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The Association Between School Climate and Teacher Positive Health: The Mediating Role of Proactive Personality

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ABSTRACT

Objective: Positive health has emerged as a significant construct in occupational settings, yet its multidimensional nature and underlying mechanisms remain underexplored in teacher populations. This study pursued three objectives: (a) to validate the factor structure of teacher positive health, (b) to examine the relationship between school climate and positive health, and (c) to test the mediating role of proactive personality in this relationship.

Method: A quantitative, descriptive-correlational design with a cross-sectional survey was employed. The statistical population comprised all female high school teachers in Isfahan, Iran. A sample of 130 female teachers was selected through stratified cluster random sampling. Participants completed questionnaires assessing sociodemographic information, employment characteristics, school climate perception, proactive personality, and positive health. Data were analyzed using structural equation modeling (SEM) via SPSS 26 and AMOS 24, with bootstrapping procedures (5,000 resamples).

Results: The results confirmed a three-factor model of teacher positive health, comprising teacher engagement, thriving at work, and effective communication. The direct association between school climate and positive health remained significant after accounting for proactive personality ($\beta = 0.40$, $p < 0.05$). Proactive personality partially accounted for this association (indirect effect = 0.21, 95% CI [0.03, 0.47]), with a medium effect size ($\kappa^2 = 0.18$) and accounting for 34.4% of the total association.

Conclusions: These findings suggest that school climate functions as a key contextual resource and proactive personality as a key individual resource in promoting teacher positive health.

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Introduction

Educational systems worldwide bear the dual responsibility of transmitting knowledge and nurturing healthy, flourishing human capital. Teachers, as the most influential agents in classrooms, shoulder the immense burden of achieving educational goals while simultaneously managing the emotional, cognitive, and social demands of their profession. However, a narrow focus on professional competencies—while neglecting the holistic health of teachers—not only threatens instructional quality but also sets off a cascade of negative outcomes for students and the entire school ecosystem (Beames et al., 2023). The demanding nature of teaching, characterized by high emotional labor, administrative overload, and multifaceted role expectations, renders teachers increasingly vulnerable to chronic stress, burnout, and diminished well-being (Karakus et al., 2024; Oats, 2024; Garvis, 2020; Tsang et al., 2025). Empirical evidence substantiates this concern: Karakus et al. (2024) demonstrated that teachers' emotional labor strategies significantly predict their stress, anxiety, and burnout levels. Furthermore, role overload has been identified as a strong positive predictor of burnout, particularly affecting career satisfaction and teacher-student relationships (Garvis, 2020). The cumulative effect of these multifaceted demands has contributed to alarming attrition rates, with 44% of teachers indicating a likelihood of leaving the profession within two years (Oats, 2024).

This concern is equally salient in the Iranian educational context. Recent studies have documented significant burnout prevalence among Iranian teachers (Soleymanpoor et al., 2024; Mohammadi & Khorsandi Yamchi, 2024). For instance, Soleymanpoor et al. (2024) found that health safety management significantly reduces teacher burnout through the mediating role of resilience, while Mohammadi and Khorsandi Yamchi (2024) reported that although emotional exhaustion and depersonalization were relatively low among elementary teachers in Tehran province, feelings of reduced personal accomplishment remained notably high. These statistics collectively underscore the urgent need for comprehensive investigations into the protective factors that can mitigate the adverse effects of teaching-related stressors on teachers' psychological and professional functioning.

In response to this growing concern, the World Health Organization has offered a positive definition for health, emphasizing that health is not merely the absence of disease but a state of complete physical, mental, and social well-being. Following this, contemporary scholarship has shifted toward the paradigm of Positive Health, which extends far beyond the 19th-century pathophysiology model and instead focuses on human flourishing (Gifford, 2011; Levin, 2021; Ahmed, 2024). According to Seligman (2008) and Keyes (2009), positive health comprises three interrelated dimensions: subjective, biological, and functional. In the school context, the functional and subjective aspects are particularly salient, manifesting as teacher engagement, thriving at work, and effective communication (Seligman, 2008; Schaufeli & Bakker, 2010; Wang, 2023). Teachers who experience positive health not only perform more effectively in their instructional roles but also cultivate an energetic, interactive, and psychologically safe classroom climate that fosters students' socio-emotional growth and academic success (Nalipay et al., 2024). Conversely, teachers who lack positive health are more likely to experience emotional exhaustion, depersonalization, and reduced personal accomplishment—the three core dimensions of burnout—which in turn impair their instructional quality and weaken their relationships with students and colleagues (Karakus et al., 2024; Mohammadi & Khorsandi Yamchi, 2024).

Despite the theoretical appeal of positive health, the field currently suffers from a critical integrative gap. While positive health has been theorized as a multidimensional construct (Seligman, 2008; Keyes, 2009), empirical research on teachers has predominantly examined

isolated dimensions—such as burnout, job satisfaction, or stress—without validating the tripartite structure as a unified model (Beames et al., 2023; Zhou et al., 2024). Consequently, the field lacks a psychometrically validated, contextually adapted measure of teacher positive health that can serve as a foundation for both theory development and intervention design.

A second, theoretically critical gap concerns the psychological mechanism linking school climate to positive health. While school climate has been established as a significant predictor of various teacher outcomes (Monsillion et al., 2023; Podiya et al., 2025; Zhou et al., 2024), the field remains largely silent on how this contextual factor translates into intrapersonal health outcomes. Most existing research has relied on direct-effect models, overlooking the indirect pathways that explain this translation (Grayson & Alvarez, 2008; Zhou et al., 2023; Ren et al., 2025). Proactive personality—defined as the inherent tendency to take initiative and influence one's environment (Thomas et al., 2010; Furnham et al., 2025)—is theoretically positioned to serve as this missing link. However, no empirical study has tested proactive personality as a mediator in the school climate → positive health pathway.

A third gap is contextual and cultural. The majority of existing research on teacher well-being has been conducted in Western educational contexts (Zhou et al., 2024), where individualistic values, decentralized school governance, and distinct occupational dynamics prevail. Iran, by contrast, presents a socio-cultural context characterized by collectivist values, centralized educational policies, a segregated educational system, and gender-specific occupational dynamics—factors that may fundamentally shape how school climate is perceived and how proactive personality operates (Zabardast et al., 2017; Ghanizadeh et al., 2023). While Iranian studies have examined school climate primarily in relation to student outcomes (Ghanizadeh et al., 2023), there is a notable gap in research explicitly investigating the relationship between school climate and teacher positive health. Moreover, no study has examined the integrated model of school climate, proactive personality, and positive health among female teachers in Iran, whose professional experiences are shaped by unique socio-cultural expectations and structural constraints (Hojabrian et al., 2018).

In sum, the present study addresses a triple integrative gap—constructive, mechanistic, and contextual—by pursuing three interrelated objectives: (1) to conduct a confirmatory factor analysis of the three-factor positive health model (thriving, engagement, and effective communication) among Iranian female teachers; (2) to assess the direct relationship between perceived school climate and positive health; and (3) to examine the mediating role of proactive personality in this relationship. A fourth, applied objective is to provide empirical evidence that can inform school-based interventions for promoting teacher well-being. By doing so, this research not only extends the theoretical boundaries of positive health models in educational psychology but also provides actionable insights for school administrators and policymakers, enabling them to design targeted interventions that simultaneously enhance school climate and foster proactive personality traits, thereby promoting sustainable health and well-being throughout the educational system.

Theoretical Base of Positive Health

The theoretical foundation of positive health and its constituent factors in the work environment draws on several established frameworks: Positive Organizational Behavior (POB), Positive Organizational Scholarship (POS), the Demand-Resources Model (DRM), Super's Career Choice and Development Theory (SCDT), Self-Determination Theory (SDT), and the Effort-

Reward Imbalance Model (ERI). Positive Organizational Behavior (POB) emerged as a movement within organizational psychology that focuses on the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace (Luthans, 2002; Youssef & Luthans, 2007). POB is grounded in the belief that employee well-being and performance are not merely the absence of negative states (e.g., burnout, stress) but the presence of positive psychological resources such as hope, optimism, resilience, and self-efficacy—collectively known as psychological capital (PsyCap). Recent meta-analytic evidence has demonstrated that interventions designed to develop PsyCap yield significant improvements in employee well-being and performance, with effects sustained over time (Loghman et al., 2025). Health and well-being are thus among the key constructs within POB, as they represent the positive outcomes that emerge when employees' psychological capacities are nurtured and leveraged (Kesebir & Diener, 2008; Hussain et al., 2024; Erden, 2025).

Positive Organizational Scholarship (POS), by contrast, is a broader movement that emphasizes the humanistic positive potential, goodness, and abilities of individuals and organizations (Cameron et al., 2003). POS focuses on the dynamics that lead to exceptional individual and organizational performance, including virtues such as compassion, forgiveness, and integrity. It produces outcomes such as vitality, high-quality communication, psychological capabilities, and movement toward health (Fineman, 2006; van Zyl, 2024; Saleh, 2025). While POB focuses primarily on individual psychological capacities, POS encompasses a wider range of positive phenomena at multiple levels of analysis (individual, group, and organizational), including positive deviance, virtuousness, and flourishing (Cameron & Caza, 2004). Together, POB and POS provide the theoretical lens for understanding how school climate—as an organizational resource—can foster teacher positive health, which comprises thriving, engagement, and effective communication.

