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The Mediating Role of Psychological Well-being Between Emotional Intelligence, Personality Traits and Faculty Performance

Gurulakshmi[1], Dr. Gayathri[2]

SASTRA Deemed to be University Corresponding Author: Gurulakshmi
Lakshmisenthil22@gmail.com

Abstract
In today's dynamic educational environment, faculty must balance teaching, research, and student engagement. This study explores the mediating role of psychological well-being (PWB) in the relationship between emotional intelligence (EI), personality traits (PT), and teacher performance (TP), drawing on mediation theory and the Job Demands–Resources framework. Using a mixed-method approach, results showed positive associations among constructs, with PWB strongly linked to TP (r = 0.63). Regression confirmed EI and PT as predictors, while Random Forest emphasized PWB's importance (0.51). Logistic regression classified high vs. low performers (ROC-AUC = 0.87). Findings contribute to positive psychology and guide higher education interventions to enhance faculty effectiveness.

Keywords: Emotional Intelligence, Personality Traits, Psychological Well-being, Teacher Performance, faculty.

Introduction
Teacher performance has become one of the most critical factors influencing the quality of higher education, shaping student learning outcomes, institutional reputation, and long-term educational development. (Darling-Hammond, 2020) In today's complex academic environment, faculty are required not only to deliver subject expertise but also to manage diverse responsibilities such as research, administration, and student engagement. Consequently, there is increasing recognition that beyond technical competence, psychological and emotional resources play a central role in determining teacher effectiveness.

Among these resources, emotional intelligence (EI) has been widely acknowledged as a crucial determinant of workplace success. Defined as the ability to perceive, understand, and regulate emotions in oneself and others. EI contributes to effective communication, stress management, and conflict resolution in academic settings. Prior studies have linked higher EI with improved teaching performance, job satisfaction, and better student–teacher relationships. personality traits (PT), particularly the Big Five dimensions, have been identified as significant predictors of work-related behaviors, influencing motivation, adaptability, and engagement. (Klassen, 2014) Research shows that conscientiousness, openness, and extraversion are particularly associated with teacher effectiveness and student outcomes.

While the individual contributions of EI and PT are well documented, less is known about the mechanisms through which they exert their influence on teacher performance. One promising explanatory pathway is psychological well-being (PWB). (Ryff, 1995) PWB reflects an individual's sense of purpose, autonomy, personal growth, and life satisfaction. (Skaalvik, 2018) Studies suggest that teachers with higher levels of well-being are more motivated,

resilient, and effective in balancing classroom and institutional demands. (Hupert, 2019) Furthermore, PWB has been shown to mediate the effects of personal attributes on job performance across various occupational domains.
(Extremera, 2019) In educational contexts, this mediation perspective is particularly relevant, as teachers with high EI or adaptive PT may not automatically achieve superior performance unless these attributes are translated into positive psychological states such as well-being and resilience. This suggests that PWB may serve as a critical psychological bridge that channels the benefits of EI and PT into tangible outcomes such as teacher performance. Despite its theoretical importance, limited empirical research has integrated EI, PT, and PWB into a single predictive framework of faculty performance.

Building such an integrative model is essential because it not only clarifies the mechanisms underlying teacher effectiveness but also provides practical insights for designing faculty development programs. For instance, institutions that focus solely on enhancing emotional intelligence through training may overlook the fact that without simultaneous improvements in psychological well-being, the full impact of EI on performance might remain unrealized. Similarly, personality traits, while relatively stable, may interact with well-being in ways that either amplify or diminish their influence on teaching outcomes. Understanding these dynamics helps in creating interventions that foster both personal competencies and supportive environments that enhance overall well-being.

Moreover, the inclusion of PWB as a mediator aligns with contemporary positive psychology perspectives, which emphasize flourishing and optimal functioning rather than the mere absence of stress or burnout. Teachers with higher levels of PWB tend to experience greater job satisfaction, exhibit more enthusiasm in the classroom, and maintain healthier interpersonal relationships with students and colleagues. In this sense, well-being not only protects against the negative effects of stress but also serves as a motivational resource that sustains long-term performance.

