				1	−0.114**	0.033	−0.014	0.050	−0.076*	−0.094*	0.006	0.016	0.090*	−0.019	0.308**	0.166**	0.005	0.103**	
N					1	−0.062	−0.079*	−0.276**	0.048	0.218**	−0.252**	−0.278**	−0.308**	−0.275**	−0.282**	−0.238**	−0.167**	0.053	
SE						1	0.266**	0.278**	0.063	0.063	0.172**	0.112**	−0.002	0.070	0.082*	0.146**	0.096*	0.067	
JBS							1	0.313**	−0.019	−0.098**	0.122**	0.065	0.059	0.129**	0.144**	0.132**	0.115**	0.073	
RG								1	0.066	−0.038	0.243**	0.256**	0.183**	0.147**	0.240**	0.320**	0.139**	0.061	
9. AU									1	0.776**	−0.066	−0.072	0.142**	−0.049	−0.082*	0.047	−0.010	−0009	
10. ASP										1	−0.187**	−0.166**	0.016	−0.078*	−0.209**	−0.063	−0.102**	−0.016	
11. Hope											1	0.674**	0.317**	0.360**	0.184**	0.218**	0.159**	0.049	
12. Efficacy												1	0.343**	0.327**	0.213**	0.259**	0.141**	0.034	
13.Resileince													1	0.419**	0.161**	0.165**	0.069	−0.028	
14.Optimism														1	0.095*	0.111**	0.075*	−0.063	
15. SEA															1	0.520**	0.362**	0.212**	
16. OEA																1	0.239**	0.276**	
17. UOE																	1	0.361**	
18. ROE																		1	

Note: **Indicates two tailed statistically significant. A = agreeableness; ASP = aspiration, AU = authority; C=Conscientiousness; E = Extraversion; JBS = job satisfaction; RCO = Recognition; ROE = Regulation of Emotions; SE = self-efficacy; SEA = Self-Emotion Appraisal; N=Neuroticism; O = Openness to Experience; OEA = Others' Emotion Appraisal; OEA = Use of Emotions.

constructs. Configural invariance was tested first, and the result of the four main constructs were acceptable (see Table 6).

To perform metric invariance testing, factor loadings have to be restricted to being equal for all items. The overall model fit was conventionally acceptable for the Big Five personality traits, EIQ, PsyCap, and TPWB (ΔTLI = 0.003, −0.002, −0.004, −0.002; ΔCFI = 0.004, 0.002, 0.002, −0.002; and ΔRMSEA = −0.001, 0.001, 0.002, 0.000; respectively).

Scalar MI, which is based on MMI, was tested in the third stage. The results showed good model fit to the data for the Big Five personality traits, EIQ, PsyCap, and TPWB (ΔTLI = 0.007, −0.003, −0.005, −0.004; ΔCFI = −0.001, 0.003, 0.003, 0.000; and ΔRMSEA = 0.003, 0.001, 0.002, 0.001; respectively).

For the Big Five personality traits, EIQ, PsyCap, and TPWB, we tested the RMI based on the scalar variance result (ΔTLI = −0.001, 0.007, 0.001, −0.019, 0.018; ΔCFI = 0.002, 0.004, 0.020, 0.017; and ΔRMSEA = 0.001, −0.001, −0.006, −0.004; respectively). As a result, we can infer that the four primary constructs are equivalent regardless of gender, type of university, and teaching experience based on the conventional rule of Putnick and Bornstein (2016).

3.1.6. . *Measurement and structural model*

Model 1: *Big Five Personality* → PsyCap and EI → TPWB (see Fig. 3).
Model 2: *Big Five Personality* → PsyCap → TPWB (see Fig. 4).
Model 3: *Big Five Personality* → EI → TPWB (see Fig. 5).

The study utilized a measurement model (M1) with 18 indicators and four latent constructs (see Table 9). The EIS-16 had four indicators (SEA, OEA, use of emotions, and regulation of emotions), the BFI-10 had five indicators (openness, conscientiousness, extraversion, agreeableness, and neuroticism), the PCQ-12 had four indicators (hope, efficacy, resilience, and optimism), and the TPWBS had five indicators (self-efficacy, job satisfaction, recognition, authority, and aspiration).

The confirmatory factor analysis (CFA) results showed that the measurement model for the EIS-16 had a good fit, with the following indices: χ2, TLI, CFI, and RMSEA. The BFI-10 and PCQ-12 also demonstrated acceptable and excellent model fits, respectively, based on the relevant fit indices. The TPWBS measurement model exhibited an acceptable model fit as well. Furthermore, the overall measurement model for all scales showed a good fit to the data, indicating that the latent variables were accurately represented by their corresponding indicators. The structural model was then evaluated and fitted to the data, yielding acceptable fit indices. All factor loadings were significant, and the latent variables were accurately represented by their corresponding indicators. Finally, the partial mediation model of structural models, which included the relationships between the Big Five personality, PsyCap, EIQ, and TPWB, also had an acceptable structural model fit.

3.1.7. *Serial mediation model*

Using SEM with latent variables, the mediating effects of PsyCap and EIQ were assessed. Using the bootstrapping method, a multiple-mediator model (containing psychological capital and EIQ) was used to determine how PsyCap and EIQ affected TPWB. Therefore, path analysis was used to examine a mediation model using point estimates and a 95 % bootstrap confidence interval for the parameters. The outcome (dependent) variable was TPWB, while the predictor (independent) variables were the Big Five personality traits and EIQ. Inputs for the mediating factors included PsyCap and EI. Table 9 and Fig. 3 show the standardized coefficients, and 95 % confidence intervals obtained using a bootstrap method for the structural model.

As shown in Fig. 3 the study found several significant relationships in the tested model (M2). The Big Five personality traits had a direct positive effect on Emotional Intelligence (EIQ), Psychological Capital (PsyCap), and Total Positive Well-Being (TPWB). Specifically, the personality traits had a substantial positive influence on EIQ, a moderate positive effect on PsyCap, and a moderate positive impact on TPWB. Furthermore, the results showed that EIQ had a significant and positive

Table 6
Reliability and validity indices of the study variables ($N = 708$).

Emotional Intelligence (EI)								
Models	α	CR	AVE (>0.50*)	MSV	Squared correlation			
	(>0.70*)				SEA	OEA	UOE	ROE
SEA	0.96	0.98	0.85	0.27	1			
OEA	0.92	0.95	0.75	0.27	0.27	1		
UOE	0.91	0.93	0.71	0.13	0.13	0.06	1	
ROE	0.92	0.93	0.73	0.13	0.04	0.08	0.13	1

Psychological Capital Questionnaire (PCQ-12)								
Models	α	CR	AVE (>0.50*)	MSV	Squared correlation			
	(>0.70*)				H	E	R	O
Hope	0.86	0.86	0.60	0.45	1			
Efficacy	0.85	0.81	0.55	0.45	0.45**	1		
Resilience	0.84	0.84	0.63	0.12	0.10**	0.12**	1	
Optimism	0.77	0.77	0.63	0.18	0.13**	0.11**	0.18**	1

Brief Version of the Big Five Personality Inventory (BFI- 10)									
Models	α	CR	AVE (>0.50*)	MSV	Squared correlation				
	(>0.70*)				O	C	E	A	N
O	0.74	0.74	0.59	0.14	1				
C	0.73	0.73	0.58	0.14	0.14*	1			
E	0.78	0.78	0.64	0.22	0.12*	0.09*	1		
A	0.77	0.78	0.63	0.22	0.05*	0.08*	0.22*	1	
N	0.92	0.92	0.85	0.09	0.09*	0.02*	0.05*	0.01*	1

Teacher Professional Well-Being Scale (TPWBS)									
Models	α	CR	AVE (>0.50*)	MSV	Squared correlation				
	(>0.70*)				SE	JBS	RCO	AU	ASP
SE	0.91	0.92	0.58	0.08	1				
JBS	0.84	0.86	0.71	0.10	0.07*	1			
RCO	0.88	0.88	0.64	0.10	0.08*	0.10*	1		
AU	0.89	0.90	0.64	0.60	0.04*	0.01*	0.01*	1	
ASP	0.91	0.91	0.71	0.60	0.03*	0.04*	0.02*	0.60*	1

Note: *Indicates a global rule of thumb of an acceptable level of validity and reliability based on the recommendation of Hair et al. (2019) and Kline (2016). α = Cronbach's alpha; A = agreeableness; ASP = aspiration, AU = authority; AVE = average variance extracted; C=Conscientiousness; CR = composite reliability; EF = efficacy; E = Extraversion; JBS = job satisfaction; RCO = Recognition; ROE = Regulation of Emotions; SE = self-efficacy; SEA = Self-Emotion Appraisal MSV = maximum shared variance; N=Neuroticism; O = Openness to Experience; OEA = Others' Emotion Appraisal; UOE = Use of Emotions.