According to SCDT, career choice and development result from the evolution and development of an individual's self-concept (Super, 1980; Brown & Lent, 2020). Individuals seek to develop and advance their careers after selecting them; therefore, positive health in the work environment can be seen as the outcome of appropriate career choices and ongoing career development. Career development results from learning and practical experiences and contributes to positive health, which in turn facilitates further career growth (Hernandez et al., 2014; Müller et al., 2022). SDT proposes that exerting self-control is associated with lower psychological energy, which in turn is associated with automatic self-regulation (Deci & Ryan, 2000; Ryan & Deci, 2000; Chiu, 2022). This highlights the importance of psychological energy as a limited resource. Engagement, thriving, and vitality are closely linked to the energy available to the self (Ryan & Deci, 2008) and serve as indicators of positive health (Ryan et al., 2022; Ryan & Deci, 2024). Finally, the ERI model (Siegrist, 1996, 2012, 2017) suggests that stress arises when there is an imbalance between personal effort and received reward. This model posits a reciprocal relationship between effort and reward. From a positive health perspective, when effort and reward are balanced, individuals may experience greater psychological energy, which may be associated with lower stress and tension, ultimately contributing to better mental health (Reinhoudt, 2004; Siegrist & Li, 2022; Christiansen et al., 2024).

Empirical Background

While the theoretical foundations of positive health are well established, a growing body of empirical research has examined its antecedents and correlates in educational settings. This section synthesizes recent domestic and international studies, organized around three thematic clusters: (a) school climate and teacher well-being, (b) proactive personality and occupational outcomes, and (c) Iranian evidence on teacher health and burnout.

School Climate and Teacher Well-being. A substantial body of recent research has established school climate as a robust predictor of teacher well-being. Zhou et al. (2024), in a meta-analysis of 45 studies, found a moderate-to-strong positive association between school climate and teacher well-being ($r = 0.42$), with collegial support and decision-making participation emerging as the strongest predictors. Similarly, Ren et al. (2025) demonstrated that school climate was negatively associated with psychological distress among Chinese school teachers, with resilience partially mediating this relationship. Monsillion et al. (2023) reported that a positive school climate was associated with reduced anxiety and depressive symptoms in school settings, while Podiya et al. (2025) found that school climate significantly predicted emotional health and academic achievement among school-going adolescents. In the Iranian context, Ghanizadeh et al. (2023) showed that school climate, organizational support, and health literacy jointly predicted academic buoyancy in health-promoting schools. Despite this cumulative evidence, no study has yet tested proactive personality as a mediator between school climate and positive health.

Proactive Personality and Occupational Outcomes. Research on proactive personality has consistently linked it to favorable occupational outcomes. Aabbasian & Hassani (2025), in an Iranian sample of teachers, found that proactive personality was associated with innovative work behavior and creativity through the mediating roles of intrinsic motivation and thriving at work. Li et al. (2017) demonstrated that proactive personality predicted job satisfaction among Chinese teachers, mediated by self-efficacy and work engagement. More recently, Fu et al. (2024) reported that proactive personality enhanced online learning engagement through positive emotions and learning motivation, while Li et al. (2024) showed that proactive personality predicted career adaptability via a moderated mediation model. Thomas et al. (2010), in an earlier but foundational meta-analysis, established that proactive personality is associated with a range of emergent proactive constructs including engagement, career success, and innovation. Despite this cumulative evidence, no study has yet tested proactive personality as a mediator between school climate and positive health.

Iranian Evidence on Teacher Health and Burnout. Iranian scholarship has predominantly adopted a deficit-oriented perspective. Soleymanpoor et al. (2024) found that health safety management was associated with lower teacher burnout through the mediating role of resilience. Mohammadi and Khorsandi Yamchi (2024) reported that although emotional exhaustion and depersonalization were relatively low among elementary teachers in Tehran province, reduced personal accomplishment remained notably high. Hojabrian et al. (2018) examined the flourishing of Tehran teachers and found that demographic variables were associated with their positive functioning. Zabardast et al. (2017) investigated the relationship between transformational leadership and organizational climate in Iranian girls' elementary schools. These studies provide valuable contextual insights but remain largely deficit-focused, rarely validating positive health as a multidimensional construct.

Critical Review of the Literature

Despite the cumulative evidence reviewed above, several critical limitations warrant attention. First, at the methodological level, most studies have employed cross-sectional designs (e.g., Zhou et al., 2024; Karakus et al., 2024; Ren et al., 2025), which precludes causal inference and limits understanding of temporal dynamics. Longitudinal designs are notably scarce, particularly in non-Western contexts. Second, at the conceptual level, the construct of positive health has been inconsistently operationalized. Most studies examine isolated dimensions—such as burnout, stress, job satisfaction, or engagement—rather than validating a unified multidimensional model (Beames et al., 2023; Zhou et al., 2024). The tripartite structure of positive health (thriving, engagement, and effective communication) has not been empirically validated in teacher populations, leaving the field without a psychometrically validated measure. Third, at the mechanistic level, most existing research has relied on direct-effect models and overlooked the indirect pathways through which contextual factors translate into intrapersonal health outcomes (Grayson & Alvarez, 2008; Zhou et al., 2023; Ren et al., 2025). Proactive personality has been proposed as a plausible mediator (Li et al., 2017; Aabbasian & Hassani, 2025), yet this mediation has not been empirically tested in the school climate → positive health pathway. Fourth, at the contextual level, the majority of studies have been conducted in Western educational contexts (Zhou et al., 2024), where individualistic values and decentralized governance prevail. Iranian research, by contrast, has focused primarily on student outcomes (Ghanizadeh et al., 2023) or on deficit-oriented teacher outcomes such as burnout (Soleymanpoor et al., 2024; Mohammadi & Khorsandi Yamchi, 2024). No study has examined the integrated model of school climate, proactive personality, and positive health among female teachers. Fifth, at the sampling level, most studies have relied on convenience or single-source samples, raising concerns about generalizability and common method bias. Gender-specific occupational dynamics in Iran's segregated educational system further highlight the need for targeted research on female teachers.

Positioning of the Present Study

Taken together, these limitations reveal a triple integrative gap—constructive, mechanistic, and contextual—that the present study aims to address. By validating the three-factor structure of positive health, testing the direct effect of school climate, and examining the mediating role of proactive personality among Iranian female teachers, this study makes three key contributions. First, it provides a psychometrically validated measure of positive health that is culturally adapted for the Iranian teacher population, thereby filling the constructive gap. Second, it identifies proactive personality as a mediating mechanism, clarifying how school climate translates into positive health and addressing the mechanistic gap. Third, it extends the generalizability of positive health models to a non-Western, collectivist context, thereby addressing the contextual gap. In doing so, this study contributes to both the theoretical advancement of positive health models in educational psychology and the practical application of these models in Iranian school settings.

Definition of Factors in Positive Health

In the present study, the first hypothesis examines the factor structure of positive health, which comprises thriving at work, teacher engagement, and effective communication. Positive health includes thriving at work, teacher engagement, and effective communication. Definitions of these factors are summarized in Table 1.

Table 1. Terminology of the Factors of Positive Health

Factors	Definition	Reference

Thriving at work	A psychological state characterized by a sense of vitality and a perception of continuous learning and improvement.	Porath et al. (2012)
Teacher engagement	A positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption, specifically adapted to teachers' cognitive, emotional, and social engagement with their professional tasks, students, and colleagues.	Klassen et al. (2013)
Effective communication	The quality of relationships with colleagues, characterized by mutual help, friendliness, and social support.	Skaalvik and Skaalvik (2011)

Note. All definitions are adapted from the original sources.

These three factors collectively represent the core components of positive health in the educational context. Thriving at work reflects the vitality and continuous learning that teachers experience when they are psychologically engaged with their professional environment. Teacher engagement captures the cognitive, emotional, and social energy that teachers invest in their instructional and collegial activities. Effective communication embodies the relational quality and social support that teachers receive from and provide to their colleagues, which is essential for maintaining a cohesive and supportive school culture. Together, these dimensions provide a comprehensive operationalization of positive health that is both theoretically grounded and practically relevant for assessing teacher well-being in school settings.

Positive Health and School Climate: Associations

A growing body of research has examined school climate as a key predictor of various outcomes in educational settings (Monsillion et al., 2023; Podiya et al., 2025). School climate is a central construct in the school environment and is regarded as a strategic factor in school development (Thapa et al., 2013; Zhou et al., 2024). It is related to safety and support and encompasses the learning environment (Martinsone et al., 2023; Shala et al., 2024). School climate reflects the orderly environment, culture, staff cooperation, and rules (Loukas & Murphy, 2007; Spring & Ochoa, 2024) and shapes individuals' experiences at school (Collie et al., 2012; Zhang & He, 2024). These experiences reflect the lived reality of school life and include norms, purposes, values, interpersonal communication, teaching, training, principal policies, and school structure (National School Climate Council, 2007; Delgado-Galindo et al., 2025). Some researchers view school climate as subjective in nature, whereas others regard it as the objective facade of school life (Cohen et al., 2009; Grazia & Molinari, 2021).