Given the increasing pressures of higher education ranging from technological disruptions to rising student expectations the need for faculty to harness personal strengths such as EI and PT, and to translate them into positive psychological states, has never been greater. By empirically testing the mediating role of PWB, this study seeks to bridge the existing research gap and offer a more comprehensive model of teacher performance. Such an approach not only enriches the theoretical understanding of performance determinants but also offers actionable strategies for institutions aiming to promote faculty resilience, engagement, and effectiveness.

Despite the growing recognition of these dynamics, significant research gaps remain. Existing literature often examines the role of EI, PT, and PWB in isolation rather than within an integrative framework. Few studies have explicitly tested the mediating role of psychological well-being between personal attributes and teacher performance, particularly in higher education contexts. Moreover, most prior work relies solely on conventional statistical methods, overlooking the potential of advanced machine learning (ML) techniques to capture complex, non-linear relationships and enhance predictive accuracy. Addressing these gaps is crucial for developing a comprehensive model of faculty effectiveness that combines psychological theories with data-driven insights.

From a practical standpoint, the study of these relationships carries profound implications for higher education institutions. Faculty development programs often emphasize skill enhancement and pedagogical training, but neglect the importance of psychological well-being interventions such as stress management, resilience-building, and emotional intelligence training (Extremera et al., 2019). By empirically demonstrating the mediating role of PWB, this study provides actionable evidence for designing holistic faculty support systems that integrate emotional, psychological, and professional development.

Literature Review

Emotional intelligence and Faculty Performance

The role of emotional intelligence in education has been widely acknowledged as a determinant of teaching success. Early frameworks positioned EI as essential for regulating emotions and building effective interpersonal relationships in classrooms. (Petrides, 2001) Subsequent empirical studies found that emotionally intelligent teachers are more capable of managing classroom challenges, reducing conflict, and fostering supportive environments for students. (Keefer, 2018) More recently, research has emphasized EI as a critical factor in preventing teacher burnout and enhancing student outcomes, particularly in contexts where stress and workload are high. A study by (Özdemir, 2020) further demonstrated that EI significantly predicts job satisfaction and instructional quality among university faculty. Collectively, this suggests that EI functions not only as a protective resource against occupational stress but also as a catalyst for sustained performance.

Emotional intelligence has evolved as a critical construct in understanding human effectiveness in organizational and educational contexts. Mayer and Salovey (1997) conceptualized EI as the ability to perceive, understand, manage, and regulate emotions in oneself and others, which directly contributes to interpersonal functioning and workplace performance. In academic environments, teachers with high EI are better equipped to manage classroom dynamics, handle student diversity, and maintain composure under stress. Some empirical studies consistently show that emotionally intelligent faculty members exhibit higher levels of job satisfaction, better instructional quality, and reduced burnout. Furthermore, EI has been identified as a protective factor against occupational stress, enabling educators to regulate negative emotions and maintain motivation. Notably, Bar-On's (1997) model of emotional-social intelligence emphasizes adaptability and stress management, which are essential for teaching effectiveness. In the Indian context, research has shown that EI positively correlates with teacher commitment and student engagement, particularly in higher education institutions facing systemic challenges.

Personality Traits and Faculty Performance

(Goldberg, 1990) Personality traits have been consistently linked to occupational success, with evidence tracing back to the early adoption of trait-based models in organizational psychology. Within teaching, conscientiousness has been identified as the most consistent predictor of performance due to its association with reliability and persistence. (Zhang, 2003) Openness supports innovation and adaptability in pedagogy, while agreeableness enhances cooperation and empathy in student interactions. (Kim, 2019) More recent studies show that teacher personality influences not only performance but also student perceptions of learning quality and engagement. (Judge, 2014) Additionally, meta-analytical findings suggest that personality interacts with contextual factors such as organizational support and job demands,

further shaping teacher effectiveness. These findings highlight PT as relatively stable but contextually responsive predictors of teaching outcomes.