Table 7
Fit indices for measurement invariance (configural, metric, scalar, and residual) models across socio-demographic factors.

Scales	Groups	Configural			Metric			Scalar			Residual		
		TLI	CFI	RMSEA	TLI	CFI	RMSEA	TLI	CFI	RMSEA	TLI	CFI	RMSEA
Emotional Intelligence	Gender	0.936	0.948	0.066	0.939	0.947	0.064	0.944	0.947	0.062	0.940	0.940	0.064
	University Types	0.912	0.928	0.065	0.914	0.925	0.064	0.918	0.921	0.062	0.914	0.918	0.062
	Experience	0.933	0.945	0.055	0.935	0.943	0.054	0.938	0.940	0.053	0.931	0.936	0.054
BIG Five Personality traits	Gender	0.968	0.982	0.037	0.971	0.982	0.036	0.973	0.980	0.035	0.975	0.979	0.033
	University Type	0.969	0.983	0.030	0.967	0.979	0.031	0.966	0.974	0.032	0.956	0.959	0036
	Experience	0.973	0.985	0.028	0.970	0.981	0.029	0.977	0.982	0.026	0.978	0.980	0.025
Psychological Capital	Gender	0.948	0.962	0.049	0.953	0.963	0.946	0.958	0.963	0.044	0.959	0.961	0.043
	University Types	0.942	0.958	0.042	0.940	0.950	0.043	0.943	0.947	0.042	0.934	0.937	0.043
	Experience	0.933	0.951	0.046	0.937	0.949	0.044	0.942	0.946	0.042	0.923	0.926	0.048
Teachers Professional Well-being	Gender	0.928	0.936	0.043	0.930	0.935	0.042	0.932	0.934	0.042	0.921	0.924	0.041
	University Types	0.920	0.929	0.037	0.923	0.928	0.037	0.920	0.922	0.037	0.905	0.908	0.043
	Experience	0.922	0.931	0.036	0.924	0.929	0.036	0.928	0.929	0.035	0.910	0.912	0.039

direct effect on teachers' PsyCap and TPWB. Additionally, PsyCap was found to be a positive and direct predictor of TPWB. Importantly, the study also revealed that Psychological Capital significantly and fully mediated the relationship between the Big Five personality traits and the pathway from Emotional Intelligence to Total Positive Well-Being. This suggests that PsyCap plays a crucial role in explaining how personality and emotional intelligence contribute to overall positive well-being.

The subsequent phase of the study examined the role of partial mediation, with Total Positive Well-Being (TPWB) as the dependent variable, Big Five personality traits as the predictor variable, and

Table 8
Confirmatory factor analysis of the constructs using the measurement model and the structural model ($N = 708$).

Models	Fitness of indices	Confirmatory factorial analysis of the variables			
		χ^2	TLI	CFI	RMSEA
	BIG 5 Personality	59 (25) *	0.978	0.988	0.044
	EI	675 (98) *	0.938	0.950	0.065
	PsyCap	179 (48) *	0.957	0.969	0.046
	TPWB	944 (80) *	0.935	0.942	0.051
Model 1	Measurement Model	3448 (1409) *	0.917	0.921	0.043
	Structural model	3326 (1408) *	0.922	0.926	0.044
Model 2	Structural model	3250 (1064) *	0.904	0.912	0.054
Model 3	Structural model	3798 (1258) *	0.905	0.911	0.053
	Rule of Thumb		>0.90	>0.90	>0.08

Note: * $p < 0.001$, χ^2 = chi-squared, df = degrees of freedom, TLI = Tucker Lewis index, CFI = comparative fit index, RMSEA = root mean error square of approximation.

Psychological Capital (PsyCap) as the mediator variable. The findings revealed that the Big Five personality traits exhibited a strong positive association with PsyCap, as well as a substantial positive relationship with TPWB. Additionally, PsyCap was found to be a significant positive predictor of TPWB. Importantly, the results showed that PsyCap partially mediated the relationship between the Big Five personality traits and TPWB. This suggests that while the personality traits have a direct positive impact on overall well-being, Psychological Capital also plays a crucial role in explaining how these personality characteristics influence an individual's total positive well-being.

Furthermore, the researchers explored the role of Emotional Intelligence (EIQ) as a partial mediator in the relationship between Big Five personality traits and TPWB, as depicted in Fig. 5. Consistent with the proposed hypothesis, the findings revealed that the Big Five personality traits exhibited a strong positive association with EIQ and a substantial positive relationship with TPWB. Notably, EIQ was found to significantly mediate the connection between the Big Five personality traits and TPWB.

These results lend support to the notion that emotional intelligence plays a crucial role in explaining the relationship between Big Five personality traits and an individual's overall positive well-being. The partial mediation models highlight the complex interplay between personality, emotional intelligence, psychological capital, and the total positive well-being of the study participants.

In Fig. 6, we also observed the tested model (M4), which aimed to investigate whether the Five Big personality traits (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism) have an impact on TPWB (Teacher Professional Well-Being) through the mediating factors of PsyCap (Psychological Capital) and EIQ (Emotional Intelligence). The results revealed several significant relationships. *Firstly,* we found that *openness to experience* had a direct positive effect on EIQ, PsyCap, and TPWB, as indicated in Table 9. This suggests that teachers who possess a high level of openness to experience tend to exhibit greater emotional intelligence, psychological capital, and overall professional well-being. *Secondly, conscientiousness* was found to have a positive direct effect on EI, implying that teachers with a conscientious nature are more likely to demonstrate higher emotional intelligence. *Thirdly, extraversion* showed a positive direct effect on PsyCap, suggesting that teachers who are more extraverted tend to possess greater psychological capital.

Furthermore, the study uncovered a substantial and positive direct effect of *agreeableness* on teachers' EIQ. This implies that individuals with a high degree of *agreeableness* tend to have higher levels of emotional intelligence. However, *neuroticism* was negatively and directly associated with EIQ, PsyCap, and TPWB, as evidenced by the findings presented in Table 9 and Fig. 6. This indicates that teachers who exhibit neurotic tendencies are more likely to have lower emotional intelligence, psychological capital, and overall well-being. Our data partially answered RQ4, highlighting the significant relationships between the Five Big personality traits, EIQ, PsyCap, and TPWB among teachers.

Table 9
Direct and indirect effects of predictors using a 95 % biased corrected confidence interval predicting teachers' professional well-being ($N = 708$).

Predictors	Outcome variables	Beta	Bootstrap 95 % CI		
			LBC	UBC	*p*-Value
Standardized direct effect					
BIG 5 Personality	EIQ	0.556	0.470	0.646	0.001
BIG 5 Personality	PsyCap	0.283	0.119	0.441	0.002
BIG 5 Personality	TPWB	0.225	0.024	0.286	0.003
EIQ	PsyCap	0.199	0.067	0.324	0.014
EIQ	TPWB	0.261	0.045	0.422	0.047
PsyCap	TPWB	0.254	0.146	0.389	0.001
The direct effect of BIG Five Personality traits					
O	EIQ	0.213	0.129	0.297	0.001
O	PsyCap	0.296	0.200	0.392	0.002
O	TPWB	0.117	0.043	0.284	0.022
C	EIQ	0.122	0.015	0.210	0.057
C	PsyCap	0.044	−0.052	0.134	0.488
C	TPWB	0.114	0.009	0.272	0.083
E	EIQ	0.035	−0.037	0.123	0.562
E	PsyCap	−0.127	−0.200	−0.043	0.026
E	TPWB	0.030	−0.072	0.123	0.726
A	EIQ	0.202	0.081	0.320	0.009
A	PsyCap	−0.094	−0.202	0.034	0.230
A	TPWB	−0.111	−0.222	0.001	0.102
N	EIQ	−0.253	−0.332	−0.184	0.001
N	PsyCap	−0.217	−0.301	−0.127	0.002
N	TPWB	−0.136	−0.260	−0.070	0.006
Standardized indirect effect					
BIG 5 Personality → EIQ → PsyCap	TPWB	0.262	0.107	0.387	0.005
BIG 5 Personality → EIQ→	PsyCap	0.112	0.042	0.177	0.012
BIG 5 Personality → PsyCap →	TPWB(Fig. 4)	0.118	0.083	0.186	0.000
BIG 5 Personality → EIQ →	TPWB (Fig. 5)	0.246	0.136	0.360	0.002
EIQ → PsyCap →	TPWB	0.051	0.018	0.110	0.003
The Indirect effect of BIG Five Personality traits					
O → EIQ→	PsyCap	0.046	0.016	0.080	0.007
O → EIQ →	TPWB	0.143	−0.005	0.113	0.131
C → EIQ →	PsyCap	0.026	0.005	0.052	0.035
C → EIQ →	TPWB	0.053	0.016	0.103	0.008
E → EIQ →	PsyCap	0.008	0.022	0.077	0.001
E → EIQ →	TPWB	−0.016	0.088	0.229	0.001
A → EIQ →	PsyCap	0.044	−0.007	0.031	0.486
A → EIQ →	TPWB	0.051	−0.060	0.008	0.199
N → EIQ →	PsyCap	−0.055	−0.083	−0.032	0.001
N → EIQ →	TPWB	−0.139	−0.205	−0.086	0.000

