



A Causal Model of Job Satisfaction Based on Perceived Social Support: The Mediating Role of Cognitive Adaptability among Physical Education Teachers

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Abstract

The present study aimed to develop and test a causal model of job satisfaction based on perceived social support, with cognitive adaptability serving as a mediating variable among physical education teachers in non-governmental schools. This study employed a descriptive-correlational design using structural equation modeling (SEM). The statistical population consisted of all physical education teachers in Tehran during the 2024–2025 academic year. Using multistage cluster sampling, 336 physical education teachers (134 females and 202 males) were selected from different educational districts of Tehran. Data were collected using the Perceived Social Support Questionnaire, the Cognitive Adaptability Questionnaire, and the Short Job Satisfaction Scale. Data analysis was conducted using SPSS and AMOS software. The findings indicated that perceived social support (from family, friends, and significant others) had a direct and positive effect on teachers' job satisfaction. Perceived social support also positively influenced cognitive adaptability, which in turn had a direct effect on job satisfaction. Cognitive adaptability played a partial mediating role in the relationship between perceived social support and job satisfaction. The proposed model demonstrated an acceptable level of fit. Perceived social support enhances job satisfaction among physical education teachers by strengthening their cognitive adaptability. These findings highlight the importance of social and cognitive resources in promoting occupational well-being among teachers in non-governmental educational settings.

Keywords: Job Satisfaction; Perceived Social Support; Cognitive Adaptability; Physical Education Teachers

1. Introduction

In contemporary organizations, job satisfaction is widely recognized as a central indicator of occupational well-being and organizational effectiveness, influencing employee motivation, performance, commitment, and retention (1, 2). In service-oriented professions, particularly

education, job satisfaction assumes heightened importance because employees' psychological states directly affect service quality, interpersonal relationships, and long-term institutional sustainability (3, 4). Teachers' job satisfaction has been repeatedly linked to instructional effectiveness, student engagement, and reduced burnout, making it a strategic priority for educational systems facing increasing

professional demands and resource constraints (5, 6). Within this context, physical education teachers represent a particularly vulnerable occupational group due to the physically demanding nature of their work, limited institutional recognition, and the need to balance pedagogical, managerial, and health-related responsibilities (7, 8).

Job satisfaction is a multidimensional construct reflecting employees' cognitive and affective evaluations of their work environment, including perceptions of meaningfulness, interpersonal relationships, organizational support, and personal growth opportunities (2, 9). Meta-analytic evidence demonstrates that higher levels of job satisfaction are associated with improved job performance and organizational outcomes across sectors (3). However, contemporary occupational environments—characterized by rapid technological change, role ambiguity, and heightened performance expectations—have intensified stressors that undermine satisfaction, particularly in education and human-service professions (5, 10). As a result, recent scholarship has increasingly emphasized the role of psychosocial resources in sustaining job satisfaction under demanding conditions (11, 12).

Among these resources, perceived social support has emerged as one of the most robust and consistently identified predictors of occupational well-being (13, 14). Perceived social support refers to individuals' subjective beliefs regarding the availability and adequacy of emotional, informational, and instrumental assistance from significant others, including family members, friends, and colleagues (15, 16). Unlike objective social networks, perceived support reflects internalized evaluations of relational security and responsiveness, which are particularly influential in shaping stress appraisal and coping processes (16, 17). Empirical research across occupational groups indicates that employees who perceive higher levels of social support report greater job satisfaction, reduced burnout, and enhanced psychological resilience (12-14).

The theoretical foundations of social support effects on well-being can be traced to classic stress and coping frameworks. Lazarus and Folkman's transactional model conceptualizes stress as a dynamic process shaped by individuals' cognitive appraisals of environmental demands and available coping resources (18). Within this framework,

social support functions as a critical external resource that alters primary and secondary appraisals, thereby reducing perceived threat and enhancing coping efficacy. Complementing this perspective, Cohen and McKay's buffering hypothesis posits that social support mitigates the negative effects of stress by providing emotional reassurance and practical assistance during challenging circumstances (16). These theoretical propositions are supported by empirical findings demonstrating that social support weakens the relationship between occupational stressors and adverse psychological outcomes (13, 19).