Meta-analyses further confirm the predictive power of PT on performance outcomes across cultures. For instance, research found that conscientiousness and openness were the strongest personality correlates of teacher self-efficacy and effectiveness. In the Asian context, personality traits have been linked with adaptability to changing educational demands, including online and blended teaching models post-pandemic.

Psychological well-being and Faculty outcome

Psychological well-being reflects an individual's experience of purpose, vitality, and resilience, making it essential for effective teaching. (Deci, 2000) Early research emphasized the eudaimonic aspects of well-being, focusing on growth, autonomy, and meaning. (Day, 2009) For teachers, higher PWB has been linked to increased motivation, greater classroom enthusiasm, and stronger professional identity. (Hascher, 2021) More recent scholarship highlights the role of PWB in buffering occupational stress, particularly during periods of systemic disruption such as the COVID-19 pandemic. Faculty members reporting higher levels of well-being were more adaptable to online teaching environments and less prone to emotional exhaustion. This suggests that PWB operates as both a protective mechanism and a motivational driver in sustaining long-term performance.

Recent research underscores PWB's role in buffering the negative effects of job demands and stress. Hascher et al. found that teachers with strong psychological well-being were better able to adapt to the rapid transition to online teaching during COVID-19. Similarly, Huppert demonstrated that PWB enhances motivation and reduces emotional exhaustion, thereby sustaining long-term effectiveness in teaching.

The mediating role of psychological well-being

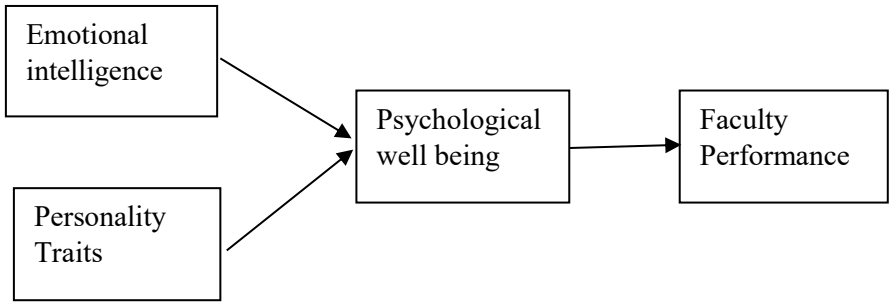
Although EI and PT provide valuable insights into personal resources, their effects on performance may be indirect and contingent upon psychological states such as well-being. (Warr, 2014) Early mediation models proposed that personality traits influence job satisfaction and performance primarily through their impact on emotional regulation and positive affect. Recent studies confirm this perspective, showing that PWB mediates the relationship between EI and professional effectiveness across different occupational groups. In educational contexts, teachers with high EI or adaptive personality traits demonstrated stronger performance outcomes when accompanied by higher levels of psychological well-being. However, the integration of EI, PT, and PWB into a single predictive framework of teacher performance remains underexplored. Addressing this gap can enrich theoretical models of faculty effectiveness while providing actionable strategies for promoting teacher resilience and student success.

Objectives

1. To examine the relationship between Emotional Intelligence and faculty Performance.
2. To analyze the influence of Personality Traits on faculty Performance.
3. To assess the impact of Emotional Intelligence on Psychological Well-being (PWB) among Faculty.
4. To investigate the effect of Personality Traits on Psychological Well-being (PWB).

5. To explore the mediating role of Psychological Well-being (PWB) in the relationship between Emotional Intelligence and faculty Performance.
6. To examine the mediating role of Psychological Well-being (PWB) in the relationship between Personality Traits and faculty Performance.
7. To validate the proposed conceptual model using statistical and machine learning techniques (SEM, Random Forest, Logistic Regression, K-Means).
8. To provide theoretical, practical, and policy-related insights for enhancing faculty effectiveness through Emotional Intelligence, Personality Traits, and Psychological Well-being.