Note: A = Agreeableness, CI = confidence interval, C=Conscientiousness, LBC = lower bound, UBC = upper bound, EI = emotional intelligence, E = Extraversion, N = Neuroticism O=Openness to Experience, PsyCap = psychological capital, TPWB = teacher professional well-being.

4. Discussion

This study investigated the hypotheses (see Figs. 1 and 2) that Big Five personality traits and EIQ are the predictor variables TPWB as the dependent variable, and with PsyCap as a mediating variable. We also examined the Big Five personality with PsyCap and TPWB using EIQ as a mediating variable. The results showed a positive correlation between EIQ, PsyCap, TPWB, and the Big Five personality traits. Furthermore, PsyCap and TPWB were positively correlated with EIQ. Additionally,

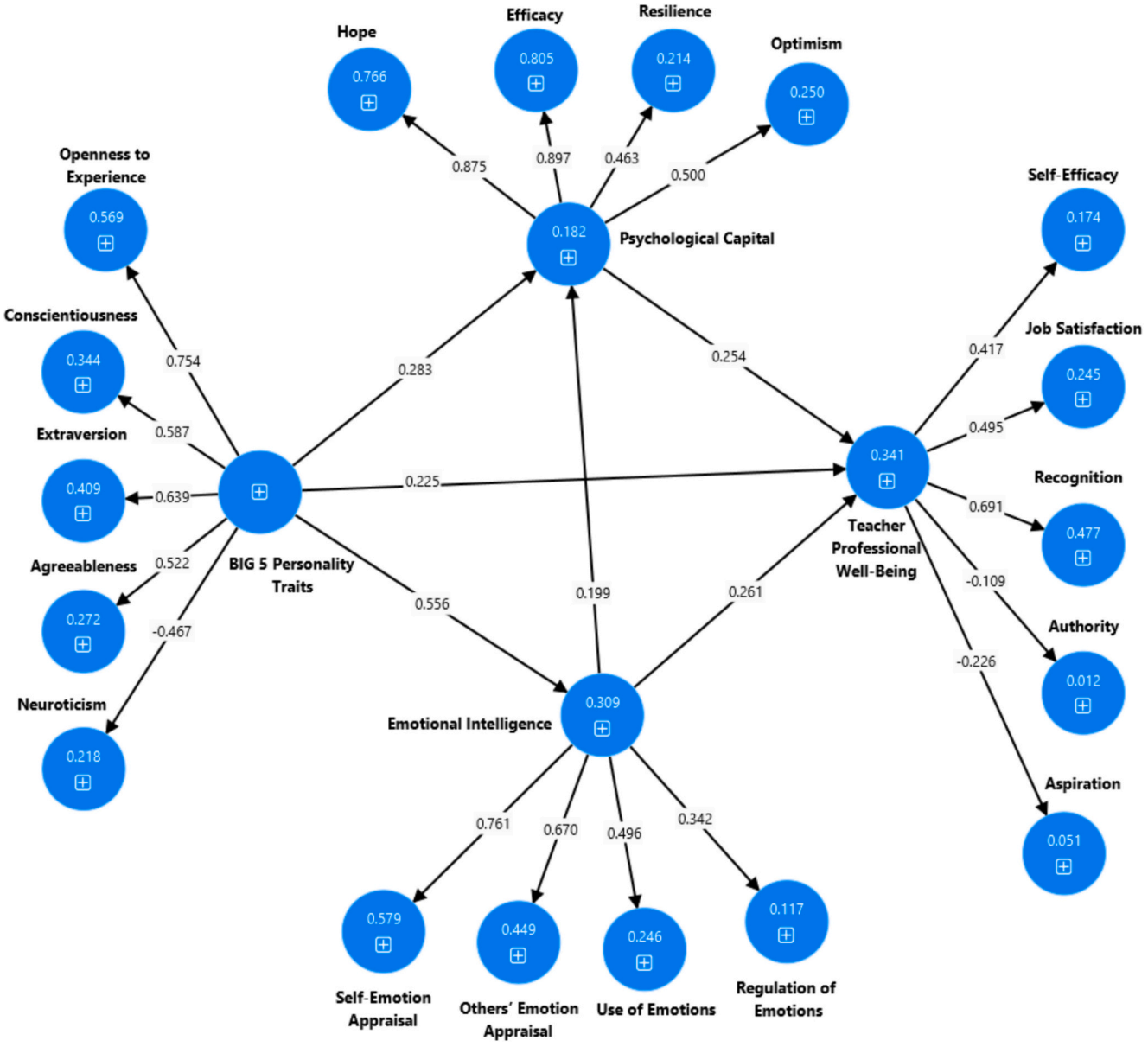


Fig. 3. Output of serial mediation model to explain the association between the Big five personality traits, emotional intelligence and psychological capital and teachers' professional well-being.

TPWB was positively correlated with PsyCap. These results support the first hypothesis of this study. The findings of relevant previous studies are in line with these conclusions. For example, research by Hong et al. (2020) and Vernon et al. (2008) found strong positive associations between the Big Five personality traits, EIQ, and PsyCap.

The indirect effects of Big Five personality on TPWB through PsyCap and partially mediated by EIQ were significant and positive. This finding is consistent with the positive psychology theory of Seligman. (2011), which is linked to Big Five personality, PsyCap, and TPWB. In addition, the results of various scientific studies support this study's findings. This indicates that the higher values for Big Five personality traits that an instructor has, the better EIQ and positive PsyCap he/she tends to have, which in turn leads to a better TPWB. Furthermore, studies have suggested that Big Five, EIQ, and PsyCap have positive and direct impacts on employees well-being and job satisfaction (Alegre et al., 2019; Dwan & Ownsworth, 2019; Evans et al., 2018; Manzano-García & Ayala, 2017; Sanchez-Ruiz et al., 2021; Zeidner et al., 2012; Zewude & Hercz, 2024).

This study provides evidence to support the conception that psychological capital can mediate the relationship between the Big Five personality traits, EIQ, and TPWB (Alegre et al., 2019; Dwan & Ownsworth, 2019; Evans et al., 2018; Manzano-García & Ayala, 2017; Sanchez-Ruiz et al., 2021; Zeidner et al., 2012; Zewude & Hercz, 2024). To the best of the authors' knowledge, this is the first empirical investigation to demonstrate the mediating role of PsyCap for the relationship between the Big Five personality traits, EIQ, and TPWB.

More specifically, the Big Five personality traits had a significant and positive direct effect on EI, PsyCap, and TPWB. Additionally, EIQ had a positive direct impact on PsyCap and TPWB, and PsyCap had a direct effect on TPWB. For instance, research by Hong et al. (2020) and Vernon et al. (2008) revealed high associations between PsyCap, EIQ, and the Big Five personality traits. These results are consistent with our findings.

