



Yoga practice and compassion fatigue among Indonesian school counselors: a cross-sectional survey

Práctica de yoga y fatiga por compasión entre consejeros escolares indonesios: una encuesta transversal

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Received: 19-02-26
 Accepted: 10-03-26

How to cite in APA

Rahayu, D. S., Atmoko, A., Muslihahati, M., Setiyowati, A. J., Jaafar, W. M. W., Septiana, N. Z., Setyorini, S., Andriane, S., & Hikmy, B. J. (2026). Yoga practice and compassion fatigue among Indonesian school counselors: a cross-sectional survey. *Retos*, 78, 757-766. <https://doi.org/10.47197/retos.v78.118844>

Abstract

Introduction: Although physical activity is widely associated with psychological wellbeing, most evidence comes from structured interventions. Less is known about how naturally occurring physical activity functions in emotionally demanding occupational settings.

Objective: To examine the association between weekly yoga practice and compassion fatigue among Indonesian school counselors.

Method: A national cross-sectional survey was conducted with 523 school counselors across 28 provinces in Indonesia. Weekly yoga exposure was calculated from self-reported frequency and duration. Compassion fatigue was assessed using the Compassion Fatigue Self-Test (CFST). One-way ANOVA, Pearson correlation, and multiple linear regression were performed.

Results: Weekly yoga practice was positively associated with compassion fatigue ($r = .188, p < .001$). Significant differences in compassion fatigue were observed across levels of yoga practice, $F(2, 520) = 10.91, p < .001, \eta^2 = .040$. Regression analysis showed that yoga practice remained a significant predictor after controlling for gender and professional experience, $F(3, 519) = 18.40, p < .001$, explaining 9.6% of the variance ($R^2 = .096$). Professional experience was negatively associated with compassion fatigue.

Conclusions: In contrast to findings from structured interventions, greater naturalistic yoga practice co-occurred with higher compassion fatigue, suggesting that yoga practice may reflect coping efforts rather than functioning as an independent protective factor. These findings highlight the importance of integrating individual physical activity practices with broader occupational support systems.

Keywords

Exercise psychology; psychological wellbeing; physical and psychological health; occupational wellbeing; self-regulation.

Resumen

Introducción: Aunque la actividad física se asocia ampliamente con el bienestar psicológico, la mayor parte de la evidencia proviene de intervenciones estructuradas. Se sabe menos sobre cómo la actividad física que ocurre de manera natural funciona en contextos ocupacionales emocionalmente exigentes.

Objetivo: Examinar la asociación entre la exposición semanal a la práctica de yoga y la fatiga por compasión en orientadores escolares de Indonesia.

Método: Se realizó una encuesta transversal nacional con 523 orientadores escolares de 28 provincias de Indonesia. La exposición semanal al yoga se calculó a partir de la frecuencia y la duración autoinformadas. La fatiga por compasión se evaluó mediante el Compassion Fatigue Self-Test (CFST). Se realizaron ANOVA de un factor, correlación de Pearson y regresión lineal múltiple.

Resultados: La exposición semanal al yoga se asoció positivamente con la fatiga por compasión ($r = .188, p < .001$). Se observaron diferencias significativas entre los niveles de práctica de yoga, $F(2, 520) = 10.91, p < .001, \eta^2 = .040$. El análisis de regresión mostró que la exposición al yoga siguió siendo un predictor significativo después de controlar el género y la experiencia profesional, $F(3, 519) = 18.40, p < .001$, explicando el 9.6% de la varianza ($R^2 = .096$). La experiencia profesional se asoció negativamente con la fatiga por compasión.

Conclusiones: A diferencia de los hallazgos de intervenciones estructuradas, una mayor exposición naturalista al yoga coocurrió con una mayor fatiga por compasión, lo que sugiere que la práctica de yoga puede reflejar esfuerzos de afrontamiento más que funcionar como un factor protector independiente. Estos hallazgos destacan la importancia de integrar las prácticas individuales de actividad física con sistemas más amplios de apoyo ocupacional.

Palabras clave

Psicología del ejercicio; bienestar psicológico; salud física y psicológica; bienestar ocupacional; autorregulación.