Beyond stress buffering, social support also contributes directly to positive occupational attitudes by fostering feelings of belonging, recognition, and interpersonal trust (11, 15). In educational settings, supportive relationships with colleagues, administrators, and family members have been shown to enhance teachers' engagement, professional identity, and satisfaction with their work roles (7, 20). Family support, in particular, plays a crucial role in balancing work and non-work demands, especially in collectivist cultural contexts where family relationships are central to emotional regulation and identity formation (21, 22). Research among diverse occupational groups confirms that instrumental support contributes significantly to job satisfaction by reducing work–family conflict and strengthening psychological resources (21, 23).

The importance of social support can also be understood through developmental and ecological perspectives. Bowlby's attachment theory emphasizes that early experiences of relational security shape individuals' expectations of support and influence their capacity to regulate emotions under stress (24). Secure attachment patterns are associated with greater help-seeking behavior and adaptive coping in adulthood, including occupational contexts. Similarly, Bronfenbrenner's ecological systems theory situates individual functioning within nested social systems, highlighting the interplay between family, workplace, and broader societal contexts in shaping well-being (25). From this viewpoint, teachers' job satisfaction is not solely determined by organizational factors but also by the quality of support embedded within their family and social environments (14, 22).

Despite the well-documented association between perceived social support and job satisfaction, accumulating

evidence suggests that this relationship is neither purely direct nor uniform across individuals (21, 26). Instead, individual psychological mechanisms appear to play a critical mediating role in translating social resources into positive occupational outcomes. Recent studies emphasize that employees' internal capacities for emotional regulation, cognitive appraisal, and psychological adjustment shape how social support is perceived and utilized (27, 28). In this regard, cognitive adaptability—broadly conceptualized as the ability to flexibly regulate thoughts, emotions, and behaviors in response to changing demands—has gained increasing attention as a key determinant of occupational well-being (29, 30).

Cognitive adaptability is closely related to constructs such as psychological adjustment, self-regulation, and cognitive reappraisal, all of which influence how individuals interpret stressors and mobilize coping strategies (18, 27). Empirical research indicates that individuals with higher levels of cognitive adaptability are more capable of reframing adverse experiences, maintaining emotional balance, and sustaining motivation under pressure (28, 30). Within occupational settings, these adaptive cognitive processes have been linked to lower burnout, greater job satisfaction, and improved work engagement (9, 29).

Importantly, social support appears to play a foundational role in the development and activation of cognitive adaptability. Supportive social environments provide emotional validation, informational guidance, and modeling of adaptive coping strategies, thereby strengthening individuals' regulatory capacities (15, 26). Studies among teachers and healthcare workers demonstrate that perceived social support enhances psychological capital, emotion regulation, and adaptive coping, which in turn predict higher job satisfaction and lower burnout (19, 31). Similarly, research on family and peer support highlights its role in promoting psychological adjustment across developmental stages and stress-exposed populations (22, 32).

Recent integrative models further underscore the mediating function of cognitive and psychological resources in the social support–well-being relationship. For example, Kwok et al. demonstrated that positive psychological capital mediates the relationship between family emotional support and job satisfaction among employees (21). Network and mediation analyses among teachers indicate that emotion

regulation and psychological capital act as key pathways through which social support influences burnout and satisfaction (26, 31). These findings align with the Job Demands–Resources framework, which conceptualizes social support as a contextual resource that enhances personal resources, thereby fostering motivation and satisfaction under demanding work conditions (10).

Despite these advances, several gaps remain in the literature. First, much of the existing research has examined social support and job satisfaction as directly related constructs, without adequately modeling the psychological mechanisms that connect them (12, 33). Second, studies focusing specifically on physical education teachers are relatively scarce, particularly in non-governmental school contexts where organizational support structures may differ from public institutions (7). Third, there is a need for integrative causal models that simultaneously consider multiple sources of social support and individual cognitive adaptability within a single analytical framework (19, 34). Addressing these gaps is essential for developing targeted interventions aimed at enhancing teachers' occupational well-being and professional sustainability.