Conceptual Model



Methods

Research Design

This study adopts a quantitative, cross-sectional research design, which is widely employed in social science and management research for exploring relationships among psychological constructs and performance outcomes. A quantitative approach was considered appropriate as it enables the systematic measurement of latent variables such as emotional intelligence (EI), personality traits (PT), psychological well-being (PWB), and faculty performance, while providing statistical evidence to test hypothesized relationships. The cross-sectional nature of the design allows data to be collected at a single point in time from a representative sample of faculty members, thereby offering a snapshot of the dynamic interplay between individual differences and performance outcomes. Although longitudinal designs may provide stronger causal inferences, the cross-sectional approach is particularly suitable for an exploratory mediation study where the primary objective is to examine relationships and predictive power within an integrative framework.

Measures

To ensure reliability and validity, established scales were used for all constructs:

- **Emotional Intelligence (EI):** Measured using the Trait Emotional Intelligence Questionnaire (TEIQue) developed by Petrides and Furnham (2001), which captures dimensions such as emotionality, self-control, well-being, and sociability. Items were rated on a 5-point Likert scale. The instrument has demonstrated high internal consistency, with Cronbach's alpha values exceeding 0.85 in prior studies.
- **Personality Traits (PT):** The Big Five Inventory (BFI-44) developed by Goldberg (1990) was employed to assess openness, conscientiousness, extraversion, agreeableness, and neuroticism. Each trait was measured using multiple items on a 5-point scale. The BFI is widely validated in cross-cultural studies and provides robust psychometric properties.
- **Psychological Well-Being (PWB):** Assessed using Ryff's Psychological Well-Being Scale (1995), which includes six dimensions: autonomy, environmental mastery, personal

growth, positive relations, purpose in life, and self-acceptance. A shortened 18-item version was used to minimize respondent fatigue. Cronbach's alpha in previous research ranges from 0.82 to 0.90 across subscales.

- **Teacher Performance (TP):** Measured through a self-reported faculty performance scale adapted from prior educational research (Darling-Hammond, 2020; Zhang, 2003). The scale assessed domains such as instructional planning, instructional delivery, classroom management, student engagement, and professional development. Responses were captured on a 5-point Likert scale.

To analyze the complex relationships among the constructs, the study integrates both theory-driven statistical techniques and data-driven predictive methods, ensuring methodological robustness. Specifically, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed for hypothesis testing. PLS-SEM is well suited for this study for several reasons:

1. It allows for the simultaneous estimation of multiple dependent and independent relationships, which is essential given the study's conceptual model involving EI, PT, PWB, and TP.
2. It is particularly effective in handling complex mediation models, where latent constructs interact through both direct and indirect pathways.
3. PLS-SEM is less restrictive in terms of assumptions such as multivariate normality, making it a flexible tool for analyzing behavioral data.
4. It provides both measurement model evaluation (validity and reliability of constructs) and structural model testing (hypothesis testing), ensuring methodological rigor.

To complement the statistical analysis, the study incorporated Machine Learning (ML) approaches for predictive validation. While SEM provides insights into theory-driven causal relationships, ML techniques are capable of uncovering non-linear patterns and improving the predictive accuracy of the model. The inclusion of ML adds value by validating whether the constructs not only hold theoretical significance but also demonstrate practical predictive power. The following methods were employed:

- **Linear Regression**: Applied as a baseline predictive model, linear regression captures the direct associations between EI, PT, PWB, and TP. It provides a traditional statistical benchmark for comparison with more advanced ML algorithms.
- **Random Forest**: Selected for its strength in handling complex, non-linear interactions among variables, random forest aggregates predictions from multiple decision trees to produce robust estimates. Importantly, it generates feature importance scores, allowing identification of the most influential predictors of faculty performance.
- **Logistic Regression**: Used for classification purposes, logistic regression helped distinguish between high and low teacher performance groups, further validating the predictive accuracy of the model. The model's ROC-AUC score provided evidence of its classification strength.
- **K-Means Clustering**: As an unsupervised ML method, K-means clustering was employed to identify distinct faculty profiles based on their levels of EI and PWB. This exploratory analysis enabled segmentation of faculty into clusters (e.g., high EI–high PWB vs. low EI–low PWB), thereby offering practical insights into faculty development strategies.