Introduction

Physical activity is widely recognized as a central determinant of both physical and psychological health across occupational populations (Bull et al., 2020; Holtermann et al., 2018; Schuch et al., 2018). Within exercise psychology, increasing attention has been directed toward understanding how naturally occurring physical activity behaviors operate under real-world professional demands rather than exclusively within controlled intervention settings (Biddle et al., 2019). Although structured exercise programs consistently demonstrate beneficial effects on stress reduction, emotional regulation, and resilience (Qiu et al., 2025; Singh et al., 2023), less is known about how self-initiated physical activity functions when embedded in emotionally demanding work environments. Clarifying this distinction is essential for advancing occupational physical activity research beyond intervention efficacy models, particularly given evidence that context can shape health effects of activity exposure (Quinn, 2024).

Yoga practice represents a particularly relevant modality within this domain (Luarte-Rocha et al., 2022). As a mind-body practice integrating postural movement, breath regulation, and attentional focus, yoga occupies a hybrid position between physical training and psychophysiological regulation (López-Fuenzalida et al., 2026). Recent systematic reviews and meta-analyses indicate that structured yoga interventions are associated with improvements in perceived stress, anxiety symptoms, and autonomic balance (Breedvelt et al., 2019; Moosburner et al., 2024; Shobana et al., 2022). However, much of this evidence derives from supervised programs delivered under standardized protocols. The ecological validity of these findings remains uncertain when yoga is practiced independently as part of routine lifestyle behavior rather than as a prescribed therapeutic intervention.

In occupational contexts characterized by sustained emotional labor, the relationship between yoga practice and psychological strain may be more complex than commonly assumed. The physical activity-stress buffering hypothesis suggests that regular exercise can mitigate stress-related outcomes (Ghasemi et al., 2024; Schuch et al., 2018). At the same time, contemporary coping frameworks indicate that individuals experiencing higher levels of stress may increase engagement in regulatory behaviors, including physical activity, as an adaptive response (Compas et al., 2017; Hives et al., 2025). Under such conditions, greater engagement in yoga practice may reflect reactive coping rather than preventive buffering. Observational cross-sectional designs provide an opportunity to examine these naturally occurring behavioral patterns within professional populations, while acknowledging that associations do not establish temporal direction (Vickers & Altman, 2001).

School counselors represent a professional group exposed to sustained interpersonal demands, crisis management responsibilities, and repeated exposure to students' emotional distress. These demands have become increasingly complex as counselors are required to respond not only to everyday developmental and academic concerns (Saputra et al., 2025), but also to more serious psychosocial problems (Setiyowati et al., 2024), including social media addiction (Sugara et al., 2025), bullying (Putri et al., 2025), anxiety (Junaedi et al., 2022), depression (Bariyyah et al., 2025), hatred (Septiana et al., 2025), and suicide (Rahayu et al., 2024). These working conditions elevate the risk of compassion fatigue, conceptualized as a multidimensional construct encompassing emotional exhaustion and secondary traumatic stress symptoms (Figley, 2002; Yılmaz & Bekaroglu, 2025). Contemporary occupational health research indicates that compassion fatigue is shaped not only by workload intensity and trauma exposure but also by recovery opportunities, organizational climate, and individual self-regulatory resources (Cocker & Joss, 2016; Rahayu et al., 2025). From an exercise psychology perspective, examining yoga practice within this context enables the integration of behavioral self-regulation research with occupational mental health outcomes, particularly in professions characterized by sustained emotional labor.

The Indonesian educational context offers additional relevance for this investigation. In collectivistic sociocultural environments, professional roles often involve strong relational expectations and sustained empathic engagement, potentially intensifying emotional labor demands (Chen & Unal, 2023; Zhao et al., 2025). Contemporary research on emotional labor suggests that cultural norms emphasizing relational harmony and social responsibility may amplify role-related stress in helping professions (Mastracci & Adams, 2019). Concurrently, mind-body practices emphasizing breath awareness and embodied regulation resonate with broader Asian traditions of holistic self-regulation, suggesting cultural congruence in regulatory strategies (Khalsa & Butzer, 2016; Paz & Davidovitch, 2025). Investigating naturally occurring yoga practice among Indonesian school counselors therefore contributes to cross-

cultural exercise psychology and occupational wellbeing research by situating behavioral regulation within culturally embedded professional expectations.