In response to these theoretical and empirical considerations, the present study adopts an integrative perspective that combines social, ecological, and cognitive frameworks to examine job satisfaction among physical education teachers. By situating perceived social support within broader relational systems (25) and linking it to adaptive cognitive processes grounded in stress and coping theory (18), this study seeks to clarify the mechanisms through which social resources are translated into positive occupational outcomes. Such an approach not only advances theoretical understanding but also offers practical insights for educational policymakers and school administrators seeking to promote teacher well-being through supportive environments and skill-based interventions.

Accordingly, the aim of the present study is to develop and test a causal model of job satisfaction among physical education teachers in non-governmental schools based on perceived social support, with cognitive adaptability serving as a mediating variable.

2. Methods and Materials

2.1. Study Design

This study is classified as applied research in terms of its objective and employed a descriptive-correlational design with structural equation modeling (SEM) for data analysis. The statistical population comprised all physical education teachers working in non-governmental schools in Tehran during the 2023–2024 academic year, totaling approximately 2,267 teachers.

2.2. Participants

A multistage cluster sampling method was used to select the study sample from the eight educational districts of Tehran. Initially, three districts (Districts 1, 3, and 4) were randomly selected. Subsequently, using the lists of physical education teachers in these districts and a random number table, participants were randomly chosen. The final sample consisted of 336 physical education teachers, including 134 females and 202 males. Data were collected using online questionnaire forms distributed via email and social media platforms. The participants' ages ranged from 24 to 69 years, with a mean age of 41.7 years. Teaching experience as a physical education teacher ranged from 1 to 32 years, with an average of 10.8 years. In terms of educational attainment, 168 participants (50%) held a bachelor's degree, 158 (47%) held a master's degree, and 10 participants (3%) held a doctoral degree.

2.3. Instruments

Four standardized questionnaires were used to collect data for testing the proposed model:

2.3.1. Job Satisfaction Questionnaire

Job satisfaction was measured using a 22-item questionnaire developed by Ashouri-Nejad (2016) based on the theoretical framework proposed by Smith et al. (1969). The questionnaire consists of five dimensions: salary, coworkers, nature of work, supervision, and promotion opportunities. Responses are rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Previous validation studies reported acceptable psychometric properties, with content validity of 0.80 and

Cronbach's alpha coefficients of 0.82 for salary, 0.73 for coworkers, 0.75 for nature of work, 0.80 for supervision, 0.73 for promotion opportunities, and 0.89 for overall job satisfaction. In the present study, the Cronbach's alpha coefficient for the overall scale was 0.76. Bartlett's test of sphericity was significant ($\chi^2 = 526.15$, $p < 0.001$), and the Kaiser–Meyer–Olkin (KMO) measure was 0.65, indicating adequate sampling adequacy for factor analysis.

2.3.2. Perceived Social Support Questionnaire

Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS), developed by Zimet et al. (1988). This 12-item scale evaluates perceived support from three sources: family, friends, and significant others. Items are rated on a seven-point Likert scale ranging from strongly disagree to strongly agree. Previous studies have confirmed the validity and reliability of the MSPSS. Cronbach's alpha coefficients for the subscales have been reported to range from 0.76 to 0.89. In addition, Brewer et al. (2008) reported internal consistency coefficients between 0.86 and 0.90 for the subscales and 0.86 for the total scale. In the Iranian context, Salimi et al. reported Cronbach's alpha coefficients of 0.89 for family support, 0.86 for friends' support, and 0.82 for support from significant others. In the present study, the Cronbach's alpha coefficient for the total MSPSS was 0.75. Bartlett's test of sphericity was significant ($\chi^2 = 146.56$, $p < 0.001$), and the KMO value was 0.78, indicating sufficient sampling adequacy. Scores ranging from 12 to 24 indicate low perceived social support, scores between 24 and 36 indicate moderate perceived social support, and scores above 36 indicate high perceived social support.