Specifically, of the Big Five personality qualities, neuroticism adversely predicted TPWB, while conscientiousness, openness, extraversion, and agreeableness positively predicted well-being and had a positive impact on work values (Landa et al., 2010; Roccas, Sagiv, Schwartz, & Knafo, 2002). Additionally, the Big Five personality traits

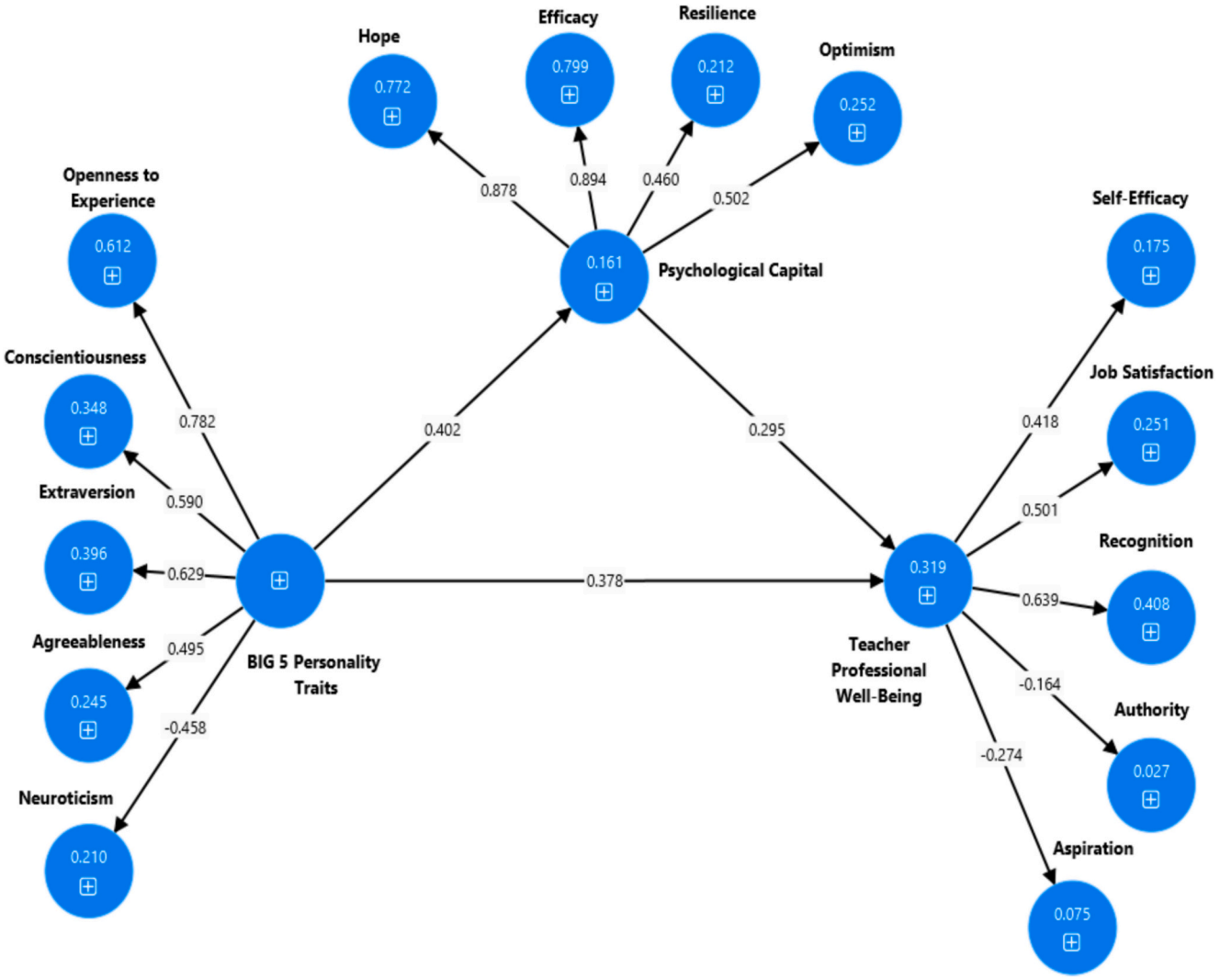


Fig. 4. Output of the partial mediation model to explain the association between the big five personality traits, psychological capital and teachers' professional well-being.

predicted PsyCap and EIQ in a positive way (Bozgeyikli, 2017; Szcześniak et al., 2020).

The BBPE provides support for this study, focusing on the Big Five personality traits and positive interventions that emphasize the use of positive emotions and PsyCap to improve university teachers' TPWB and foster their daily functioning. Teachers who strive to maximize positive outcomes and possess stable personality traits, as well as positive PsyCap, including hope, efficacy, resilience, and optimism, better EIQ skills, and healthy TPWB, may benefit and have a good opportunity, leading to personal and organizational development and growth. This line of reasoning is empirically supported by prior studies, which found that the Big Five personality traits, EI, and PsyCap are the best predictors of employees; well-being and have a positive outcome in the workplace, reducing stress, fostering teachers' healthy work functioning, and boosting their well-being (Hjalmarsson & Dåderman, 2022; Löckenhoff et al., 2011; Luthans et al., 2007; Szcześniak et al., 2020; Zewude & Hercz, 2024). Moreover, EIQ was identified as a preventive resource that can be used to improve TPWB, and empirical evidence has also shown that it has a positive relationship with PsyCap and TPWB, confirming our three hypotheses.

It was expected that PsyCap, such as hope, efficacy, resilience, and optimism, would influence TPWB and serve as a personal resource for well-being. Teachers with higher scores on Big Five personality traits and EIQ were predicted to have developed positive PsyCap (hope, efficacy, resilience, and optimism) and as a result, increased confidence in their profession, job satisfaction, better relationships with their leaders, recognition for their accomplishments, and a desire to continue learning.

The findings of this study confirmed that EIQ has an indirect effect on TPWB through PsyCap. This is in line with grand theory and empirical research that have both pointed to the significance of PsyCap, such as hope, efficacy, resilience, and optimism, in influencing TPWB and serving as personal resources for their well-being. The importance of TPWB is increasingly being recognized by researchers and practitioners due to its short, medium, and long-term effects on individual and organizational effectiveness (Li, 2018; Rabenu and Yaniv, 2017). This study demonstrates the value of such EIQ and PsyCap in teachers' well-being.

4.1. Implications

While this study highlights the relationships between the Big Five personality traits, EI, PsyCap, and TPWB, there are several suggestions for practitioners, policymakers, and researchers. Some potential implications of this study include:

4.1.1. Implication for practitioners

First, educators and educational organizations should prioritize the

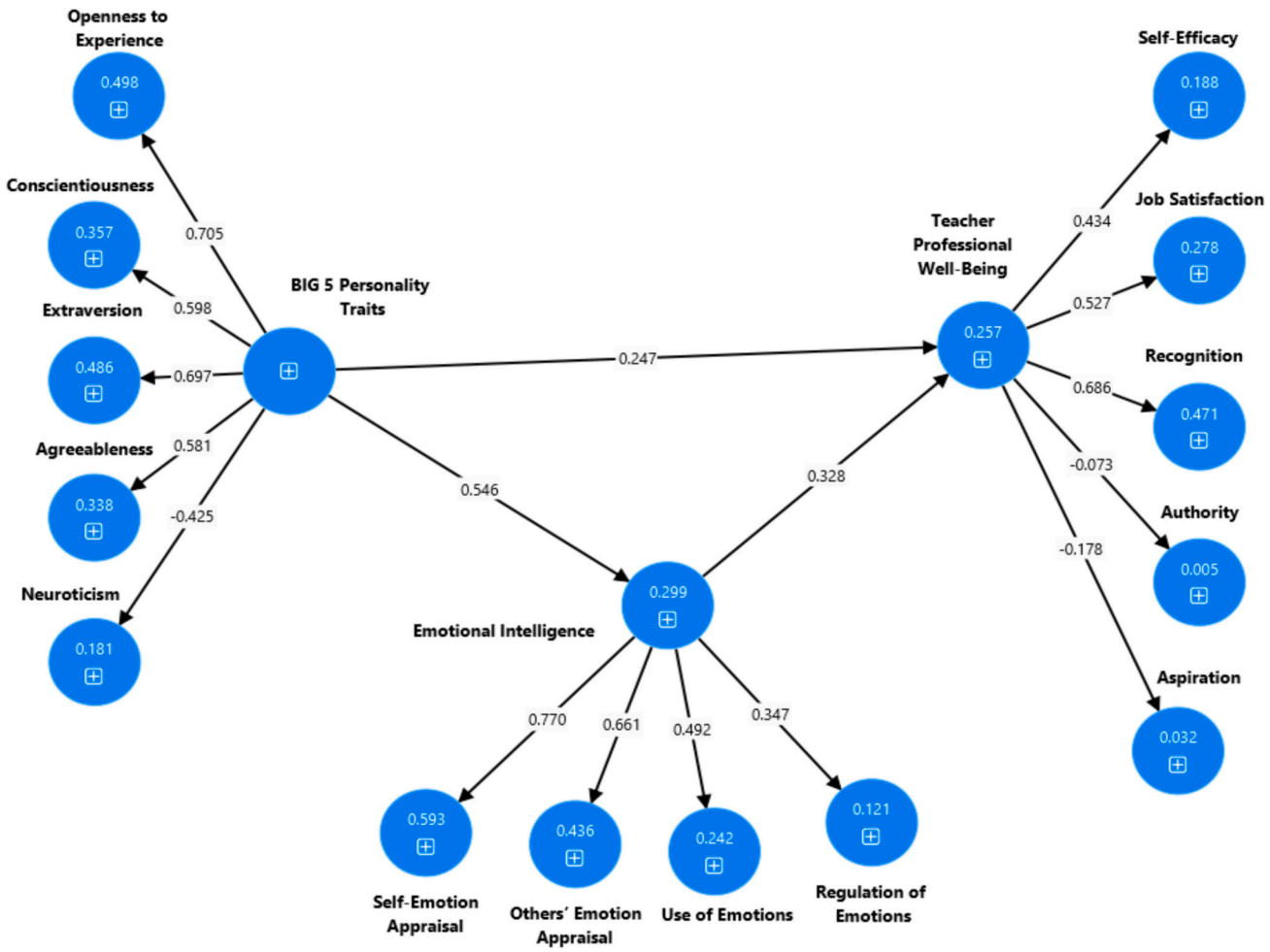


Fig. 5. Output of the partial mediation model to explain the association between the big five personality traits, emotional intelligence and teachers' professional well-being.

development of teachers' emotional intelligence (EI) skills and psychological capital (PsyCap) to enhance their professional well-being (TPWB). Training programs and interventions can be designed to improve EI and foster positive PsyCap, including hope, efficacy, resilience, and optimism, among teachers (Gong et al., 2019). Practitioners in the field of education should focus on the development of teachers' Emotional Intelligence (EIQ) skills. Providing training programs and workshops that enhance teachers' ability to understand and manage their own emotions, as well as effectively communicate and empathize with others, can contribute to their overall well-being (Szcześniak et al., 2020).

Second, practitioners should recognize the importance of teachers' personality traits, specifically the Big Five traits (lower score of neuroticisms and openness to experience) in predicting TPWB. However, conscientiousness, extraversion, and agreeableness did not predict TPWB. Therefore, creating a positive work environment that values well-being, recognizes teachers' accomplishments, and promotes positive relationships with leaders can contribute to teachers' TPWB (Yildirim, 2014). Practitioners should focus on creating supportive and inclusive work cultures (Yildirim, 2014).

4.1.2. Implication for policymakers

First, policymakers in the field of education should prioritize the well-being of teachers and consider it as an essential component of educational policies (Hascher & Waber, 2021). They should promote initiatives that support teachers' TPWB, such as providing resources for professional development, implementing work-life balance policies, and addressing factors that contribute to stress and burnout. *Second,* educational organizations and policymakers should consider incorporating interventions that promote positive emotions and Psychological Capital (PsyCap) among teachers. Strategies such as fostering hope, efficacy, resilience, and optimism can enhance teachers' confidence, job satisfaction, and their ability to cope with daily challenges (Zewude & Hercz, 2024). *Third,* policies should encourage the integration of EIQ training and development programs into teacher education and professional development curricula. Policymakers can collaborate with educational institutions and organizations to incorporate these skills into teacher training programs.

4.1.3. Direction for future research

First, further research should explore the underlying mechanisms through which the Big Five personality traits, EI, and PsyCap influence teachers' well-being in different educational contexts and populations. Investigating additional mediators, such as job satisfaction, mindfulness and educational commitments, can provide a more comprehensive understanding of the factors that contribute to teachers' professional well-being in diverse settings can provide valuable insights for tailoring interventions to specific educational contexts (Zewude & Hercz, 2024). *Second,* researchers should conduct studies in diverse educational contexts to examine the generalizability of the findings. Investigating the impact of the identified variables on TPWB in different cultural and organizational settings can provide valuable insights for developing context-specific interventions. *Third,* longitudinal studies can be conducted to explore the long-term effects of the identified variables on

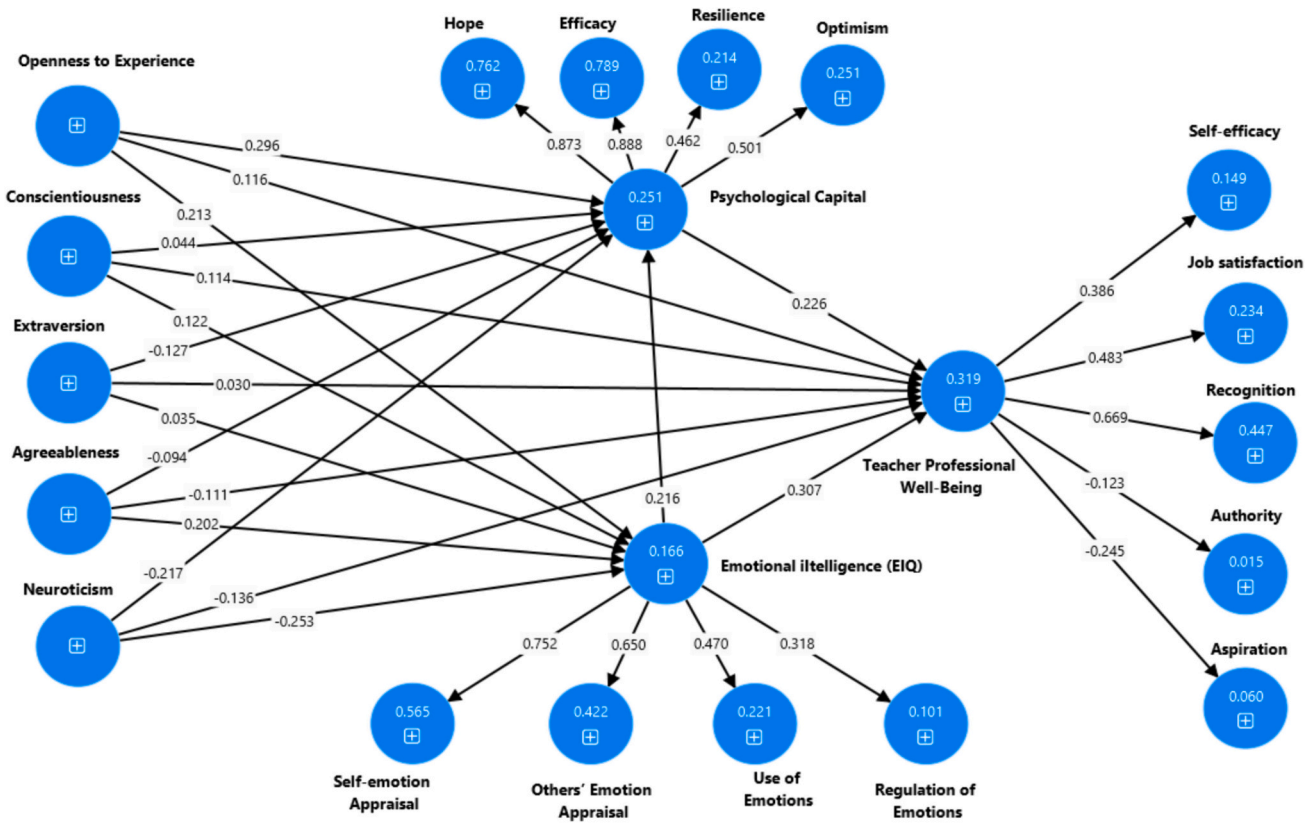


Fig. 6. Output of serial mediation model to explain the association between the Five Big Five Personality traits type, Emotional Intelligence and PsyCap and teachers' Professional Well-being.

teachers' TPWB and their overall career satisfaction. Understanding the trajectory of TPWB and the factors that contribute to its sustainability over time can inform strategies for long-term teacher well-being. *Fourth,* future research should consider *longitudinal Studies*. Conducting longitudinal studies to examine the long-term effects of the Big Five personality traits, EI, and PsyCap on TPWB would provide valuable insights into the stability and development of well-being over time. This would contribute to understanding the dynamic nature of these relationships and their implications for sustainable higher education (Zewude et al., 2023). *Finally*, the integration of EIQ, PsyCap, and the consideration of the Big Five personality traits can contribute to enhancing teachers' professional well-being. By implementing evidence-based practices and policies informed by research findings, practitioners, policymakers, and researchers can collectively promote a positive and supportive environment for teachers, ultimately benefiting both educators and students (Ng, 2015).