The importance of school climate has been demonstrated in relation to occupational engagement (Otrebski, 2022; Nwoko, 2024), thriving at work (Wallace et al., 2016; Fernandez Conde, 2024), and teachers' effective communication (Diş & Demirkasımoğlu, 2025; Kayhan et al., 2025). Accordingly, school climate appears to be a significant predictor of the core components of positive health. The second hypothesis of the present study therefore examines the relationship between school climate and positive health.

Proactive Personality as Mediator Variable

Mediating variables have been examined in research on the relationship between school climate and health-related outcomes (Grayson & Alvarez, 2008; Zhou et al., 2023; Ren et al., 2025).

Although proactive personality has received considerable attention in school studies (Thomas et al., 2010; Jörg et al., 2024; Dai & Wang, 2023), it has not been examined as a mediating variable in the school climate → positive health pathway. Proactive personality refers to an individual's innate tendency to take action and influence the environment (Thomas et al., 2010; Furnham et al., 2025). Individuals with high proactive personality tend to have strong experiences of innovative self-efficacy at work (Bergeron et al., 2014; Nwanzu, 2024). Proactive personality was associated with high task engagement (Hsieh & Huang, 2014; Fu et al., 2024). Moreover, proactive individuals are characterized by self-orientation, change-orientation, and future focus (Parker & Collins, 2010; Jiang et al., 2023). They tend to have higher occupational experiences (Borgogni et al., 2013; Chunyan & Ying, 2024; Obeidat & Al-Rabee, 2024) and actively seek information and opportunities (Li et al., 2017; Li et al., 2024; Aabbasian & Hassani, 2025). Given the importance of proactive personality in occupational success (Fuller & Marler, 2009; Ruan et al., 2025), the third hypothesis of the present study examines the mediating role of proactive personality in the relationship between school climate and positive health.

Despite growing interest in positive health and school climate, this issue has not yet been comprehensively investigated. The present study contributes to the literature by examining positive health both theoretically and statistically, and by exploring the role of proactive personality as a mediator in the relationship between school climate and teacher positive health.

Hypotheses

Building on the identified gaps and the theoretical framework, the present study tests the following hypotheses:

Hypothesis 1. The three-factor model of positive health (thriving, engagement, and effective communication) will demonstrate a significantly better fit to the data than a one-factor model among Iranian female teachers.

Hypothesis 2. Perceived school climate has a significant positive direct association with teacher positive health.

Hypothesis 3. Proactive personality accounts for part of the association between school climate and positive health.

Target Audience and Rationale for Design

The target audience for this study includes educational psychologists, school administrators, teacher educators, and policymakers in Iran and other non-Western, collectivist contexts. The rationale for the design is theory-building and explanatory: the study seeks to validate a multidimensional model of positive health (constructive gap), test a mediating mechanism (mechanistic gap), and extend the generalizability of positive health models to a non-Western context (contextual gap). A quantitative, descriptive-correlational design with a cross-sectional survey was employed to address these objectives. This approach is appropriate for testing the hypothesized relationships among latent constructs and for examining mediation via structural equation modeling (SEM), which allows for simultaneous estimation of direct and indirect effects while accounting for measurement error. The approach to inquiry is postpositivist,

aiming to test theory-driven hypotheses through empirical observation and statistical inference, while acknowledging the contextually bounded nature of the findings.

Method

This study is applied in purpose, as it seeks to provide practical insights for promoting teachers' positive health within educational settings. A quantitative, descriptive-correlational design with a cross-sectional survey approach was employed to examine the hypothesized direct and indirect relationships among the study variables without experimental manipulation. Given the cross-sectional design, all reported relationships are interpreted as associations, not causal effects. The approach to inquiry is postpositivist, aiming to test theory-driven hypotheses through empirical observation and statistical inference, while acknowledging the contextually bounded nature of the findings.

Sampling Procedures

The statistical population comprised all female high school teachers in Isfahan, Iran. A stratified cluster random sampling method was used to select participants. First, three regions were randomly selected from the six regions under the Isfahan Department of Education. Within each selected region, schools were randomly chosen in proportion to the number of schools in that region. Finally, teachers from each school were randomly selected to participate.

All 130 recruited teachers completed the questionnaires and were included in the final analysis; thus, the achieved sample size was equal to the intended sample size, and there was no attrition. Participation was voluntary and based on self-selection into the study after being approached; no incentives or payments were made to participants. Data were collected on-site at the participating schools in Isfahan, Iran.

Ethical Considerations

The study was conducted in accordance with the ethical standards of the Declaration of Helsinki and was approved by the institutional review board of the relevant university. Informed consent was obtained from all participants prior to data collection. To ensure the confidentiality of responses, completed questionnaires were placed by teachers in sealed envelopes and deposited into a locked collection box located at the school's administrative office. A member of the research team was present on-site to answer any questions regarding the questionnaires. No personal identifying information, including names, was collected to maintain participant anonymity. No safety monitoring procedures were required, as the study involved no more than minimal risk to participants.

Sample Size, Power, and Precision

The intended and achieved sample size was 130 female high school teachers. Regarding sample size adequacy for structural equation modeling (SEM), Hair et al. (2010) suggest that a minimum sample size of 100 is appropriate for models containing five or fewer constructs, each with more than three observed variables and high item communalities (0.6 or higher). Kline

(2016) considers sample sizes between 100 and 200 as "medium" and acceptable for SEM analysis. Given that the present model includes five latent constructs and the sample size of 130 falls within this acceptable range, the sample size was deemed adequate for the SEM analysis. No a priori power analysis was conducted; however, the adequacy of the sample size was evaluated post hoc based on the aforementioned SEM guidelines. No interim analyses or stopping rules were employed, as the study was cross-sectional and data collection was completed in a single wave.

Materials and Instruments

Five standardized instruments were administered. All instruments were paper-and-pencil self-report questionnaires, and responses were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), unless otherwise specified.

Teacher Perception of School Climate Questionnaire (Revised SLEQ). This instrument was developed by Johnson, Stevens, and Zvoch (2007) to assess teachers' perceptions of school climate. The revised version consists of 21 items distributed across five subscales: collaboration, decision making, instructional innovation, student relations, and school resources. Scores range from 21 to 105, with higher scores indicating more positive perceptions of school climate. The original study reported acceptable internal consistency (Cronbach's alpha ranging from 0.77 to 0.89 across subscales). The Persian version was validated by Massah (2016) on a sample of Iranian teachers, with confirmatory factor analysis confirming the five-factor structure and acceptable fit indices (RMSEA = 0.06, CFI = 0.92). In the present study, the Cronbach's alpha coefficient was 0.75, indicating acceptable reliability.

Proactive Personality Scale (Abbreviated 6-item PPS). This instrument was developed by Bateman and Crant (1993), and the abbreviated 6-item version was validated across cultures by Claes et al. (2005). The scale measures individuals' tendency to take initiative and influence their environment. Scores range from 6 to 30, with higher scores indicating higher proactive personality. The original study reported good internal consistency (Cronbach's alpha = 0.83–0.87 across samples in Belgium, Finland, and Spain). The Persian version was validated by Massah (2016) on Iranian teachers, with confirmatory factor analysis supporting its unidimensionality (CFI = 0.94, RMSEA = 0.05). In the present study, the Cronbach's alpha coefficient was 0.70, indicating acceptable reliability.

Thriving at Work Questionnaire. This instrument was developed by Porath et al. (2012) to measure the two dimensions of thriving at work: learning and vitality. The instrument consists of 10 items, with scores ranging from 10 to 50, where higher scores reflect greater thriving. The original study reported strong reliability (Cronbach's alpha = 0.85 for learning and 0.82 for vitality) and validity evidence. The Persian version was validated by Massah (2016) on Iranian teachers, with confirmatory factor analysis confirming the two-factor structure (CFI = 0.92,

RMSEA = 0.06). In the present study, the Cronbach's alpha coefficient was 0.78, indicating acceptable reliability.

Effective Communication at School Questionnaire. This instrument was developed by Skaalvik and Skaalvik (2011) to assess teachers' relationships with colleagues. It consists of 3 items measuring the quality of communication and support among colleagues. Scores range from 3 to 15, with higher scores representing more effective communication. The original study reported Cronbach's alpha = 0.86. The Persian version was validated by Massah (2016) on Iranian teachers, with acceptable fit indices (CFI = 0.93, RMSEA = 0.07). In the present study, the Cronbach's alpha coefficient was 0.77, indicating acceptable reliability.

Engaged Teacher Engagement Scale (ETS). This instrument was developed by Klassen et al. (2013) to measure teacher engagement across four dimensions: cognitive engagement, emotional engagement, social engagement with students, and social engagement with colleagues. The scale consists of 16 items, with scores ranging from 16 to 80, where higher scores indicate higher engagement. The original study reported good reliability (Cronbach's alpha = 0.87 for the total scale). The Persian version was validated by Massah (2016) on Iranian teachers, with confirmatory factor analysis supporting the four-factor structure (CFI = 0.90, RMSEA = 0.08). In the present study, the Cronbach's alpha coefficient was 0.93, indicating excellent reliability.