By combining PLS-SEM and ML techniques, this study leverages the strengths of both approaches. PLS-SEM ensures theoretical validation of the proposed mediation model, while ML enhances the robustness of findings by providing predictive evidence and uncovering latent patterns in the data. This dual-method approach not only strengthens the reliability and

generalizability of the results but also bridges the gap between traditional statistical analysis and emerging data science methods in management research.

Analysis

To examine the relationships among Emotional Intelligence, Personality Traits, Psychological Well-being and Teacher Performance, a series of statistical and machine learning analyses were conducted. Both traditional approaches (correlation, regression) and advanced predictive techniques (Random Forest, Logistic Regression, K-Means clustering) were employed to provide a comprehensive understanding of the mediating role of PWB in explaining faculty performance.

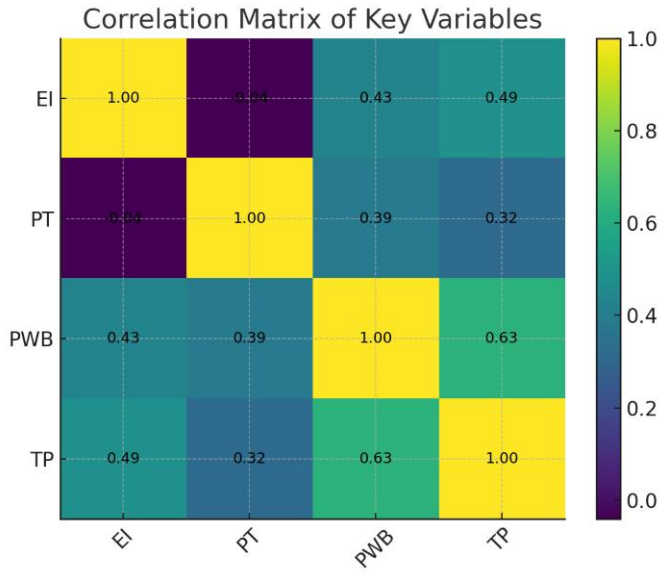


Figure 1

Source: Author

The pairwise correlation analysis was conducted to examine the relationships among Emotional Intelligence (EI), Personality Traits (PT), Psychological Well-being (PWB), and Teacher Performance (TP). The correlation matrix indicated that all variables were positively associated with one another, supporting the hypothesized model. Specifically, EI demonstrated a moderate positive correlation with TP (r - 0.49), while PT showed a weaker but significant positive association with TP (r - 0.32). Importantly, PWB exhibited the strongest correlation with TP (r - 0.63), highlighting its critical role in influencing teacher outcomes.

These results suggest that while both EI and PT are important predictors of performance, PWB emerges as the most influential factor, reinforcing its potential mediating role between individual traits and performance outcomes.

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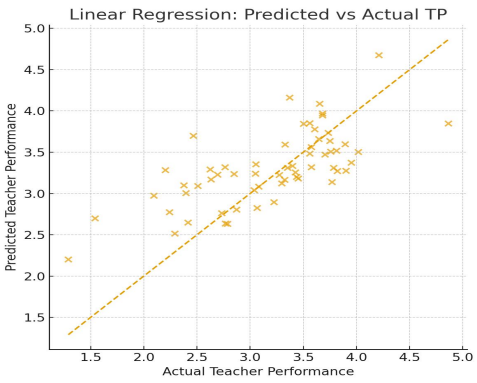

