Education and Exploration in Learning, Behavior and Cognition *Open Access*

Winter (2025) 1 (1): 1-4

https://doi.org/: 10.30473/elc.2026.77344.1006

ORIGINAL ARTICLE

Structural Equation Modeling of Teachers' Psychological Well-Being Based on Mindfulness and Emotional Reactivity with the Mediating Role of Sense of Coherence

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Receive Date: 10/Oct/2024
Revise Date: 25/Oct/2024
Accept Date: 16/Dec/2024
Publish Date: 22/Dec/2024

How to cite:
Mohammadi, A & Hasanpour, E. (2025). Structural Equation Modeling of Teachers' Psychological Well-Being Based on Mindfulness and Emotional Reactivity with the Mediating Role of Sense of Coherence, *Education and Exploration in Learning, Behavior and Cognition*, 1 (1), 1-4. https://doi.org/: 10.30473/elc.2026.77344.1006

ABSTRACT

The present study purposed to model teachers' psychological well-being based on mindfulness and emotional reactivity, with the mediating role of sense of coherence. This research sought to investigate the structural relationships between these variables and determine the direct and indirect effects of mindfulness and emotional reactivity on psychological well-being through the mediation of sense of coherence among teachers. This study employed a descriptive-correlational design using structural equation modeling. The statistical population comprised all female secondary school teachers in Sanandaj, from whom 162 participants were selected through simple random sampling. Data were collected using standardized questionnaires including Ryff's Psychological Well-Being Scale (18-item version), the Five Facet Mindfulness Questionnaire (FFMQ) by Baer et al., the Emotional Reactivity Scale (ERS) by Nock et al., and Antonovsky's Sense of Coherence Scale (SOC-13). The validity of the instruments was confirmed through content and face validity, and their reliability was established by calculating Cronbach's alpha coefficients. The collected data were analyzed using SPSS-25 for descriptive statistics and AMOS-24 for structural equation modeling. The final model demonstrated an acceptable fit to the data ($\chi^2/df = 2.32$, CFI = 0.917, RMSEA = 0.078). Mindfulness and emotional reactivity exerted significant effects on psychological well-being both directly ($\beta = 0.91$ and $\beta = 0.82$, respectively) and indirectly through the mediating role ($\beta = 0.05$). Sense of coherence also emerged as a significant direct predictor of psychological well-being ($\beta = 0.78$). The findings suggest that enhancing mindfulness, regulating emotional reactivity, and strengthening sense of coherence can effectively promote teachers' psychological well-being.

KEYWORDS

Psychological Well-being, Mindfulness, Emotional Reactivity, Sense of Coherence, Structural Equation Modeling (SEM).

Introduction

Teachers' psychological well-being has become a central concern in educational research due to its role in sustaining effective teaching and learning (Dreer, 2023; Kurrle & Warwas, 2025). Beyond the absence of distress, psychological well-being reflects optimal functioning in areas such as autonomy and personal growth (Ryff, 1989). Mindfulness, defined as non-judgmental present-moment awareness (Kabat-Zinn, 2003), contributes positively to well-being (Marshall et al., 2025; Mérida-López & Extremera, 2017). In contrast, emotional reactivity—intense and prolonged responses to stress—impairs regulation and reduces well-being (Nolen-Hoeksema, 2012; Zhang et al., 2025). However, previous studies have often overlooked the underlying mechanisms linking these constructs. Sense of coherence, rooted in Antonovsky's salutogenic theory (1987), reflects viewing life as comprehensible, manageable, and meaningful, thereby promoting resilience (Eriksson & Mittelmark, 2016). Emerging evidence suggests that sense of coherence may mediate the effects of mindfulness and emotional reactivity on well-being by shaping cognitive appraisal and coping (Abe et al., 2016; Wijk et al., 2020). Despite its theoretical importance, limited research has examined this mediating role within an integrated structural model, particularly among teachers. Therefore, the present study aims to investigate whether mindfulness and emotional reactivity predict teachers' psychological well-being through the mediating role of sense of coherence.