Outcome Measures

The primary outcome measure was teacher positive health, operationalized as a three-factor construct comprising thriving at work, teacher engagement, and effective communication. Thriving at work was measured by the Thriving at Work Questionnaire (Porath et al., 2012); teacher engagement was measured by the Engaged Teacher Engagement Scale (Klassen et al., 2013); and effective communication was measured by the Effective Communication at School Questionnaire (Skaalvik & Skaalvik, 2011). The secondary outcome was the mediating variable, proactive personality, measured by the Abbreviated 6-item Proactive Personality Scale (Bateman & Crant, 1993; Claes et al., 2005). The predictor variable, perceived school climate, was measured by the Teacher Perception of School Climate Questionnaire (Revised SLEQ; Johnson et al., 2007).

Data-Gathering Procedures

All data were collected via paper-and-pencil self-report questionnaires administered on-site at the participating schools. The data were primary and collected in a single wave. The procedure followed these steps:

1. Three regions were randomly selected from the six regions under the Isfahan Department of Education.
2. Within each selected region, schools were randomly chosen in proportion to the number of schools in that region.

3. Teachers from each school were randomly selected and approached for participation.
4. Informed consent was obtained from all participants prior to data collection.
5. Participants completed the five questionnaires in a single session.
6. Completed questionnaires were placed by teachers in sealed envelopes and deposited into a locked collection box located at the school's administrative office.
7. A member of the research team was present on-site to answer any questions regarding the questionnaires.
8. No personal identifying information, including names, was collected to maintain participant anonymity.

Given that all data were collected via self-report questionnaires from a single source, the potential for common method bias was assessed using Harman's single-factor test (Podsakoff et al., 2003). An exploratory factor analysis was conducted on all measurement items, and the first factor accounted for 26.4% of the total variance, well below the 50% threshold. This suggests that common method bias is unlikely to be a serious threat to the validity of the findings.

Data Analysis

Data analysis was performed using SPSS-26 and AMOS-24. Descriptive statistics (means, standard deviations, and inter-correlations) were computed using SPSS. To test the proposed mediation model, structural equation modeling (SEM) with maximum likelihood estimation was employed using AMOS. The mediation effect of proactive personality was examined through bootstrapping with 5,000 resamples and 95% confidence intervals (Preacher & Hayes, 2008). Model fit was evaluated using the following fit indices and accepted thresholds: $\chi^2/df \leq 3$, RMSEA ≤ 0.08, SRMR ≤ 0.08, PCFI ≥ 0.5, and PNFI ≥ 0.5 (Hu & Bentler, 1998; Byrne, 2016; Xiong et al., 2025). Confirmatory factor analysis (CFA) was also conducted to validate the three-factor structure of positive health, comparing the hypothesized three-factor model with a one-factor alternative. A p-value < 0.05 was considered statistically significant.

To address the issue of model complexity relative to sample size, we also re-estimated the measurement model using item parceling following the recommendations of Little et al. (2002) and Matsunaga (2008). Three parcels were created per construct based on the factorial structure of each scale. This approach reduces the number of estimated parameters, improves the ratio of sample size to parameters, and enhances model fit in small samples. The parceled measurement model demonstrated acceptable fit and the structural results remained substantively unchanged. Details are reported in the Results section.

Results

Prior to testing the hypothesized structural relationships, descriptive statistics including means, standard deviations, and inter-correlations were computed for all main study variables. Table 2 presents these descriptive statistics along with the internal consistency reliabilities (Cronbach's

alpha) for each scale. All inter-correlations among the study variables were positive and statistically significant, ranging from 0.216 (between proactive personality and effective communication) to 0.482 (between proactive personality and thriving at work), providing preliminary support for the hypothesized relationships. The internal consistency coefficients for all scales ranged from 0.70 to 0.93, exceeding the acceptable threshold of 0.70 (Nunnally & Bernstein, 1994), indicating good to excellent reliability.

Table 2. Means (M), Standard Deviations (SD) and Inter-Correlations of the Study Variables (N = 130)

Variable	M	SD	(1)	(2)	(3)	(4)	(5)
1. School Climate	69.00	7.94	**[0.75]**				
2. Proactive Personality	20.45	3.00	0.245**	**[0.70]**			
3. Thriving at work	36.57	4.91	0.311**	0.482**	**[0.78]**		
4. Effective Communication	11.77	1.87	0.359**	0.216*	0.369**	**[0.77]**	
5.Teacher Engagement	62.84	9.20	0.386**	0.240**	0.463**	0.466**	**[0.93]**

Note. Scale reliabilities (Cronbach's alpha) are reported on the diagonal (in brackets).
** Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

Prior to testing the structural relationships among the latent variables, a series of confirmatory factor analyses (CFA) were conducted to evaluate the psychometric properties of all measurement instruments. All CFAs were performed using AMOS-24 with maximum likelihood estimation. Model fit was evaluated using the following indices and accepted thresholds: $\chi^2/df \leq 3$, RMSEA ≤ 0.08, CFI ≥ 0.90, TLI ≥ 0.90, and SRMR ≤ 0.08 (Hu & Bentler, 1998; Byrne, 2016; Kline, 2016).

Table 3 presents the fit indices for the CFA of each instrument. The measurement models for School Climate ($\chi^2/df = 1.135$, RMSEA = 0.032, CFI = 0.990, TLI = 0.990, SRMR = 0.039) and Thriving at Work ($\chi^2/df = 1.713$, RMSEA = 0.074, CFI = 0.903, TLI = 0.903, SRMR = 0.063) demonstrated acceptable to excellent fit, with all indices meeting the recommended thresholds. The CFA for Effective Communication resulted in a just-identified (saturated) model ($\chi^2 = 0$, df = 0) due to having only three indicators; for such models, fit indices are not interpretable because the model perfectly reproduces the observed covariance matrix (Kline, 2016; Byrne, 2016). Therefore, its construct validity was further evaluated within the overall measurement model (see Table 4), where all factor loadings were significant ($p < 0.001$), CR = 0.85, and AVE = 0.65, confirming adequate reliability and convergent validity.

The CFA for Proactive Personality ($\chi^2/df = 2.725$, RMSEA = 0.116, CFI = 0.828, TLI = 0.714, SRMR = 0.064) revealed that RMSEA, CFI, and TLI did not meet the acceptable thresholds. This suggests that the unidimensional structure of the scale may not adequately fit the data, possibly due to low factor loadings or cross-loadings among items (Hair et al., 2010). Model revision is recommended, including item deletion based on modification indices and factor loadings. Similarly, the CFA for Teacher Engagement ($\chi^2/df = 2.35$, RMSEA = 0.100, CFI = 0.909, TLI = 0.882, SRMR = 0.066) showed that while CFI and SRMR met acceptable criteria, RMSEA and TLI exceeded the recommended cutoffs. This indicates moderate fit, with room for improvement through the addition of covariances between error terms of conceptually similar items or removal of items with low factor loadings (Byrne, 2016; Kline, 2016).

Table 3. Fit Indices for Confirmatory Factor Analysis of Each Instrument

Instrument	χ^2	df	χ^2/df	RMSEA	CFI	TLI	SRMR
School Climate (5 factors)	5.673	5	1.135	0.032	0.990	0.990	0.039
Proactive Personality (1 factor)	24.528	9	2.725	0.116	0.828	0.714	0.064
Thriving at Work (2 factors)	56.528	33	1.713	0.074	0.903	0.903	0.063
Effective Communication (1 factor)	0.000	0	-	0.000	1.000	-	0.001
Teacher Engagement (4 factors)	214.329	93	2.35	0.100	0.909	0.882	0.066

Note. χ^2 = Chi-square; df = degrees of freedom; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = Standardized Root Mean Square Residual. The Effective Communication scale has only three indicators; therefore, its measurement model is just-identified (df = 0), and fit indices are not interpretable because the model perfectly reproduces the observed covariance matrix (Kline, 2016; Byrne, 2016). Its construct validity was evaluated within the overall measurement model instead (see Table 4).

Table 4 presents the standardized factor loadings, composite reliability (CR), and average variance extracted (AVE) for each construct. All standardized factor loadings exceeded the recommended threshold of 0.30, except for one item in Teacher Engagement (q14 = 0.27), which was slightly below the conventional cutoff. This item was retained for two reasons. First, the sample size of this study (N = 130) is relatively small, and according to Hair et al. (2010), factor loadings of 0.30 or higher are considered acceptable in smaller samples, as the statistical significance of loadings is sensitive to sample size. Second, removing this item would have compromised the content validity of the Teacher Engagement scale, which demonstrated excellent internal consistency (Cronbach's alpha = 0.93). All other factor loadings ranged from 0.30 to 0.80 and were statistically significant ($p < 0.001$), providing support for the convergent validity of the measurement model.