5. Conclusion

This study investigated the mediating role of Emotional Intelligence (EIQ) between the Big Five personality traits, psychological capital (PsyCap), and teachers' professional well-being (TPWB). The results revealed significant and positive direct effects of the Big Five personality traits on EIQ, PsyCap, and TPWB. Additionally, EIQ had a positive direct impact on PsyCap and TPWB, while PsyCap directly influenced TPWB. These findings align with existing research and support the hypothesis that the Big Five personality traits, EIQ, and PsyCap are positively associated with TPWB. This study provides empirical evidence for the positive correlation and predictive power of these factors in relation to teachers' well-being. Consequently, fostering and cultivating these factors is crucial for optimizing teachers' TPWB.

Furthermore, the study found that psychological capital partially mediated the relationship between the Big Five personality traits, EIQ, and TPWB. However, EIQ partially mediated the relationship between specific personality traits (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism), PsyCap, and TPWB.

Specifically, the findings indicated that:

- Individuals with higher scores in Openness to experience exhibited higher levels of EIQ, PsyCap, and TPWB.
- Higher scores in conscientiousness and agreeableness were positively associated with higher EIQ.
- Higher scores in extraversion had a positive direct impact on PsyCap.
- Lower scores in neuroticism resulted in a negative direct impact on EIQ, PsyCap, and TPWB.

The study's findings emphasize the importance of nurturing positive personality traits, developing EIQ, and cultivating PsyCap in teachers. This approach can contribute to a more fulfilling and positive work environment, leading to improved job satisfaction, reduced stress, and enhanced overall well-being. The findings also underscore the value of PsyCap as a crucial personal resource for teachers' well-being, supporting their professional growth and development.

The use of AI statement

During the review process of this document, the writer employed the assistance of ChatGPT to enhance the clarity and organization of this report. Subsequently, post-utilization of this tool, the authors meticulously revised and edited the material as required, assuming complete accountability for the publication's contents.

CRediT authorship contribution statement

Girum Tareke Zewude: Writing – review & editing, Writing – original draft, Validation, Methodology, Formal analysis, Conceptualization. **Yikunoamlak Mesfin:** Writing – review & editing, Writing – original draft, Resources, Conceptualization. **Fatiha Sadouki:** Writing – review & editing, Resources, Data curation, Conceptualization. **Abate Getahun Ayele:** Writing – review & editing, Writing – original draft, Resources, Data curation, Conceptualization. **Solomon Goraw:** Writing – review & editing, Resources, Investigation, Conceptualization. **Tesfaye Segon:** Writing – review & editing, Data curation, Conceptualization. **Mária Hercz:** Writing – review & editing, Supervision, Resources, Conceptualization.

Declaration of competing interest

The study was performed by the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. The studies involving human participants were reviewed and approved by the first authors' University Ethics board committee of the Institution. The authors have no competing interests to declare that are relevant to the content of this article.

Data availability

Data will be made available on request.

Acknowledgements

I would like to express my gratitude to the University of Szeged Library for their support in funding English language and spelling editing services provided by Enago, an editing brand of Crimson Interactive Inc. (Certificate no. Feb 15-2023).

Funding

This study received no external funding.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.actpsy.2024.104500.

References

Acosta-prado, J. C., & Torres, R. A. Z. (2020). Validation of the Wong and Law emotional intelligence scale for Chilean managers. *Suma Psicológica, 26*(2), 110–118.

Agler, R., & De Boeck, P. (2017). On the interpretation and use of mediation: Multiple perspectives on mediation analysis. *Frontiers in Psychology, 8*(3), 1–11. https://doi.org/10.3389/fpsyg.2017.01984

Alegre, A., Pérez-Escoda, N., & López-Cassá, E. (2019). The relationship between trait emotional intelligence and personality. Is trait EI really anchored within the big five, big two and big one frameworks? *Frontiers in Psychology, 10*(APR). https://doi.org/10.3389/fpsyg.2019.00866

Angelini, G. (2023). Big five model personality traits and job burnout : A systematic literature review. *BMC Psychology, 11*(39), 1–35. https://doi.org/10.1186/s40359-023-01056-y

Arshad, S., & Rafique, R. (2016). Personality and creativity as predictors of psychological well-being in college students. *Pakistan Journal of Psychological Research, 31*(1), 139–160.

Avey, J. B., Luthans, F., & Youssef, C. M. (2010). The additive value of positive psychological capital in predicting work attitudes and behaviors. *Journal of Management, 36*(2), 430–452. https://doi.org/10.1177/0149206308329961

Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. *Human Resource Development Quarterly, 22*(2), 127–152. https://doi.org/10.1002/hrdq.20070

Bar-On, R., & Parker, J. D. (2000). The handbook of emotional intelligence: Theory, development, assessment, and application at home, School, and in the Workplace: Vol. 1st Edn.

Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine, 25*(24), 3186–3191. https://doi.org/10.1097/00007632-200012150-00014

Bozgeyikli, H. (2017). Big five personality traits as the predictor of teachers' organizational psychological capital. *Journal of Education and Practice, 8*(18), 125-135–135.

Carmeli, A., Yitzhak-Halevy, M., & Weisberg, J. (2009). The relationship between emotional intelligence and psychological wellbeing. *Journal of Managerial Psychology, 24*(1), 66–78. https://doi.org/10.1108/02683940910922546

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling, 14*(3), 464–504. https://doi.org/10.1080/10705510701301834

Cheung, G. W., & Rensvold, R. B. (2009). Structural equation modeling : A evaluating goodness-of- fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Choi, Y., & Lee, D. (2014). Psychological capital, big five traits, and employee outcomes. *Journal of Managerial Psychology, 29*(2), 122–140. https://doi.org/10.1108/JMP-06-2012-0193

Collie, R. J., & Martin, A. J. (2023). Teacher well-being and sense of relatedness with students : Examining associations over one school term. *Teaching and Teacher Education, 132*(2), 1–11. https://doi.org/10.1016/j.tate.2023.104233

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297–334. https://doi.org/10.1007/BF02310555

Davidov, E., Meuleman, B., Cieciuch, J., Schmidt, P., & Billiet, J. (2014). Measurement equivalence in cross-national research. *Annual Review of Sociology, 40*(2), 55–75. https://doi.org/10.1146/annurev-soc-071913-043137

Davidov, E., Schmidt, P., Billiet, J., & Meuleman, B. (2018). Cross-cultural analysis: Methods and application: Vol. 2nd Editio. Taylor & Francis Group, LLC.

Dirzyte, A., & Patapas, A. (2022). Associations between emotional intelligence and subjective wellbeing in the Lithuanian youth sample. *Current Psychology, 0123456789*. https://doi.org/10.1007/s12144-021-02598-3

D'Souza, G. S., Irudayasamy, F. G., Usman, S. A., Andiappan, V. S., & Parayitam, S. (2021). The effect of emotional intelligence and psychological capital on knowledge, service and leadership excellence: Knowledge sharing and trust as moderators. *FIIB Business Review, 1–19*. https://doi.org/10.1177/23197145211065087

Dwan, T., & Ownsworth, T. (2019). The big five personality factors and psychological well-being following stroke: A systematic review. *Disability and Rehabilitation, 41*(10), 1119–1130. https://doi.org/10.1080/09638288.2017.1419382

Evans, P., Martin, A. J., & Ivcevic, Z. (2018). Personality, coping, and school well-being: An investigation of high school students. *Social Psychology of Education, 21*(5), 1061–1080. https://doi.org/10.1007/s11218-018-9456-8

Fiori, M., & Vesely-Maillefer, A. K. (2019). Emotional intelligence as an ability: Theory, challenges, and new directions. In K. Keefer, J. Parker, & D. Saklofske (Eds.), *Emotional intelligence in education. The springer series on human exceptionality* (pp. 23–47). Cham: Springer. https://doi.org/10.1007/978-3-319-90633-1_2.

Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society, B: Biological Sciences, 359*(1449), 1367–1377. https://doi.org/10.1098/rstb.2004.1512

George, D., & Mallery, P. (2020). *IBM SPSS statistics 26 step by step: A simple guide and reference* (Vol. 16th). Routledge.