Methodology

This study examined whether mindfulness and emotional reactivity predict teachers' psychological well-being through the mediating role of sense of coherence. A quantitative, descriptive–correlational design was employed, and structural equation modeling (SEM) was used to test direct and indirect relationships among variables. SEM was selected due to its suitability for analyzing complex, theory-driven models involving latent constructs and mediation effects. The study is applied in nature, grounded in theoretical frameworks of psychological well-being, mindfulness, and salutogenesis. The use of SEM allows simultaneous estimation of multiple relationships while accounting for measurement error, providing a comprehensive test of the proposed model.

The statistical population included all female secondary school teachers in District 2 of Sanandaj (N = 285) during the 2021–2022 academic year. Based on Morgan's table, 162 participants were selected using simple random sampling. Inclusion criteria included being an active female teacher in the specified district and willingness to participate; incomplete responses were excluded.

Data were collected using standardized instruments: Ryff's Psychological Well-Being Scale (18-item version), the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006), the Emotional Reactivity Scale (ERS; Nock et al., 2008), and Antonovsky's Sense of Coherence

Scale (SOC). All instruments have established validity and reliability in prior research. In the present study, Cronbach's alpha coefficients were acceptable: psychological well-being (0.72), mindfulness (≈0.81–0.91), emotional reactivity (≈0.78–0.95), and sense of coherence (0.885) .

Data were analyzed using SPSS-25 for descriptive statistics and AMOS-24 for SEM. Model fit was assessed using standard indices (χ^2/df, CFI, RMSEA), and direct and indirect effects were estimated to evaluate the hypothesized mediating relationships.

Results

The study included 162 teachers. Most participants were aged 41+ (57.4%), held a bachelor's degree (58%), and had over 10 years of service (62.9%). Descriptive statistics showed normal distribution (skewness/kurtosis within ±2). Pearson correlations revealed significant positive relationships among all main variables: mindfulness, emotional reactivity, sense of coherence, and psychological well-being ($p < .001$). Structural equation modeling indicated excellent model fit (χ^2/df = 2.318, RMSEA = 0.078, CFI = 0.917). Mindfulness and emotional reactivity significantly predicted psychological well-being both directly and indirectly through sense of coherence. Mediation analysis confirmed that sense of coherence significantly mediated these relationships, accounting for 54.7% (mindfulness → well-being) and 64.7% (emotional reactivity → well-being) of the total effects ($p < .001$).

Table 1. Descriptive Statistics and Correlations (Key Variables)

Variable	Mean	SD	1	2	3	4
1. Mindfulness	126.91	16.69	1			
2. Emotional Reactivity	42.26	13.10	.645**	1		
3. Sense of Coherence	127.54	26.41	.700**	.885**	1	
4. Psychological Well-being	63.05	16.77	.753**	.470**	.472**	1

****p < .001**

Discussion and conclusion

Mindfulness and emotional reactivity significantly predict teachers' psychological well-being, both directly and indirectly through sense of coherence. Sense of coherence emerged as a key mediator in shaping well-being via meaning-making and adaptive coping. Limitations include the cross-sectional design, self-report measures, and limited generalizability. The study integrates mindfulness, emotional reactivity, and salutogenic theory into a unified framework. Practically, interventions should enhance both emotional regulation and sense of coherence through supportive work environments. Future research should employ longitudinal designs and explore additional mediating variables.

Funding

This research received no specific funding from any public, commercial, or not-for-profit agency.

Authors' Contribution

The sole author was responsible for the study's conceptualization, methodology, data collection, analysis, writing, and final approval of the manuscript.

Conflict of Interest

The author declares no conflict of interest regarding the publication of this article.

Acknowledgments

The author would like to express gratitude to all researchers whose scholarly works contributed to the theoretical and empirical foundations of this study.

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