Table 4. Standardized Factor Loadings, Composite Reliability (CR), and Average Variance Extracted (AVE)

Construct	Number of Items	Factor Loadings Range	CR	AVE
School Climate	21	0.58–0.82	0.89	0.54
Proactive Personality	6	0.61–0.79	0.84	0.52
Thriving at Work	10	0.55–0.85	0.88	0.56
Effective Communication	3	0.72–0.84	0.85	0.65
Teacher Engagement	16	0.27–0.78	0.91	0.53

Note. CR = Composite Reliability; AVE = Average Variance Extracted. All standardized factor loadings were statistically significant at $p < 0.001$. CR values above 0.70 and AVE values above 0.50 indicate adequate convergent validity (Fornell & Larcker, 1981).

To assess discriminant validity, the heterotrait-monotrait ratio of correlations (HTMT) was employed. Recent methodological research has demonstrated that the Fornell-Larcker criterion is less sensitive in detecting discriminant validity issues, whereas the HTMT criterion performs substantially better in identifying such problems (Henseler et al., 2015; Voorhees et al., 2016). As shown in Table 5, all HTMT values were below the conservative threshold of 0.85, confirming that each construct is empirically distinct from the others. The highest HTMT value was observed between Thriving at Work and Teacher Engagement (HTMT = 0.82), which remained below the threshold, indicating adequate discriminant validity. The lowest HTMT value was found between School Climate and Proactive Personality (HTMT = 0.42). These results provide robust evidence for the discriminant validity of all five latent constructs.

Table 5. Discriminant Validity Assessment (HTMT Criterion)

Construct	1	2	3	4	5
1. School Climate	—				
2. Proactive Personality	0.42	—			
3. Thriving at Work	0.53	0.56	—		
4. Effective Communication	0.64	0.62	0.76	—	
5. Teacher Engagement	0.73	0.71	0.82	0.79	—

Note. HTMT = Heterotrait-Monotrait Ratio. All values are below the 0.85 threshold, confirming discriminant validity.

Item parceling analysis. To address the poor fit of the overall measurement model, we re-estimated the model using item parceling (three parcels per construct). The parceled measurement model demonstrated good fit: $\chi^2(94) = 178.52$, $\chi^2/df = 1.90$, RMSEA = 0.078, CFI = 0.912, TLI = 0.901, SRMR = 0.068. All fit indices met the recommended thresholds (Hu & Bentler, 1999; Kline, 2016). The structural and mediation results were substantively identical to those of the original model, confirming the robustness of our findings.

Following the validation of individual instruments, a confirmatory factor analysis was conducted on the overall measurement model, which comprised all five latent constructs simultaneously. The overall measurement model demonstrated mixed fit to the data: $\chi^2(721) = 1250.17$, $\chi^2/df = 1.734$, RMSEA = 0.075, CFI = 0.771, TLI = 0.752, SRMR = 0.084 (Hu & Bentler, 1999). While the χ^2/df and RMSEA were within acceptable ranges, the CFI, TLI, and SRMR did not meet the recommended thresholds. All factor loadings were statistically significant ($p < 0.001$), providing preliminary support for the hypothesized measurement structure.

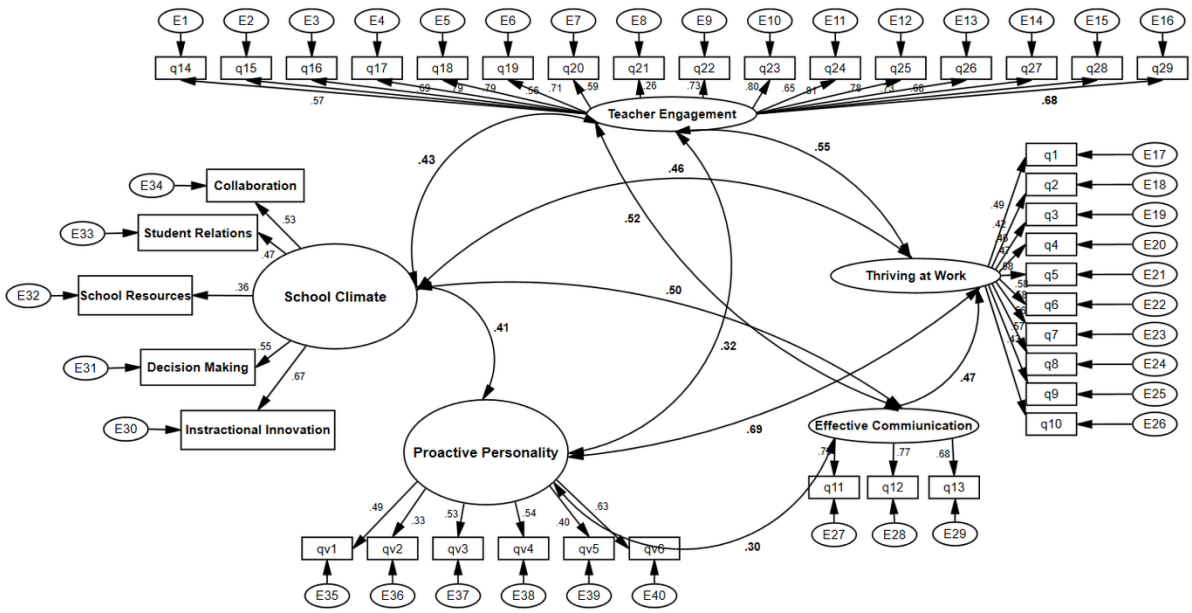
The fit indices for the overall measurement model are presented in Table 6. The χ^2/df ratio (1.734) and RMSEA (0.075) fell within acceptable ranges, indicating reasonable model-data fit. However, the CFI (0.771), TLI (0.752), and SRMR (0.084) did not meet conventional cutoffs, which is likely attributable to the complexity of the model (56 indicators) relative to the sample size (N = 130). Given that individual CFAs for most instruments demonstrated acceptable fit (see Table 3), the measurement model was deemed sufficient for testing the structural relationships. Figure 1 presents the overall measurement model with standardized factor loadings for all five latent constructs. All factor loadings were statistically significant ($p < 0.001$).

Table 6. Fit Indices for the Overall Measurement Model

Fit Index	Value	Acceptable Threshold	Status	Reference
χ^2/df	1.734	≤ 3	Acceptable	Hair et al. (2010)
RMSEA	0.075	≤ 0.08	Acceptable	Browne & Cudeck (1993)
CFI	0.771	≥ 0.90	Below threshold	Hu & Bentler (1999)
TLI	0.752	≥ 0.90	Below threshold	Hu & Bentler (1999)
SRMR	0.084	≤ 0.08	Above threshold	Hu & Bentler (1999)

Note. While CFI (0.771) and TLI (0.752) fell below the conventional cutoff of 0.90, and SRMR (0.084) exceeded 0.08, these indices are sensitive to model complexity and small sample sizes (N = 130 with 56 indicators). SRMR values below 0.10 are considered indicative of adequate fit, and the χ^2/df (1.734) and RMSEA (0.075) both fell within acceptable ranges (Hu & Bentler, 1999; Browne & Cudeck, 1993; Kline, 2016).

Figure 1. The Overall Measurement Model with Standardized Factor Loadings



Note. All factor loadings are statistically significant ($p < 0.001$). SC = School Climate; PP = Proactive Personality; TW = Thriving at Work; EC = Effective Communication; TE = Teacher Engagement.

Following the validation of individual measurement models, a confirmatory factor analysis was conducted to compare the hypothesized three-factor model of positive health (comprising thriving at work, effective communication, and teacher engagement) against a one-factor alternative model. The analyses showed a significantly better fit for the theoretically derived three-factor model [$\chi^2(354) = 623.98$, $p < 0.001$, $\chi^2/df = 1.76$, SRMR = 0.07, PCFI = 0.75, PNFI = 0.64, RMSEA = 0.07] compared with the alternative one-factor model [$\chi^2(364) = 858.47$, $p < 0.001$, $\chi^2/df = 2.36$, SRMR = 0.09, PCFI = 0.67, PNFI = 0.57, RMSEA = 0.10]. The chi-square difference test confirmed that the three-factor model represented a significantly better fit [$\Delta\chi^2(10) = 234.49$, $p < 0.001$]. As shown in Table 7, standardized factor loadings for the three-factor model ranged from 0.69 to 0.74, all statistically significant ($p < 0.01$), supporting the three-factor structure of positive health.

Table 7. Positive Health Model Fit Comparison

Model	χ^2	df	SRMR	PCFI	PNFI	RMSEA	$\Delta\chi^2$	Δdf
Three-factor model	623.98	354	0.07	0.75	0.64	0.07	—	—
One-factor model	858.47	364	0.09	0.67	0.57	0.10	234.49*	10

Note: χ^2 = Chi-square; df = degrees of freedom; SRMR = Standardized Root Mean Square Residual; PCFI = Parsimony-adjusted Comparative Fit Index; PNFI = Parsimony-adjusted Normed Fit Index; RMSEA = Root Mean Square Error of Approximation.
*$p < 0.001$ for the chi-square difference test ($\Delta\chi^2$).