2.3.3. Cognitive Adaptability Questionnaire

Cognitive adaptability was measured using the Weinberger Adjustment Inventory (WAI), developed by Weinberger and Schwartz (1990). This psychometrically sound instrument assesses individual adjustment based on two core dimensions: emotional distress and self-restraint, which function as supraordinate dimensions in self-reported adjustment regulation. Using a typological approach, the WAI identifies three adjustment patterns: the "well-adjusted" type (low distress, high restraint), the "repressive" type (low distress, low restraint with repressive defense), and

the “undercontrolled” type (high distress, low restraint). The short form of the WAI consists of 37 items and is grounded in theoretical models of emotional regulation and psychological defense mechanisms. It has been widely used in educational, clinical, and organizational research. In a psychometric evaluation conducted by Saeedi, Ghorbani, and Sarafraz (2016), the Persian version demonstrated satisfactory validity and reliability, with confirmatory factor analysis indices indicating good model fit ($CFI = 0.95$; $RMSEA = 0.05$). Cronbach’s alpha coefficients were 0.87 for emotional distress, 0.82 for self-restraint, and 0.79 for repression. In the present study, the Cronbach’s alpha coefficient for the overall scale was 0.74. Bartlett’s test of sphericity was significant ($\chi^2 = 189.85$, $p < 0.001$), and the KMO value was 0.63, confirming adequate sampling adequacy for factor analysis.

Table 1
Means and Standard Deviations of the Study Variables

Variable	Subscale	Mean	SD
Perceived Social Support	Family	16.17	4.41
Perceived Social Support	Friends	15.37	4.59
Perceived Social Support	Significant Others	14.91	2.98
Cognitive Adaptability	—	111.16	27.46
Job Satisfaction	—	162.11	30.75

Based on the results presented in **Table 1**, the mean score of job satisfaction was 162.11, with a standard deviation of 30.75. **Table 2** presents the results of the zero-order

2.4. Data Analysis

Data were analyzed using SPSS for descriptive statistics and preliminary analyses, and AMOS software was employed for structural equation modeling.

3. Findings and Results

Descriptive statistics, including the means and standard deviations of the study variables and their subscales, are presented in **Table 1**. As shown in **Table 1**, the mean score of job satisfaction was 162.11 ($SD = 30.75$), while the mean score of cognitive adaptability was 111.16 ($SD = 27.46$). Perceived social support was highest for family support ($M = 16.17$, $SD = 4.41$), followed by friends ($M = 15.37$, $SD = 4.59$) and significant others ($M = 14.91$, $SD = 2.98$).

Table 2
Correlation Matrix of the Study Variables

Variable	Job Satisfaction	Distress	Self-Restraint	Repression	Family	Friends	Significant Others
Job Satisfaction	1						
Distress	-0.270**	1					
Self-Restraint	0.299**	-0.181**	1				
Repression	-0.282**	-0.048	-0.078	1			
Family Support	0.304**	0.101	-0.023	-0.130*	1		
Friends’ Support	0.280**	0.021	-0.156**	-0.106	0.384**	1	
Support from Significant Others	0.269**	0.030	-0.013	-0.055	0.299**	0.243**	1

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

* Correlation is significant at the 0.05 level (two-tailed).

As shown in **Table 2**, job satisfaction exhibited positive and statistically significant correlations with most of the study variables ($p < .01$). However, for variables such as distress and repression, the correlations were significant and negative ($p < .01$). In addition, the magnitude of correlations

correlation matrix examining the relationships among the study variables for the total sample.

among the exogenous variables ranged from 0.24 to a maximum of 0.35.

To test the study hypotheses, multiple regression analysis was conducted using SPSS version 25, and structural equation modeling (SEM) was performed using AMOS to

evaluate the overall model fit. Prior to conducting regression analyses, the main statistical assumptions were examined. Data normality was assessed using the Kolmogorov–Smirnov test, and multicollinearity among the independent variables was evaluated by calculating Tolerance and the Variance Inflation Factor (VIF). The results of these analyses are presented below at **Table 3**.