Giluk, T. L. (2009). Mindfulness, Big Five personality, and affect : A meta-analysis. *Personality and Individual Differences, 47*(8), 805–811. https://doi.org/10.1016/j.paid.2009.06.026

Giluk, T. L., & Postlethwaite, B. E. (2015). Big five personality and academic dishonesty: A meta-analytic review. *Personality and Individual Differences, 72*, 59–67. https://doi.org/10.1016/j.paid.2014.08.027

Goldberg, L. R. (1990). An alternative "description of personality": The big-five factor structure. *Journal of Personality and Social Psychology, 59*(6), 1216–1229. https://doi.org/10.1037//0022-3514.59.6.1216

Gomes da Costa, M., Pinto, L. H., Martins, H., & Vieira, D. A. (2021). Developing psychological capital and emotional intelligence in higher education: A field experiment with economics and management students. *International Journal of Management Education, 19*(3), Article 100516. https://doi.org/10.1016/j.ijme.2021.100516

Gong, Z., Chen, Y., & Wang, Y. (2019). The influence of emotional intelligence on job burnout and job performance: Mediating effect of psychological capital. *Frontiers in Psychology, 10*(3), 1–11. https://doi.org/10.3389/fpsyg.2019.02707

Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the big-five personality domains. *Journal of Research in Personality, 37*(6), 504–528. https://doi.org/10.1016/S0092-6566(03)00046-1

Hair, J., Black, W., Babin, B., & Anderson, R. (2019). *Multivariate Data Analysis* (8th Editio). Annabel Ainscow.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least (PLS-SEM) using R equation modeling squares structural. *Springer*. https://doi.org/10.1007/978-3-030-80519-7

Hascher, T., & Waber, J. (2021). Teacher well-being : A systematic review of the research literature from the year 2000–2019. Educational Research Review, 34(3), 1–25. doi: https://doi.org/10.1016/j.edurev.2021.100411.

Hayes, A. F. (2022). Introduction to mediation, moderation, and conditional process analysis:A regression-based approach: Vol. 3rd Edit. The Guliford Press.

Hedrih, V. (2020). *Adapting psychological tests and measurement instruments for cross-cultural research*. Routledge.

Hjalmarsson, A. K. V., & Dåderman, A. M. (2022). Relationship between emotional intelligence, personality, and self-perceived individual work performance: A cross-

sectional study on the Swedish version of TEIQue-SF. *Current Psychology, 41*(5), 2558–2573. https://doi.org/10.1007/s12144-020-00753-w
Homayouni, A. (2011). Personality traits and emotional intelligence as predictors of learning English and math. *Procedia - Social and Behavioral Sciences, 30*(3), 839–843. https://doi.org/10.1016/j.sbspro.2011.10.163
Hong, M., Dyakov, D. G., & Zheng, J. (2020). Self-esteem and psychological capital: Their mediation of the relationship between big five personality traits and creativity in college students. *Journal of Psychology in Africa, 30*(2), 119–124. https://doi.org/10.1080/14330237.2020.1744286
Hu, L., & & Bentler, P. M.. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55. https://doi.org/10.1080/10705519909540118
Johnson, J. A. (2017). Big-Five Model. In V. Zeigler-Hill, & T. Shackelford (Eds.), *Encyclopedia of personality and individual differences*. Cham: Springer. https://doi.org/10.1007/978-3-319-28099-8_1212-1.
Johnson, S. J., Batey, M., & Holdsworth, L. (2009). Personality and health: The mediating role of trait emotional intelligence and work locus of control. *Personality and Individual Differences, 47*(5), 470–475. https://doi.org/10.1016/j.paid.2009.04.025
Karimi, L., Leggat, S. G., Bartram, T., Afshari, L., Sarkeshik, S., & Verulava, T. (2021). Emotional intelligence: Predictor of employees' wellbeing, quality of patient care, and psychological empowerment. *BMC Psychology, 9*(1), 1–7. https://doi.org/10.1186/s40359-021-00593-8
Kim, H.-Y. (2013). Statistical notes for clinical researchers: Assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry & Endodontics, 38*(1), 52. https://doi.org/10.5395/rde.2013.38.1.52
Kline, R. B. (2016). *Principles and practice of structural equation modeling* (Vol. 4). New York London: The Guilford Press.
Komarraju, M., Karau, S. J., & Schmeck, R. R. (2009). Role of the big five personality traits in predicting college students' academic motivation and achievement. *Learning and Individual Differences, 19*(1), 47–52. https://doi.org/10.1016/j.lindif.2008.07.001
Kong, F. (2017). The validity of the Wong and Law emotional intelligence scale in a Chinese sample : Tests of measurement invariance and latent mean differences across gender and age. *Personality and Individual Differences, 116*, 29–31. https://doi.org/10.1016/j.paid.2017.04.025
Kyriazopoulou, M., & Pappa, S. (2021). Emotional intelligence in Greek teacher education: Findings from a short intervention. *Current Psychology*. https://doi.org/10.1007/s12144-021-02226-0
Laher, S., & Quy, G. (2009). Exploring the role of spirituality in the context of the five factor model of personality in a south African sample. *Journal of Psychology in Africa, 19*(4), 509–516. https://doi.org/10.1080/14330237.2009.10820323
Landa, J. M. A., Martos, M. P., & López-Zafra, E. (2010). Emotional intelligence and personality traits as predictors of psychological well-being in Spanish undergraduates. *Social Behavior and Personality, 38*(6), 783–794. https://doi.org/10.2224/sbp.2010.38.6.783
Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing Company.
Li, Y. (2018). Building well-being among university teachers : The roles of psychological capital and meaning in life. *European Journal of Work and Organizational Psychology, 27*(5), 594–602. https://doi.org/10.1080/1359432X.2018.1496909
Libbrecht, N., De Beuckelaer, A., Lievens, F., & Rockstuhl, T. (2014). Measurement invariance of the Wong and Law emotional intelligence scale scores : Does the measurement structure hold across far eastern and European countries ? *Applied Psychology, 63*(2), 223–237. https://doi.org/10.1111/j.1464-0597.2012.00513.x
Löckenhoff, C. E., Duberstein, P. R., Friedman, B., & Costa, P. T. (2011). Five-factor personality traits and subjective health among caregivers: The role of caregiver strain and self-efficacy. *Psychology and Aging, 26*(3), 592–604. https://doi.org/10.1037/a0022209
Luthans, Youssef, C. M., & Avolio, B. J. (2015). *Psychological capital: Developing the human competitive edge*. New York: Oxford University Press.
Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology, 60*(3), 541–572. https://doi.org/10.1111/j.1744-6570.2007.00083.x
MacIntyre, P. D., Ross, J., Talbot, K., Mercer, S., Gregersen, T., & Banga, C. A. (2019). Stressors, personality and wellbeing among language teachers. *System, 82*(2), 26–38. https://doi.org/10.1016/j.system.2019.02.013
Mak, A. S., & Tran, C. (2001). Big five personality and cultural relocation factors in Vietnamese Australian students ' intercultural social self-efficacy. *International Journal of Intercultural Relations, 25*(2), 181–201.
Maluenda-albornoz, J. I. (2023). The influence of big five personality traits on college students ' key competencies : The mediating effect of psychological capital. *Frontiers in Psychology, 14*(1), 1–15. https://doi.org/10.3389/fpsyg.2023.1242557
Manzano-García, G., & Ayala, J. C. (2017). Relationship between psychological capital and psychological well-being of direct support staff of specialist autism services. The mediator role of burnout. *Frontiers in Psychology, 8*(DEC), 1–12. https://doi.org/10.3389/fpsyg.2017.02277
Maree, J. G., & Meijer, M. M. (2010). Emotional intelligence and the identity negotiation of a racial minority Group in a Majority School Context. *Journal of Psychology in Africa, 20*(1), 69–78. https://doi.org/10.1080/14330237.2010.10820344
Millsap, R. E. (2011). Statistical approaches to measurement invariance. *Routledge*. https://doi.org/10.4324/9780203821961
Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia, 22*(1), 67–72. https://doi.org/10.4103/aca.ACA_157_18
Moradian, S. T., Movahedi, M., Rad, M. G., & Saeid, Y. (2022). Emotional intelligence of nurses caring for COVID-19 patients: A cross-sectional study. *Archives of Psychiatric Nursing, 36*(3), 24–27. https://doi.org/10.1016/j.apnu.2021.10.011
Musek, J. (2007). A general factor of personality: Evidence for the big one in the five-factor model. *Journal of Research in Personality, 41*(6), 1213–1233. https://doi.org/10.1016/j.jrp.2007.02.003
Ng, W. (2015). Boosting well-being with positive psychology interventions: Moderating role of personality and other factors. *Journal of Contemporary Psychotherapy, 45*(2), 79–87. https://doi.org/10.1007/s10879-014-9291-y
Othman, C. N., Yusof, M. S. B., Din, A. M., & Zakaria, L. A. (2016). Emotional intelligence and personality traits in relation to psychological health among pharmacy students in Malaysia. *Procedia - Social and Behavioral Sciences, 222*, 253–262. https://doi.org/10.1016/j.sbspro.2016.05.154
Pacheco, N. E., Rey, L., & Sánchez-álvarez, N. (2019). Validation of the Spanish version of the Wong Law emotional intelligence scale (WLEIS-S). *Psicothema, 31*(1), 94–100. https://doi.org/10.7334/psicothema2018.147
Park, H., & Yu, S. (2021). Validity and reliability of the Korean version of the Wong and Law emotional intelligence scale for nurses. SAGE Open, 0(0), 1–8. doi:https://doi.org/10.1177/21582440211023202.
Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality, 15*(6), 425–448. https://doi.org/10.1002/per.416
Petrides, K. V., Vernon, P. A., Schermer, J. A., Ligthart, L., Boomsma, D. I., & Veselka, L. (2010). Relationships between trait emotional intelligence and the big five in the Netherlands. *Personality and Individual Differences, 48*(8), 906–910. https://doi.org/10.1016/j.paid.2010.02.019
Pradhan, R. K., Jena, L. K., & Bhattacharya, P. (2016). Impact of psychological capital on organizational citizenship behavior: Moderating role of emotional intelligence. *Cogent Business and Management, 3*(1). https://doi.org/10.1080/23311975.2016.1194174
Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review, 41*(1), 71–90. https://doi.org/10.1016/j.dr.2016.06.004
Rabenu, E., & Yaniv, E. (2017). Psychological resources and strategies to cope with stress at work. *International Journal of Psychological Research, 10*(2), 8–15. https://doi.org/10.21500/20112084.2698
Rabenu, E., Yaniv, E., & Elizur, D. (2016). The relationship between psychological capital, coping with stress, well-being, and performance. *Current Psychology, 13*(3), 1–13. https://doi.org/10.1007/s12144-016-9477-4
Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the big five inventory in English and German. *Journal of Research in Personality, 41*(1), 203–212. https://doi.org/10.1016/j.jrp.2006.02.001
Robinson, E., Hull, L., & Petrides, K. V. (2020). Big five model and trait emotional intelligence in camouflaging behaviours in autism. *Personality and Individual Differences, 152*(August 2019), Article 109565. https://doi.org/10.1016/j.paid.2019.109565
Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The big five personality factors and personal values. *Personality and Social Psychology Bulletin, 28*(6), 789–801. https://doi.org/10.1177/0146167202289008
Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality, 9*(3), 185–211. https://doi.org/10.2190/DUGG-P24E-52WK-6CDG
Sánchez-Álvarez, N., Extremera, N., & Fernández-Berrocal, P. (2016). The relation between emotional intelligence and subjective well-being: A meta-analytic investigation. *Journal of Positive Psychology, 11*(3), 276–285. https://doi.org/10.1080/17439760.2015.1058968
Sanchez-Ruiz, M. J., Tadros, N., Khalaf, T., Ego, V., Eisenbeck, N., Carreno, D. F., & Nassar, E. (2021). Trait emotional intelligence and wellbeing during the pandemic: The mediating role of meaning-centered coping. *Frontiers in Psychology, 12*(May). https://doi.org/10.3389/fpsyg.2021.648401
Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology. *An introduction. The American Psychologist, 55*(1), 5–14. https://doi.org/10.1037/0003-066X.55.1.5
Seligman.. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press.
Siegling, A. B., Furnham, A., & Petrides, K. V. (2015). Trait emotional intelligence and personality: Gender-invariant linkages across different measures of the big five. *Journal of Psychoeducational Assessment, 33*(1), 57–67. https://doi.org/10.1177/0734282914550385
Soto, C. J. (2018). Big five personality traits. In M. H. Bornstein, M. E. Arterberry, K. L. Fingerman, & J. E. Lansford (Eds.), *The SAGE encyclopedia of lifespan human development* (pp. 240–241).
Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2011). Age differences in personality traits from 10 to 65: Big five domains and facets in a large cross-sectional sample. *Journal of Personality and Social Psychology, 100*(2), 330–348. https://doi.org/10.1037/a0021717
Szcześniak, M., Rodzeń, W., & Malinowska, A. (2020). Big five personality traits and gratitude: The role of emotional intelligence. *Psychology Research and Behavior Management, 13*(1), 977–988. https://doi.org/10.2147/PRBM.S268643
Traymbak, S., Sharma, A., & Dutta, M. (2022). Reliability and construct validity assessment of Wong and Law emotional intelligence scale and satisfaction with life scale in the Indian hospitality industry. *Annals of Neurosciences, 29*(2–3), 121–128. https://doi.org/10.1177/09727531221100249
Udin, U., & Yuniawan, A. (2020). Psychological capital, personality traits of big-five, organizational citizenship behavior, and task performance: Testing their relationships. *Journal of Asian Finance, Economics and Business, 7*(9), 781–790. https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.781