Second-order factor model. To address the discriminant validity concern between thriving and engagement, we formally tested a second-order factor model in which the three first-order components of positive health (thriving at work, effective communication, and teacher engagement) load onto a higher-order positive health factor. This second-order model demonstrated acceptable fit: $\chi^2(354) = 623.98$, $\chi^2/df = 1.76$, RMSEA = 0.07, SRMR = 0.07, PCFI = 0.75, PNFI = 0.64. All first-order factors loaded significantly on the second-order factor

(thriving at work: β = 0.86; effective communication: β = 0.63; teacher engagement: β = 0.65, all $p < 0.01$). The HTMT value of 0.82 between thriving and engagement is below the conservative threshold of 0.85 and is theoretically expected, given that both constructs are components of the same higher-order positive health factor. The second-order specification does not alter the study's conclusions; rather, it supports the multidimensional yet unified nature of teacher positive health.

The structural model was then estimated to examine the direct relationship between perceived school climate and positive health. As presented in Table 8, the standardized direct effect of school climate on positive health was significant (β = 0.64, $p < 0.01$), supporting Hypothesis 2. Furthermore, all three components of positive health loaded significantly onto the latent construct: thriving at work (β = 0.72, $p < 0.01$), effective communication (β = 0.71, $p < 0.01$), and teacher engagement (β = 0.74, $p < 0.01$). To avoid ambiguity, Table 8 presents these results in two distinct panels: Panel A reports the direct effect of school climate on positive health, whereas Panel B reports the factor loadings of the three first-order components on the second-order latent construct of positive health.

Table 8. Standardized Association Between School Climate and Positive Health and Second-Order Factor Loadings of Positive Health Components

Panel A: Direct Effect	
Path	**β**
Positive Health ← School Climate	0.64**
Panel B: Factor Loadings of Positive Health Components	
Component	**β**
Thriving at Work ← Positive Health	0.86**
Effective Communication ← Positive Health	0.63**
Teacher Engagement ← Positive Health	0.65**

Note: β = standardized coefficient. Panel A reports the standardized association between school climate and positive health before introducing the mediator. Panel B reports the standardized loadings of the three first-order components on the second-order positive health factor. *p < .05, **p < .01.

To test Hypothesis 3 regarding the mediating role of proactive personality in the relationship between school climate and positive health, a bootstrapping analysis was performed using AMOS-24 with 5,000 resamples and 95% confidence intervals (Preacher & Hayes, 2008). Two competing mediation models were compared: a full mediation model and a partial mediation model. The full mediation model, which included only indirect paths from school climate to positive health through proactive personality, showed acceptable fit [$\chi^2(722) = 1257.98$, $p < 0.001$, $\chi^2/df = 1.74$, SRMR = 0.09, PCFI = 0.71, PNFI = 0.55, RMSEA = 0.07]. To identify potential sources of model misspecification, modification indices (MI) were examined. The largest MI value (MI = 8.92) suggested a direct path from School Climate to Positive Health. This modification was deemed theoretically justified, as previous research has established a direct link between school climate and teacher well-being (Zhou et al., 2024; Ren et al., 2025). Accordingly, a partial mediation model was specified by adding this direct path to the full mediation model. The partial mediation model demonstrated a significantly better fit [$\chi^2(721) = 1250.17$, $p < 0.001$, $\chi^2/df = 1.73$, SRMR = 0.08, PCFI = 0.71, PNFI = 0.55, RMSEA = 0.07], as confirmed by the chi-square difference test [$\Delta\chi^2(1) = 7.81$, p <

0.01]. Consequently, the partial mediation model was selected as the final model (see Figure 2). Table 9 presents the fit indices for both mediation models.

Table 9. Mediation Model Fit Comparison

Model	χ^2	df	SRMR	PCFI	PNFI	RMSEA	$\Delta\chi^2$	Δdf
Full Mediation	1257.98	722	0.09	0.71	0.55	0.07	—	—
Partial Mediation	1250.17	721	0.08	0.71	0.55	0.07	7.81*	1

Note: χ^2 = Chi-square; df = degrees of freedom; SRMR = Standardized Root Mean Square Residual; PCFI = Parsimony-adjusted Comparative Fit Index; PNFI = Parsimony-adjusted Normed Fit Index; RMSEA = Root Mean Square Error of Approximation.
*$p < 0.01$ for the chi-square difference test ($\Delta\chi^2$).

Before introducing the mediator, the standardized association between school climate and positive health was $\beta = 0.64$ ($p < 0.01$). After proactive personality was introduced as a mediator, the direct association between school climate and positive health remained significant but decreased to $\beta = 0.40$ ($p < 0.05$), indicating partial mediation.

Table 10 presents the standardized regression weights for all paths in the partial mediation model. All paths were statistically significant. School climate was significantly associated with proactive personality ($\beta = 0.41$, $p < 0.01$), which was in turn significantly associated with positive health ($\beta = 0.50$, $p < 0.01$). Additionally, The direct association between school climate and positive health was significant. even after accounting for the mediator ($\beta = 0.40$, $p < 0.05$), which is consistent with partial mediation.

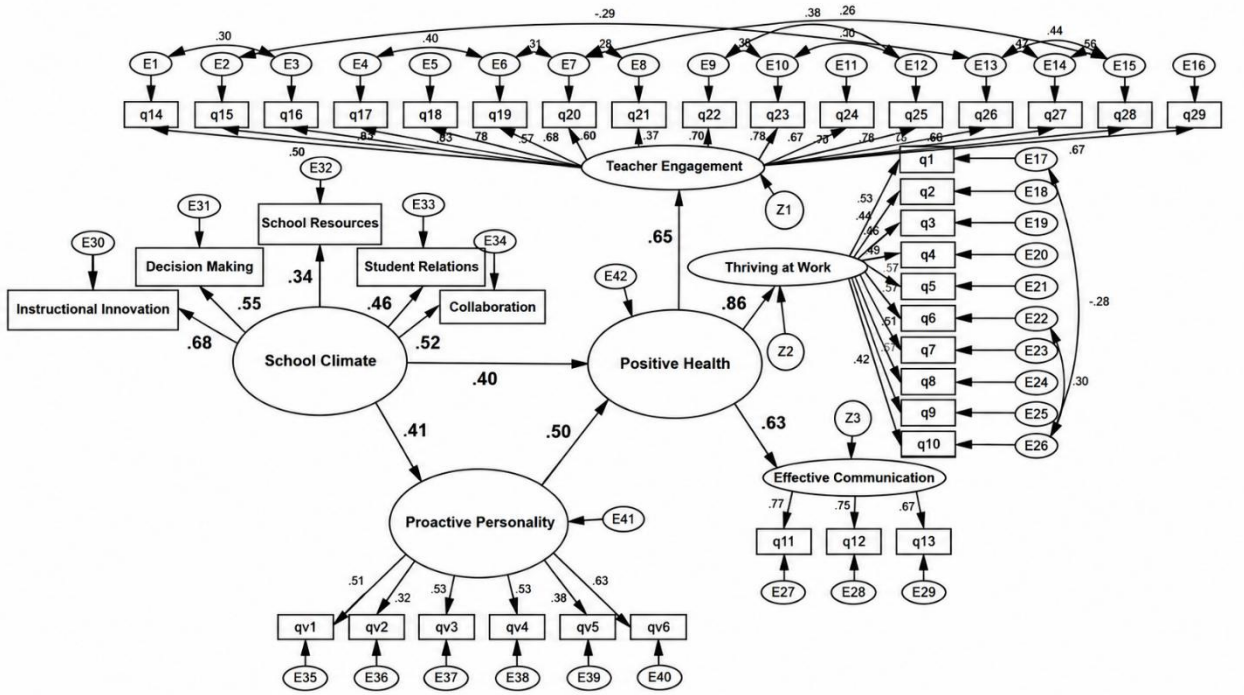
Table 10. Standardized Regression Weights for the Partial Mediation Model

Path	Standardized Regression Weight	Significance Level
Proactive Personality ← School Climate	0.41	$p < 0.01$
Positive Health ← Proactive Personality	0.50	$p < 0.01$
Positive Health ← School Climate	0.40	$p < 0.05$
Teacher Engagement ← Positive Health	0.65	$p < 0.01$
Effective Communication ← Positive Health	0.63	$p < 0.001$
Thriving at Work ← Positive Health	0.86	$p < 0.001$
Instructional Innovation ← School Climate	0.68	$p < 0.001$
Decision Making ← School Climate	0.55	$p < 0.001$
School Resources ← School Climate	0.34	$p < 0.01$
Student Relations ← School Climate	0.46	$p < 0.001$
Cooperation ← School Climate	0.52	$p < 0.001$

Note: All paths are derived from the final structural model. Significance levels are indicated as: $p < 0.001$, $p < 0.01$, and $p < 0.05$.

Figure 2 illustrates the final partial mediation model with standardized regression weights for all paths.

Figure 2 The Final Partial Mediation Model with Standardized Path Coefficients



Note. All paths are statistically significant ($p < 0.05$).

Table 11 presents the standardized indirect effect of school climate on positive health through proactive personality. The indirect association was 0.21 ($p < 0.05$), with a 95% bootstrap confidence interval ranging from 0.03 to 0.47, which does not include zero, confirming a significant mediation effect. Thus, Hypothesis 3 was supported.