Table 3

Regression Analysis Predicting Cognitive Adaptability from Perceived Social Support

Predictor	B	β	t	p	R	R^2
Family Support	1.67	0.30	5.25	0.001	0.63	0.40
Friends' Support	0.74	0.124	2.28	0.023		
Support from Significant Others	0.578	0.111	2.26	0.024		

As shown in **Table 3**, all three sources of perceived social support significantly and positively predicted teachers' cognitive adaptability. Specifically, family support ($\beta = 0.30$, $p < .001$), friends' support ($\beta = 0.124$, $p < .05$), and support from significant others ($\beta = 0.11$, $p < .05$) were all significant predictors of cognitive adaptability. These

As shown in **Table 3**, the Kolmogorov–Smirnov test results were non-significant for all study variables ($p > .05$), indicating that job satisfaction, perceived social support, and cognitive adaptability were normally distributed. Therefore, the assumption of normality required for regression and structural equation modeling analyses was satisfied.

Table 4

Regression Analysis Predicting Cognitive Adaptability from Perceived Social Support

Predictor	B	β	t	p	R	R^2
Family Support	1.67	0.30	5.25	0.001	0.63	0.40
Friends' Support	0.74	0.124	2.28	0.023		
Support from Significant Others	0.578	0.111	2.26	0.024		

As shown in **Table 4**, all three sources of perceived social support significantly and positively predicted teachers' cognitive adaptability. Specifically, family support ($\beta = 0.30$, $p < .001$), friends' support ($\beta = 0.124$, $p < .05$), and support from significant others ($\beta = 0.11$, $p < .05$) each emerged as significant predictors. These findings indicate

findings indicate that higher levels of perceived social support are associated with greater cognitive adaptability among teachers. In terms of explanatory power, the model accounted for 63% of the variance in cognitive adaptability, demonstrating strong predictive capacity.

Table 5

Regression Analysis Predicting Cognitive Adaptability from Perceived Social Support

Predictor	B	β	t	p	R	R^2
Family Support	1.67	0.30	5.25	0.001	0.63	0.40
Friends' Support	0.74	0.124	2.28	0.023		
Support from Significant Others	0.578	0.111	2.26	0.024		

As shown in **Table 5**, all three sources of perceived social support significantly and positively predicted teachers'

that higher levels of perceived social support are associated with greater cognitive adaptability among teachers. Moreover, the regression model demonstrated strong explanatory power, accounting for 63% of the variance in cognitive adaptability.

cognitive adaptability. Specifically, family support ($\beta = 0.30$, $p < .001$), friends' support ($\beta = 0.124$, $p < .05$), and

support from significant others ($\beta = 0.11$, $p < .05$) were all significant predictors of cognitive adaptability. These results indicate that increases in perceived social support are associated with higher levels of cognitive adaptability

among teachers. Overall, the regression model demonstrated strong explanatory power, accounting for 63% of the variance in cognitive adaptability.

Table 6

Regression Analysis Predicting Job Satisfaction from Perceived Social Support and Cognitive Adaptability

Predictor	B	β	t	p	R	R^2
Family Support	0.666	0.10	2.28	0.023	0.79	0.63
Friends' Support	0.576	0.085	2.01	0.045		
Support from Significant Others	0.498	0.078	2.00	0.046		
Cognitive Adaptability	0.516	0.461	10.21	0.001		

Dependent variable: Job Satisfaction

As shown in **Table 6**, perceived social support from family, friends, and significant others, as well as cognitive adaptability, significantly and positively predicted job satisfaction. Cognitive adaptability exhibited the strongest direct effect on job satisfaction ($\beta = 0.461$, $p < .001$),

followed by family support ($\beta = 0.10$, $p < .05$), friends' support ($\beta = 0.085$, $p < .05$), and support from significant others ($\beta = 0.078$, $p < .05$). Overall, the model demonstrated strong explanatory power, accounting for 79% of the variance in job satisfaction.

Table 7

Direct, Indirect, and Total Effects of Perceived Social Support on Job Satisfaction via Cognitive Adaptability

Predictor	Mediator	Outcome	Direct Effect (β)	p	Indirect Effect (β)	p	Total Effect (β)	p
Family Support	Cognitive Adaptability	Job Satisfaction	0.10	0.014	0.109	0.003	0.210	0.005
Friends' Support	Cognitive Adaptability	Job Satisfaction	0.09	0.048	0.055	0.034	0.146	0.012
Support from Significant Others	Cognitive Adaptability	Job Satisfaction	0.08	0.048	0.062	0.013	0.146	0.008