Accordingly, this study examines the association between yoga practice and compassion fatigue among Indonesian school counselors using a national cross-sectional sample. Specifically, it aims to (1) determine whether weekly yoga exposure is associated with compassion fatigue levels, (2) compare compassion fatigue across categorized levels of yoga practice, and (3) evaluate whether yoga exposure predicts compassion fatigue after controlling for demographic variables. By focusing on behavioral exposure rather than intervention delivery, this study contributes to exercise psychology by clarifying how naturalistic physical activity operates within emotionally demanding professional contexts.

Method

This study employed a quantitative cross-sectional observational design using a structured self-report survey to examine associations and group differences between yoga practice and compassion fatigue among school counselors in Indonesia. The cross-sectional approach was appropriate for analyzing naturally occurring variations in behavioral exposure without experimental manipulation (Setia, 2016; Wang & Cheng, 2020). Because the data were collected at a single time point, findings were interpreted as associations rather than causal effects (Hernan, 2018). Reporting followed STROBE guidelines for observational research (Elm et al., 2007).

Participants

The final analytic sample consisted of 523 school counselors recruited through stratified sampling across 28 provinces in Indonesia to ensure geographical representation. Provincial location served as the primary stratification criterion. Inclusion criteria were: (a) currently employed as a school counselor in a formal school setting; (b) actively providing counseling services during the data collection period; and (c) providing informed consent. Demographic characteristics are presented in Table 1.

Table 1. Demographic Characteristics of Participants (N = 523)

Variable	Category	n	%
Region (Island Grouping)	Java	419	80.1
	Sumatra	62	11.9
	Kalimantan	15	2.9
	Bali & Nusa Tenggara	14	2.7
	Sulawesi	11	2.1
	Eastern Indonesia (Maluku & Papua)	2	0.4
Gender	Female	366	70.0
	Male	157	30.0
Age Category	22–35 years	227	43.4
	36–50 years	220	42.1
	51–60 years	76	14.5
Years of Experience as School Counselor	<5 years	139	26.6
	5–10 years	139	26.6
	>10 years	245	46.8

Procedure

Data were collected through an anonymous online questionnaire distributed via professional counselor networks and school coordination channels across 28 provinces in Indonesia. The survey was administered during a single data collection period, consistent with cross-sectional research procedures. Prior to participation, respondents received an information sheet outlining the study objectives, voluntary participation, confidentiality, and data protection measures. Electronic informed consent was obtained before access to the questionnaire was granted. Anonymity was ensured to reduce potential response bias, particularly given the occupational sensitivity of compassion fatigue measures. The questionnaire required approximately 10–15 minutes to complete, and all responses were automatically recorded in a secure database for analysis. Ethical approval was obtained from the Institutional Ethics Committee of Universitas Negeri Malang (26.2.65/UN32.1/TU/2024).

Instrument

Compassion fatigue was assessed using the Compassion Fatigue Self-Test (CFST) developed within Figley's secondary traumatic stress framework (Figley, 2002). The instrument measures symptoms of secondary traumatic stress and emotional exhaustion among helping professionals using a Likert-type response format. Total scores were computed according to established scoring guidelines, with higher scores indicating greater compassion fatigue. Internal consistency reliability was evaluated using Cronbach's alpha (α) prior to inferential analyses. In the present sample, the instrument demonstrated satisfactory internal consistency (Cronbach's $\alpha = .88$).

Yoga practice was assessed through self-reported frequency (days per week) and average duration (minutes per session). Weekly yoga practice was operationalized as total weekly yoga minutes, calculated by multiplying frequency by duration. This index was used to estimate the volume of naturally occurring yoga practice in participants' routine behavior. Self-reported frequency and duration measures are commonly used in large-scale physical activity research when objective monitoring (e.g., accelerometry) is not feasible. For group comparison analyses, weekly yoga minutes were categorized into low, moderate, and high levels using tertile cut-offs derived from the observed distribution.

Data analysis

One-way ANOVA was conducted to compare compassion fatigue across levels of weekly yoga practice (low, moderate, high), with appropriate post-hoc procedures applied when necessary, and effect sizes reported using η^2 . Associations between continuous weekly yoga minutes and compassion fatigue were examined using Pearson's correlation. Multiple linear regression was performed to evaluate whether weekly yoga minutes predicted compassion fatigue after controlling for demographic covariates. Cases with missing values were handled using listwise deletion. Statistical significance was set at $p < .05$. All analyses were conducted using SPSS Version 26.