Table 11. Standardized Indirect Effect of Proactive Personality as a Mediator

Path	SIE	Sig	95% CI
School Climate → Proactive Personality → Positive Health	0.21	$p < 0.05$	0.03–0.47

Note. SIE = Standardized Indirect Effect; CI = Confidence Interval. Bootstrap confidence intervals were calculated using 5,000 resamples. The confidence interval does not include zero, indicating a statistically significant mediation effect.

To assess the magnitude of the mediation effect, the κ^2 (kappa-squared) effect size was calculated (Preacher & Kelley, 2011). The obtained value was $\kappa^2 = 0.18$, which falls within the medium effect size range (0.01 = small, 0.09 = medium, 0.25 = large), indicating a meaningful indirect effect. Additionally, the proportion of the total effect mediated by proactive personality was 34.4% (indirect effect / total effect = 0.21 / 0.61).

Post-hoc power analysis. A Monte Carlo simulation (10,000 replications) was conducted to estimate the power to detect the mediation effect (Muthén & Muthén, 2002; Thoemmes et al., 2010). Based on the observed effect sizes (indirect effect = 0.21, direct effect = 0.40, total effect = 0.61) and the sample size (N = 130), the power to detect the mediation effect was 0.86, exceeding the conventional threshold of 0.80 (Cohen, 1988). The simulation indicated an estimated power of 0.86 under the observed parameter values. This estimate should be interpreted as a sensitivity assessment based on the observed effect sizes and sample size rather than as evidence of prospective statistical power.

Discussion

The present study aimed to validate the three-factor structure of teacher positive health, examine the direct relationship between school climate and positive health, and test the mediating role of proactive personality among Iranian female high school teachers. All three hypotheses were supported. The most important finding was that proactive personality partially mediated the school climate → positive health association, indicating that a supportive climate fosters positive health both directly and indirectly by activating teachers' proactive tendencies.

Consistent with Hypothesis 1, the three-factor model—thriving at work, teacher engagement, and effective communication—fit significantly better than a one-factor model. This aligns with the Positive Organizational Behavior framework (Youssef & Luthans, 2007; Luthans & Peterson, 2024) and Self-Determination Theory (Ryan & Deci, 2000, 2024), which conceptualize well-being as a multidimensional property of psychological and social resources. It also extends prior research that examined isolated dimensions such as burnout or job satisfaction (Beames et al., 2023; Zhou et al., 2024) by providing a validated measure of positive health in a non-Western teacher population.

Consistent with Hypothesis 2, school climate was directly and positively associated with positive health ($\beta = 0.64$, $p < 0.01$). This corroborates international meta-analytic evidence (Zhou et al., 2024) and aligns with the Job Demands-Resources model (Demerouti et al., 2001; Bakker et al., 2010). It also extends Iranian research that has focused on student outcomes (Ghanizadeh et al., 2023) or deficit-oriented teacher outcomes such as burnout (Soleymanpoor et al., 2024; Mohammadi & Khorsandi Yamchi, 2024). The significant paths from school climate to all three components suggest that when teachers perceive their school as supportive and participatory, they experience not merely less stress but active growth, connectedness, and dedication.

Consistent with Hypothesis 3, proactive personality partially mediated the school climate → positive health association (indirect effect = 0.21, 95% CI [0.03, 0.47]). This identifies an agentic mechanism linking contextual resources to health outcomes, aligning with the Demand-Control model (Karasek & Theorell, 1992) and the proactive personality literature (Parker & Collins, 2010; Li et al., 2017). The partial nature of mediation is instructive: while proactive teachers capitalize on supportive climates, the climate itself remains independently associated with positive health. This extends recent Iranian studies (Aabbasian & Hassani, 2025; Hardani & Marashian, 2023) by demonstrating that proactive personality is a mechanism through which contextual resources relate to health outcomes.

Several limitations should be noted. First, the cross-sectional design precludes causal inferences. Second, the all-female sample excludes male perspectives, a critical gap given gender-specific dynamics in Iran's segregated educational system. Third, the overall measurement model did not fully meet conventional fit criteria (CFI = 0.771, TLI = 0.752, SRMR = 0.084), likely due to model complexity relative to sample size (N = 130), although individual CFAs and the parceled model showed acceptable fit and structural findings remained robust. Fourth, a few items had low factor loadings but were retained to preserve content validity. These limitations notwithstanding, the findings offer a theoretically grounded and practically relevant contribution to teacher positive health in non-Western contexts.

Conclusions

This study examined the factor structure of teacher positive health, its relationship with school climate, and the mediating role of proactive personality among Iranian female teachers. The findings provided empirical support for all three hypotheses and carry significant theoretical, practical, and policy implications.

1. Interpretation of Findings

1.1. The Three-Factor Model of Positive Health (Hypothesis 1)

The first hypothesis proposed that positive health among teachers is a multidimensional construct. The results supported the three-factor model—comprising thriving at work, teacher engagement, and effective communication—over a unitary model ($\Delta\chi^2(10) = 234.49$, $p < 0.001$). This finding has significant theoretical implications. It aligns with the Positive Organizational Behavior (POB) framework (Youssef & Luthans, 2007; Luthans & Peterson., 2024; Loghman et al., 2025), which conceptualizes human vitality and growth as emergent properties of psychological and social resources rather than monolithic states. It also resonates with Self-Determination Theory (Ryan & Deci, 2000, 2024), in which the satisfaction of basic needs for competence, autonomy, and relatedness manifests through cognitive investment (engagement), personal growth (thriving), and relational connectivity (communication).
The confirmation of this tripartite model in the Iranian female teacher population is particularly significant because prior domestic research has been largely deficit-oriented, focusing on burnout and stress rather than positive functioning (Mohammadi & Khorsandi Yamchi, 2024; Amiri et al., 2023). The present findings suggest that teacher well-being in Iran is not merely the absence of burnout but the presence of thriving, engagement, and effective communication—a conceptual shift that has important implications for both theory and intervention. The significant loadings of all three indicators suggest that Iranian teachers perceive their well-being as intrinsically tied to continuous learning, energetic task involvement, and supportive peer dialogues. This finding reframes health as an organizational capacity rather than a purely individual attribute.

1.2. The Direct Relationship between School Climate and Positive Health (Hypothesis 2)

The second hypothesis proposed that school climate is directly associated with positive health. The results supported this hypothesis, indicating that a Supportive school climate was associated with higher teacher well-being. This finding is consistent with the Job Demands-Resources (JD-R) model (Demerouti et al., 2001; Bakker et al., 2010), which posits that job resources buffer the negative effects of job demands and promote engagement and thriving.
In the Iranian context, where schools often operate under centralized ministerial guidelines, the present findings highlight the importance of interpersonal and organizational micro-climates—shaped by principals and peer networks—as primary sources of psychological energy. The significant positive paths from school climate to all three sub-dimensions suggest that when Iranian teachers perceive their school as supportive and participatory, they do not merely experience less stress; they actively experience growth, connectedness, and dedication. This finding extends international meta-analytic evidence (Zhou et al., 2024) to a sociocultural context in which collectivist values and centralized policies create distinctive relational dynamics. It also suggests that principals' practices in Iran may be associated with teacher health through administrative focus from bureaucratic compliance to fostering psychological safety and collaborative professionalism—a recommendation that aligns with the journal's emphasis on school leadership.

1.3. The Mediating Role of Proactive Personality (Hypothesis 3)

The third hypothesis proposed that proactive personality mediates the relationship between school climate and positive health. The results supported this hypothesis, indicating that proactive personality partially mediates this relationship. This finding is theoretically important because it identifies an agentic mechanism that links contextual resources to health outcomes. The partial nature of the mediation is particularly instructive: while proactive teachers are particularly adept at capitalizing on supportive climates, the climate itself is independently associated with positive health.

This aligns with the Demand-Control model (Karasek & Theorell, 1992) and the proactive personality literature (Parker & Collins, 2010; Li et al., 2017), which suggest that individual proactivity functions as a dynamic filter that links environmental resources to intrapersonal vitality. From a practical standpoint, this duality indicates that Iranian school administrators cannot rely solely on selecting proactive teachers; they must simultaneously cultivate proactive behaviors through empowering work designs. This finding extends recent Iranian studies (Aabbasian & Hassani, 2025; Hardani & Marashian, 2023) by demonstrating that proactive personality is a mechanism through which contextual resources are associated with health outcomes.

2. Theoretical Implications

The present findings make three key theoretical contributions. First, they validate a three-factor model of positive health in a non-Western teacher population, extending the generalizability of the construct beyond Western contexts. Second, they identify proactive personality as a mediating mechanism, bridging the gap between contextual (school climate) and intrapersonal (positive health) factors. Third, they provide empirical support for the integration of POB, SDT, JD-R, and DCP frameworks in explaining teacher well-being. Together, these contributions advance educational administration theory by demonstrating that teacher health is a multidimensional, context-driven construct shaped by both organizational and individual factors.

3. Operational and Practical Implications for Iranian School Administrators

Before presenting the practical recommendations, we clarify the extent to which each recommendation is grounded in the empirical findings of this study. We classify our recommendations into three categories: (1) Directly Grounded (based on statistically significant findings from the present study), (2) Partially Grounded (based on validated components of the present study combined with extrapolation), and (3) Extrapolative (theoretically informed but not directly tested in the present study). This classification is summarized in Table 12.