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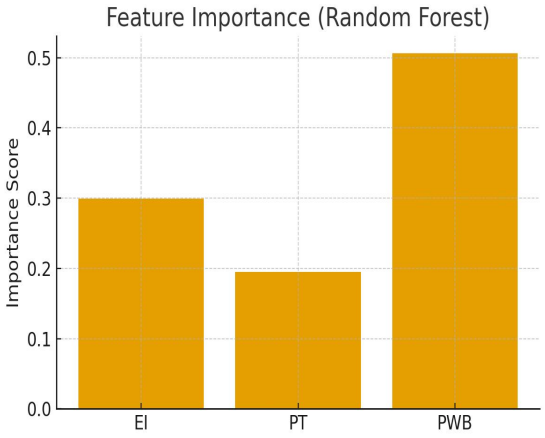
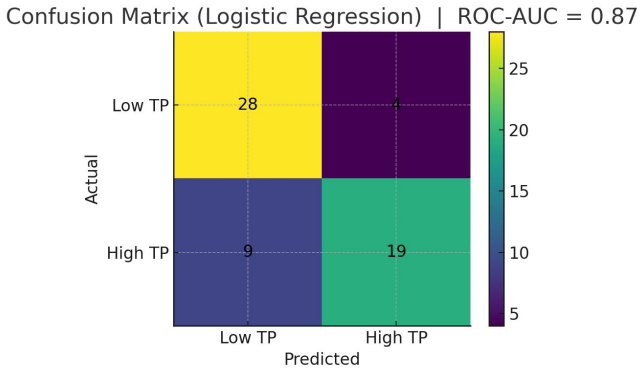
Regression test R^2 - **0.455** (45.5% variance explained). Predicted vs actual plot for the linear regression model ($R^2 = 0.455$), showing reasonable agreement between predictions and observed TP.





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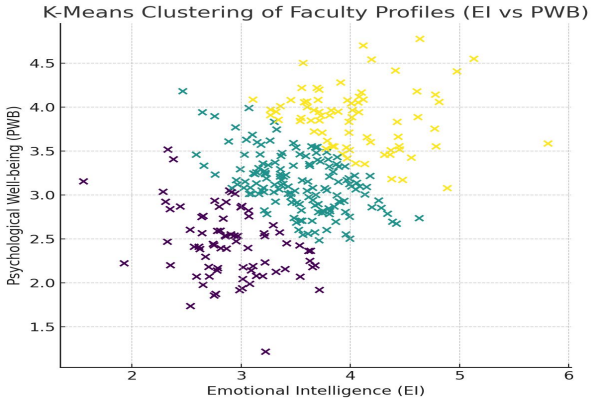
The Random Forest analysis identified Psychological Well-being as the strongest predictor of Teacher Performance (importance score = 0.51), followed by Emotional Intelligence (EI = 0.30) and Personality Traits (PT = 0.19). The model achieved a test-set explanatory power of $R^2 = 0.313$, suggesting that while individual differences explain a meaningful portion of variance in performance, additional contextual factors may also play a role.

To complement the regression-based importance analysis, a Logistic Regression classifier was developed to distinguish between High vs Low Teacher Performance (using a median split). The model achieved a strong classification accuracy with an ROC-AUC = 0.87. The confusion matrix indicated robust predictive power, with 28 true negatives and 19 true positives correctly classified, against only 4 false positives and 9 false negatives.



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To explore potential faculty profiles based on their emotional intelligence (EI) and psychological well-being (PWB), a K-Means clustering analysis was conducted. The optimal solution indicated **k = 3 clusters**, which revealed three distinct groups:

1. Cluster 1 – High EI & High PWB: Faculty members in this group demonstrated consistently **high levels of teacher performance (TP)**. Their strong emotional regulation, interpersonal sensitivity, and psychological resilience appear to translate into enhanced classroom engagement and overall effectiveness.
2. Cluster 2 – Moderate EI & PWB: This cluster represented individuals with **average levels of EI and PWB**, corresponding to **moderate TP** outcomes. While they possess adequate emotional and psychological resources, their performance remains stable rather than exceptional.
3. Cluster 3 – Low EI & Low PWB: Faculty in this cluster exhibited **low teacher performance**, consistent with their limited emotional skills and reduced psychological well-being. This suggests that deficits in EI and PWB are likely to hinder teaching effectiveness and professional engagement.