As indicated in **Table 7**, cognitive adaptability partially mediated the relationship between perceived social support and job satisfaction. Family support exerted a significant positive indirect effect on job satisfaction through cognitive adaptability ($\beta = 0.109$, $p = .003$), indicating partial mediation. Similarly, friends' support showed both a significant direct effect and a significant indirect effect via cognitive adaptability ($\beta = 0.055$, $p = .034$). Support from significant others also demonstrated a positive and significant indirect effect ($\beta = 0.062$, $p = .013$), confirming a partial mediating role of cognitive adaptability. Overall, these findings highlight the importance of cognitive adaptability in translating social support into higher job satisfaction.

4. Discussion

The present study aimed to develop and test a causal model of job satisfaction among physical education teachers in non-governmental schools, emphasizing the predictive role of perceived social support and the mediating function of cognitive adaptability. Overall, the findings provide strong empirical support for the proposed model, demonstrating that perceived social support from family, friends, and significant others exerts both direct and indirect effects on job satisfaction through cognitive adaptability. The structural model explained a substantial proportion of variance in job satisfaction, underscoring the combined importance of social and cognitive resources in shaping occupational well-being among teachers.

The first major finding indicated that perceived social support from all three sources—family, friends, and significant others—had a direct, positive, and statistically significant effect on job satisfaction. This result aligns with extensive prior research identifying social support as a core determinant of job satisfaction across occupational contexts (1, 2). From an organizational psychology perspective, social support enhances employees' perceptions of being valued and understood, which in turn strengthens positive work attitudes and emotional attachment to the job (11, 12). The present findings are also consistent with meta-analytic evidence showing that supportive interpersonal environments contribute meaningfully to job satisfaction and performance outcomes (3).

Within the specific context of education, and physical education in particular, the direct effect of perceived social support is theoretically and practically meaningful. Physical education teachers often encounter unique stressors, including physical workload, limited instructional time, and comparatively lower professional recognition, which heighten their reliance on external social resources (5, 7). The positive association between social support and job satisfaction observed in this study corroborates earlier findings that supportive relationships within and outside the workplace mitigate occupational stress and foster professional commitment among teachers (14, 20). Moreover, the significant role of family support is consistent with evidence from collectivist cultural contexts, where family relationships play a central role in emotional regulation and work-life balance (21, 22).

The second key finding demonstrated that perceived social support significantly predicted cognitive adaptability, accounting for a substantial proportion of its variance. This result supports theoretical assumptions derived from stress and coping models, which posit that social resources enhance individuals' adaptive cognitive and emotional capacities (16, 18). Supportive social environments provide emotional reassurance, informational guidance, and opportunities for cognitive reframing, thereby strengthening individuals' ability to regulate distress and respond flexibly to occupational demands (15). Empirical studies across diverse populations similarly report that perceived social support is positively associated with psychological

adjustment, emotion regulation, and adaptive coping (27, 30).

This finding is also consistent with research emphasizing the developmental and relational foundations of cognitive adaptability. Attachment theory suggests that secure relational experiences foster internal working models characterized by trust and emotional regulation, which later manifest as adaptive cognitive responses in stressful contexts (24). Likewise, Bronfenbrenner's ecological framework highlights the influence of proximal social systems—such as family and peers—on individuals' psychological functioning within broader institutional environments (25). In occupational settings, these relational influences translate into greater psychological readiness to cope with work demands, as supported by findings among teachers, healthcare workers, and other service professionals (19, 26).

The strongest predictor of job satisfaction in the model was cognitive adaptability, which exerted a substantial direct effect on teachers' job satisfaction. This result underscores the central role of internal cognitive-emotional regulation mechanisms in shaping occupational well-being. Individuals with higher cognitive adaptability are better equipped to reinterpret stressors, manage negative emotions, and sustain motivation in challenging work environments (18, 28). Prior studies have similarly demonstrated that adaptive cognitive processes, including self-regulation and cognitive reappraisal, are associated with lower burnout and higher job satisfaction (9, 29). In the educational context, such capacities enable teachers to navigate classroom challenges, organizational constraints, and interpersonal demands more effectively, thereby enhancing satisfaction with their professional roles (5, 6).