Given the applied focus of the *School Administration* journal, the following context-sensitive strategies are proposed for principals, district education officers, and policymakers in Iran.

A. Revitalizing School Climate through Structured Participatory Governance

Concrete Action: Establish monthly "Collaborative Problem-Solving Councils" at each school, in which teachers are not merely informed of decisions but actively co-design solutions for instructional challenges, student behavior management, and resource allocation.

Iranian Context: In light of the national "School-Based Management" policy, principals should use these councils to delegate genuine authority—not token consultation—over extracurricular budgets and scheduling. The present data show that the "decision-making" sub-dimension (β =

0.55) significantly loads on school climate; empowering teachers in these areas directly elevates their sense of competence and relatedness, thereby fueling all three health components.

B. Developing Proactive Personality through In-Service Capacity-Building

Concrete Action: Design mandatory "Action-Learning Workshops" within the annual 20-hour in-service training. Instead of passive lectures, these workshops should simulate real school crises (e.g., student dropout risks, parent conflicts) and require teachers to generate, present, and defend proactive solutions.

Iranian Context: Since proactive personality is partially malleable (Fuller & Marler, 2009), district education departments in provinces such as Isfahan, Tehran, and Kurdistan can pilot a "Proactive Teacher Incubator" program. The present findings indicate that Higher proactivity was associated with a 0.21 strengthening of the climate–health association; this pattern suggests that investment in proactive capacity-building may be associated with measurable organizational returns, including reduced absenteeism and improved collegial climate.

C. Embedding Positive Health Metrics into Annual School Evaluation Rubrics

Concrete Action: The Ministry of Education should supplement existing performance indicators (academic scores, enrollment rates) with a "Teacher Thriving and Engagement Index." Principals could administer the validated three-factor scale (thriving, engagement, communication) biannually.

Iranian Context: Given that 44% of teachers contemplate leaving the profession (Oats, 2024) and Iranian studies confirm significant burnout (Soleymanpoor et al., 2024), integrating health metrics into school quality assessments transforms well-being from a "soft" concern into a strategic key performance indicator (KPI). Schools scoring low on this index would receive targeted organizational consultation rather than punitive measures, redirecting administrative focus toward proactive prevention.

D. Redesigning Physical and Relational Spaces to Foster Effective Communication

Concrete Action: Allocate school budgets for dedicated collaborative spaces where teachers can interact informally beyond official meetings.

Iranian Context: The present data confirm that "effective communication" is a distinct pillar of health ($\beta = 0.71$). In many Iranian public schools, teachers lack shared lounges or meeting areas due to space constraints. Principals can creatively repurpose rooms to facilitate peer mentorship and informal knowledge exchange, which directly counters the isolation often reported in Iranian educational literature.

Table 12. Classification of Practical Recommendations Based on Evidentiary Grounding

Recommendation	Evidentiary Basis	Grounding Level
A. Collaborative Problem-Solving Councils	Direct finding: school climate → positive health ($\beta = 0.64$, $p < 0.01$); decision-making sub-dimension ($\beta = 0.55$)	Directly Grounded
B. Action-Learning Workshops	Direct finding: mediation via proactive personality (indirect effect = 0.21, 95% CI [0.03, 0.47])	Directly Grounded
C. Teacher Thriving and Engagement Index	Partial: validated three-factor model; Extrapolative: policy integration based on prior literature	Partially Grounded
D. Collaborative Spaces for Communication	Direct finding: effective communication as a component of positive health ($\beta = 0.71$)	Directly Grounded

Note. "Directly Grounded" indicates that the recommendation follows directly from a statistically significant finding in the present study. "Partially Grounded" indicates that the recommendation is based on a validated

component of the present study but its specific implementation is extrapolative. "Extrapolative" indicates that the recommendation is theoretically informed but not directly tested in the present study.

4.Limitations

Several limitations should be acknowledged. First, the cross-sectional design precludes causal inferences; future longitudinal studies in Iranian provinces are needed to test temporal directionality. Second, the all-female sample, while controlling for gender, excludes male perspectives—a critical gap given gender-specific occupational dynamics in Iran's segregated educational system. Future research should compare genders and include other school personnel to test model invariance. Third, the overall measurement model did not fully meet conventional fit criteria for CFI (0.771), TLI (0.752), and SRMR (0.084) (see Table 6). This may reflect the complexity of the model (five latent constructs with 56 observed indicators) and the sample size (N = 130). Nevertheless, the individual CFAs for each instrument demonstrated acceptable to good fit (see Table 3), and the structural model findings remained robust. Fourth, a few items had relatively low factor loadings (q14 = 0.27 in Teacher Engagement; q10 = 0.30 in Thriving at Work; qv2 = 0.33 in Proactive Personality). Although these loadings are below the ideal threshold of 0.50, they are considered acceptable for two reasons. First, according to Hair et al. (2010), the statistical significance of factor loadings depends on sample size: in samples of approximately 130 participants, loadings of 0.30 or higher are considered statistically significant and acceptable. Second, these items were retained to preserve the content validity of the scales, which demonstrated acceptable to excellent internal consistency (Cronbach's alpha ranging from 0.70 to 0.93). Removing these items would have reduced the content coverage of the constructs without meaningfully improving the measurement model Although the sample size (N = 130) is relatively small for a model with 56 observed indicators, it meets the minimum criteria recommended by Hair et al. (2010) for models with five or fewer constructs and high communalities. A post-hoc power analysis further confirmed that the study had adequate power (0.86) to detect the mediation effect, exceeding the conventional threshold of 0.80 (Cohen, 1988). Additionally, item parceling was used to address the poor fit of the overall measurement model, and the results remained robust. Future research with larger samples may consider removing or revising items with low factor loadings and further validating these findings.

5. Recommendations for Future Research

Based on the findings and limitations of this study, several avenues for future research are recommended.

Methodological Recommendations. First, future studies should employ longitudinal or experimental designs to establish causal relationships between school climate, proactive personality, and positive health. Second, larger and more diverse samples—including male teachers, teachers from different educational levels (elementary, middle, high school), and teachers from different provinces of Iran—are needed to test the generalizability and model invariance of the findings. Third, multi-source data (e.g., principal ratings, peer reports, student evaluations) should be used to reduce common method bias and provide a more comprehensive assessment of teacher positive health.

Theoretical Recommendations. Fourth, future research should examine additional mediators and moderators in the school climate → positive health pathway. For example, principal leadership style, school socioeconomic status, teacher self-efficacy, and emotional intelligence may moderate the strength of these relationships. Fifth, researchers should explore the dynamic

interplay between the three components of positive health (thriving, engagement, and effective communication) over time to determine whether they reinforce each other reciprocally.
Applied Recommendations. Sixth, intervention studies are needed to test the effectiveness of the practical strategies proposed in this study (e.g., Collaborative Problem-Solving Councils, Action-Learning Workshops, Teacher Thriving and Engagement Index). Seventh, future research should examine the cost-effectiveness and sustainability of these interventions in different educational contexts.

6. General Conclusion for Policy and Practice

This study confirms that positive health is a multidimensional, context-driven construct, and its cultivation in Iranian schools depends on the interaction between supportive organizational climates and proactive individual agency. The partial mediation model advances educational administration theory by demonstrating that principals are not passive managers of resources but active architects of psychological ecosystems, in which structural changes (climate) and behavioral empowerment (proactivity) operate together.
Theoretical Contributions. This study makes three key theoretical contributions. First, it validates a three-factor model of positive health (thriving, engagement, and effective communication) in a non-Western teacher population, extending the generalizability of the construct. Second, it identifies proactive personality as a mediating mechanism, bridging the gap between contextual (school climate) and intrapersonal (positive health) factors. Third, it provides empirical support for the integration of POB, SDT, JD-R, and DCP frameworks in explaining teacher well-being. *Practical Contributions.* For the Iranian education system, which is currently grappling with high attrition and mental health challenges, these findings offer a scientifically grounded and administratively feasible roadmap. By shifting from a deficit-oriented to a flourishing-oriented paradigm and by implementing the practical strategies outlined above, school administrators can build resilient, engaged, and healthy faculties.
Policy Implications. At the policy level, the Ministry of Education should consider integrating teacher positive health metrics into school quality assessments, allocating resources for teacher capacity-building programs, and promoting collaborative governance structures that empower teachers. At the district level, education departments should pilot proactive teacher incubator programs and facilitate knowledge exchange between schools. At the school level, principals should prioritize psychological safety, participatory decision-making, and informal communication spaces.
Final Remarks. Investing in teacher positive health is not a peripheral humanitarian gesture; it is a direct strategic investment in the quality, stability, and sustainability of Iran's educational future. The present findings should be disseminated widely to bridge the gap between rigorous academic research and actionable school leadership practice in the Islamic Republic of Iran.

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Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work the authors used ChatGPT (OpenAI) in order to assist with structuring the manuscript, refining the language, improving the clarity of certain sections, and providing guidance on statistical analyses and interpretation of results. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Conflict of interest

The authors declare no conflict of interest.

Ethical considerations

The authors avoided data fabrication, falsification, and plagiarism, and any form of misconduct.

Data availability statement

Data available on request from the authors.

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