Results

Descriptive statistics indicate that participants practice yoga an average of 2.97 days per week ($SD = 1.23$), with a mean duration of 39.08 minutes per session ($SD = 17.58$), resulting in an average weekly exposure of 115.83 minutes ($SD = 72.58$). The mean compassion fatigue score is 21.54 ($SD = 7.88$), indicating variability across participants.

Table 2. Descriptive Statistics of Main Variables (N = 523)

Variable	Mean (M)	SD	Minimum	Maximum
Days per week	2.97	1.23	0	7
Minutes per session	39.08	17.58	0	60
Weekly yoga minutes	115.83	72.58	0	420
Compassion fatigue	21.54	7.88	13	65

*Significant at $p < .05$.

To examine group differences, weekly yoga minutes are categorized into low, moderate, and high levels using tertile classification. The distribution of participants across activity levels is relatively balanced.

Table 3. Compassion Fatigue by Yoga Practice Level

Yoga Level	n	Mean CF	SD
Low	181	19.51	7.807.80
Moderate	174	21.93	7.53
High	168	23.33	7.88

One-way ANOVA reveals a statistically significant difference in compassion fatigue across yoga practice levels, $F(2, 520) = 10.91$, $p < .001$, $\eta^2 = .040$. The effect size indicates a small magnitude of difference. Participants in the high yoga activity group report higher mean compassion fatigue scores compared to those in the low activity group. Pearson correlation analysis shows a positive association between

weekly yoga minutes and compassion fatigue, $r = .188$, $p < .001$. The correlation indicates a small but statistically significant relationship.

Multiple linear regression analysis indicated that weekly yoga minutes significantly predicted compassion fatigue after controlling for gender and years of experience, $F(3, 519) = 18.40$, $p < .001$, explaining 9.6% of the variance ($R^2 = .096$; adjusted $R^2 = .091$). Weekly yoga minutes showed a positive association with compassion fatigue ($B = 0.019$, $SE = 0.005$, $t = 3.76$, $p < .001$), while years of experience demonstrated a significant negative association ($B = -2.14$, $SE = 0.42$, $t = -5.06$, $p < .001$). Gender was not a significant predictor ($p = .172$).

Discussion

The present study examined the association between yoga practice and compassion fatigue within a national sample of Indonesian school counselors and identified a small but statistically significant positive association between weekly yoga exposure and compassion fatigue. Although the magnitude of the relationship was modest, the direction of association contrasts with findings from structured intervention research in which supervised yoga programs are associated with reductions in stress and psychological distress (Moosburner et al., 2024; Singh et al., 2023). This discrepancy highlights the importance of distinguishing between controlled therapeutic interventions and naturally occurring physical activity behaviors embedded within occupational contexts, where exposure patterns, motivational factors, and recovery conditions may differ substantially from standardized program delivery.

Much of the contemporary exercise psychology literature indicates that structured and supervised physical activity interventions contribute to improvements in mental health outcomes, including reductions in stress, depressive symptoms, and emotional dysregulation (Pearce et al., 2022; Schuch et al., 2018; Singh et al., 2023). However, these effects are typically observed under conditions involving standardized dosage, instructor guidance, and defined program duration. In contrast, the present study captured self-initiated yoga engagement practiced independently within real-world occupational contexts. The findings suggest that behavioral exposure alone may not function as a sufficient protective factor against occupational emotional strain, particularly when practice quality, motivational orientation, and implementation consistency are not standardized.

From a stress-buffering perspective, regular physical activity is commonly conceptualized as mitigating stress-related outcomes through physiological regulation, affective modulation, and neurobiological adaptation mechanisms (Pascoe et al., 2021; Stults-Kolehmainen & Sinha, 2014). Nevertheless, contemporary coping and behavioral regulation frameworks suggest that individuals experiencing elevated stress may increase engagement in self-regulatory behaviors, including physical activity, as an adaptive response (Compas et al., 2017; Stults-Kolehmainen et al., 2022). Under such conditions, greater physical activity participation may reflect reactive coping rather than preventive buffering. The positive association observed in this study is consistent with this interpretation: counselors reporting higher emotional strain may engage more frequently in yoga as a stress-regulation attempt, resulting in co-occurrence rather than evidence of causal protection.