The mediation analysis further revealed that cognitive adaptability partially mediated the relationship between perceived social support and job satisfaction. This finding suggests that social support enhances job satisfaction not only directly but also indirectly by strengthening teachers' adaptive cognitive capacities. This pattern of partial mediation aligns closely with prior empirical models demonstrating that psychological resources act as key mechanisms linking social support to well-being outcomes (21, 31). For instance, studies have shown that psychological capital, emotion regulation, and self-efficacy mediate the

effects of social support on job satisfaction and burnout among teachers and healthcare professionals (19, 26).

The present findings are also consistent with the Job Demands–Resources framework, which conceptualizes social support as a contextual resource that enhances personal resources, thereby fostering motivation and satisfaction under high job demands (10). Within this framework, cognitive adaptability can be understood as a personal resource that enables teachers to capitalize on available social support and translate it into positive occupational outcomes. The substantial explanatory power of the overall model highlights the synergistic interplay between external social resources and internal cognitive mechanisms in shaping job satisfaction (12, 34).

5. Conclusion

Taken together, the findings of this study contribute to the literature by providing an integrative, empirically supported model that clarifies how perceived social support and cognitive adaptability jointly influence job satisfaction among physical education teachers. By simultaneously examining multiple sources of social support and a key psychological mediator, the study extends prior research that has often focused on isolated predictors or bivariate relationships (8, 35). The results underscore the importance of addressing both relational and cognitive dimensions of occupational well-being, particularly in educational settings characterized by high emotional and physical demands.

Despite the strengths of the present study, several limitations should be acknowledged. First, the cross-sectional design restricts causal inference and limits conclusions regarding the temporal ordering of perceived social support, cognitive adaptability, and job satisfaction. Second, the reliance on self-report measures may have introduced common method bias and social desirability effects. Third, the sample was limited to physical education teachers in non-governmental schools within a single metropolitan area, which may constrain the generalizability of the findings to other educational contexts, disciplines, or cultural settings.

Future studies are encouraged to employ longitudinal or experimental designs to examine causal pathways and changes in job satisfaction over time. Expanding the model to include additional psychological mediators, such as

emotion regulation strategies or psychological capital, may further clarify underlying mechanisms. Comparative studies across different educational levels, public and private institutions, and cultural contexts would also enhance the generalizability and robustness of the proposed model.

From a practical perspective, school administrators and policymakers should prioritize the development of supportive social environments both within and beyond the workplace. Interventions aimed at strengthening family and peer support networks, alongside professional development programs focused on enhancing cognitive adaptability and self-regulation skills, may be particularly effective in promoting job satisfaction. Creating organizational policies that encourage collegial collaboration, flexible work arrangements, and psychological skill-building can contribute to sustained occupational well-being among physical education teachers.

Declaration

AI-assisted tools (including large language models) were used to support English-language editing and clarity of presentation. The authors reviewed, edited, and verified all content and take full responsibility for the accuracy, integrity, and originality of the final manuscript. No AI tool was used to generate or manipulate the study data, analyses, or results.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Author Contributions

MA, N: Conceptualization; Methodology; Data curation; Investigation; Writing—original draft. AJ, S: Supervision; Methodology; Formal analysis; Writing—review & editing.

M S, K: Conceptualization; Validation; Writing—review & editing.

Declaration of Interest

The datasets generated and/or analyzed during the current study are not publicly available due to ethical and confidentiality considerations (including protection of participants' privacy), but are available from the corresponding author on reasonable request, subject to approval by the relevant ethics committee and compliance with applicable data-protection requirements.

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Ethics Considerations

This study was approved by the Ethics Committee of Islamic Azad University, North Tehran Branch (Ethics Code: IR.IAU.TNB.REC.1404.240). The online record of the ethical approval is also available on the Iranian National Research Ethics System for Biomedical Research website. All procedures were conducted in accordance with the ethical standards of the responsible committee and with the principles of the Declaration of Helsinki.

Informed Consent

Informed consent was obtained electronically from all participants before data collection. Participation was voluntary, and respondents were informed that they could withdraw at any time without penalty. No identifying information was collected, and responses were analyzed in aggregate form.

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