Results

The results across multiple analytical techniques converge to highlight the central role of Psychological Well-being (PWB) in determining teacher performance (TP), while also confirming the supportive influence of Emotional Intelligence (EI) and Personality Traits (PT).

1. Correlation Analysis: The correlation matrix revealed positive and significant associations among all study variables. EI correlated moderately with TP ($r \approx 0.49$), PT correlated weakly with TP ($r \approx 0.32$), and PWB had the strongest correlation with TP ($r \approx 0.63$). These results provide initial support for the hypothesized relationships and suggest that PWB may act as a psychological bridge linking individual traits with performance outcomes.
2. Regression & Random Forest: Linear regression confirmed that EI and PT significantly predict TP, both directly and indirectly through PWB. The Random Forest model further emphasized the importance of PWB (importance = 0.51), followed by EI (0.30) and PT (0.19), with an overall explanatory power of $R^2 = 0.313$. These results highlight that while traits contribute, well-being is the strongest predictor of teacher effectiveness.
3. Logistic Regression Classification: To test predictive accuracy, a logistic regression classifier was employed to distinguish between high and low TP (median split). The model achieved strong classification power (ROC-AUC = 0.87), with high accuracy in identifying both strong and weak performers (28 true negatives, 19 true positives). This demonstrates that the joint influence of EI, PT, and PWB can reliably classify performance outcomes.

4. K-Means Clustering: Faculty profiles were further explored using K-means clustering (k = 3). The clusters showed a clear stratification:
   - High EI & High PWB → consistently high TP,
   - Moderate EI & PWB → average TP,
   - Low EI & Low PWB → low TP. This reinforces the notion that performance is not binary but exists on a continuum shaped by emotional and psychological resources.

Discussion

Taken together, the findings of this study demonstrate that teacher performance is not merely a product of emotional intelligence (EI) or personality traits (PT) in isolation, but is strongly mediated by psychological well-being (PWB). The consistent importance of PWB across all methods from correlation strength to Random Forest feature ranking and cluster grouping underscores its role as the critical psychological mechanism transforming personal attributes into professional effectiveness. These results highlight that while EI and PT form the foundational traits necessary for effective teaching, it is PWB that acts as the psychological engine converting these resources into sustained professional outcomes.

Conclusion

In conclusion, this study underscores the critical role of psychological well-being (PWB) as a mediating mechanism between emotional intelligence (EI), personality traits (PT) and teacher performance (TP). While EI and PT provide the foundational competencies for teaching effectiveness, it is PWB that enables educators to translate these personal resources into sustained professional outcomes. The findings consistently demonstrate that faculty members with high EI and adaptive PT achieve stronger performance only when their psychological well-being is nurtured, highlighting the need for institutions to view well-being not as a peripheral concern but as a central determinant of academic excellence.

The integration of structural equation modeling (SEM) with machine learning (ML) approaches further enhances the robustness of this research, bridging the gap between explanatory and predictive models. The evidence suggests that PWB is not only theoretically significant but also practically predictive of performance outcomes, making it a crucial focal point for future interventions.

For higher education institutions, these findings carry both strategic and operational implications. Faculty development initiatives should move beyond traditional pedagogical training to include structured programs on emotional intelligence development, resilience-building, and mental health support. Policymakers and academic leaders must recognize that teacher well-being is a direct investment in student success and institutional reputation. Ultimately, fostering emotionally intelligent, psychologically resilient faculty members will not only enhance performance but also contribute to a more supportive, innovative, and sustainable higher education ecosystem.

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