Van der Zee, K., Thijs, M., & Schakel, L. (2002). The relationship of emotional intelligence with academic intelligence and the big five. *European Journal of Personality, 16*(2), 103–125. https://doi.org/10.1002/per.434

Van Zyl, C. J. J., & De Bruin, K. (2012). The relationship between mixed model emotional intelligence and personality. *South Africa Journal of Psychology, 42*(4), 532–542. https://doi.org/10.1177/008124631204200407

Vernon, P. A., Villani, V. C., Schermer, J. A., & Petrides, K. V. (2008). Phenotypic and genetic associations between the big five and trait emotional intelligence. *Twin Research and Human Genetics, 11*(5), 524–530. https://doi.org/10.1375/twin.11.5.524

Wang, B., Jia, L., & Wang, Y. (2024). The serial mediation model of sense of community and subjective well-being among Chinese older adults: The role of prosocial behavior and meaning in life. *Current Psychology, 43*(19), 17310–17319. https://doi.org/10.1007/s12144-024-05708-z

Wong, C., Wong, P., & Law, K. S. (2007). Evidence of the practical utility of Wong ' s emotional intelligence scale in Hong Kong and mainland China. *Asia Pacific J Ournal Management, 24*(1), 43–60. https://doi.org/10.1007/s10490-006-9024-1

Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly, 13*(3), 243–274. https://doi.org/10.1016/S1048-9843(02)00099-1

Yildirim, K. (2014). Testing the main determinants of teachers ' professional well-being by using a mixed method. *Teacher Development: An International Journal of Teachers' Professional Development, 19*(1), 59–78. https://doi.org/10.1080/13664530.2014.970663

Zeidner, M., Matthews, G., & Roberts, R. D. (2012). The emotional intelligence, health, and well-being Nexus: What have we learned and what have we missed? *Applied Psychology. Health and Well-Being, 4*(1), 1–30. https://doi.org/10.1111/j.1758-0854.2011.01062.x

Zewude, G., & Hercz, M. (2024). Does work task motivation mediate the relationship between psychological capital and teacher well-being? *Psihologija, 57*(2), 129–153. https://doi.org/10.2298/psi220314020z

Zewude, G. T., Beyene, S. D., Taye, B., Sadouki, F., & Hercz, M. (2023). COVID-19 stress and teachers well-being: The mediating role of sense of coherence and resilience. *European Journal of Investigation in Health, Psychology and Education, 13*(1), 1–22. https://doi.org/10.3390/ejihpe13010001

Zewude, G. T., & Hercz, M. (2022a). Psychometric properties and measurement invariance of the PERMA profiler in an Ethiopian higher education setting. *Pedagogika, 146*(2), 209–236. https://doi.org/10.15823/p.2022.146.11

Zewude, G. T., & Hercz, M. (2022b). The Teacher Well-Being Scale (TWBS): Construct validity, model comparisons and measurement invariance in an Ethiopian setting. doi:https://doi.org/10.1080/14330237.2022.2027623.

Zewude, G. T., Oo, T. Z., Gabriella, J., & Józsa, K. (2024). The Relationship among Internet Addiction, Moral Potency, Mindfulness, and Psychological Capital. *European Journal of Investigation in Health, Psychology and Education, 14*(6), 1735–1756. https://doi.org/10.3390/ejihpe14060115

Zhao, X., & You, X. (2021). The impact of psychological capital on vocational well-being: The mediation effect of emotional labor and its invariance across ethnicities. *Current Psychology, 40*(1), 102–112. https://doi.org/10.1007/s12144-019-00287-w