It is also important to situate these findings within the broader occupational health literature on compassion fatigue. Emotional exhaustion and secondary traumatic stress are shaped by cumulative exposure to distress narratives, workload demands, and insufficient recovery opportunities (Cocker & Joss, 2016; Deriglazov et al., 2025; Figley, 2023). Contemporary occupational wellbeing models emphasize that psychological strain emerges from the dynamic interaction between job demands and available personal and organizational resources (Bakker & de Vries, 2021; Bakker & Demerouti, 2007). Within this framework, physical activity represents only one component of a multidimensional regulatory system. Without parallel organizational support, manageable caseloads, and structured supervision, individual-level strategies may have limited capacity to offset systemic occupational pressures.

The small effect size observed ($\eta^2 = .040$; $R^2 = .096$) further supports the interpretation that yoga practice contributes modestly within a broader constellation of influencing factors. Large-scale epidemiological and meta-analytic research indicates that while physical activity is consistently associated with improved mental health outcomes, effect magnitudes vary substantially across contexts, populations, and implementation conditions (Chekroud et al., 2018; Pearce et al., 2022; Singh et al., 2023). In emotionally

intensive professions, contextual variables such as institutional climate, workload structure, and professional experience may exert stronger influence on psychological strain than behavioral activity volume alone, consistent with contemporary occupational wellbeing models (Bakker & de Vries, 2021; Bakker & Demerouti, 2007)

Professional experience emerged as a negative predictor of compassion fatigue, suggesting that longer tenure may enhance adaptive regulation, professional boundary-setting, and emotional coping capacities. Contemporary occupational research indicates that professional competence and experiential learning function as protective resources over time, buffering the impact of sustained job demands (Hartmann et al., 2020; Su & Junge, 2023). Increased role clarity, emotional regulation skills, and familiarity with institutional procedures may contribute to greater resilience among more experienced counselors. Within exercise psychology, this finding suggests that behavioral regulation strategies such as yoga may interact with professional maturity and occupational adaptation processes, rather than operate independently as universal protective mechanisms.

Culturally, the Indonesian context may also shape interpretation of these findings. In collectivistic sociocultural environments characterized by strong relational responsibility and social harmony norms, sustained empathic engagement may intensify emotional labor within helping professions (Lee et al., 2019). Contemporary research suggests that emotional strain is amplified when professional roles align with cultural expectations of relational obligation and interpersonal sensitivity (Popucza et al., 2025). Yoga-based practices, while culturally resonant within broader Asian contemplative traditions, may therefore function primarily as self-initiated regulatory attempts in high relational demand settings rather than as structurally supported interventions. The present findings indicate that cultural congruence alone does not guarantee psychological buffering when organizational and workload demands remain elevated.

Several limitations should be considered when interpreting these findings. First, the cross-sectional design does not permit conclusions regarding temporal directionality, and it remains unclear whether greater yoga engagement preceded higher compassion fatigue or reflected coping responses among counselors experiencing emotional strain. Longitudinal research is required to clarify potential bidirectional dynamics. Second, yoga practice was assessed using self-reported frequency and duration, which capture behavioral volume but do not account for practice quality, intensity, supervision, or motivational orientation. These qualitative aspects may meaningfully influence psychological outcomes in exercise research. Third, unmeasured contextual variables such as workload intensity, organizational support, and recovery quality may have influenced the observed associations. Finally, although statistically significant, the effect sizes were small, indicating that yoga practice explains only a limited proportion of variance in compassion fatigue. These considerations suggest that physical activity should be interpreted as one component within a broader occupational wellbeing framework.

Several methodological considerations should be addressed in future research to obtain more robust and consistent findings. First, yoga practice in the present study was assessed through self-reported frequency and duration, which may be influenced by recall bias and limited behavioral precision. Future studies may benefit from incorporating more detailed activity logs or objective monitoring tools to improve measurement accuracy. Second, because this study used a cross-sectional design, the temporal direction of the association between yoga practice and compassion fatigue cannot be established. Longitudinal or repeated-measures designs would allow clearer examination of whether yoga practice functions as a protective factor, a coping response, or both. Third, future research could include more detailed indicators of yoga practice, such as type, intensity, supervision, and motivational purpose, to better distinguish routine behavioral engagement from structured therapeutic participation. These refinements may help produce more consistent and interpretable results across occupational settings.

Conclusions

This study examined the association between yoga practice and compassion fatigue among Indonesian school counselors using a national cross sectional dataset and found that higher weekly yoga exposure was associated with higher compassion fatigue scores, although the magnitude of this relationship was

small, while greater professional experience was associated with lower compassion fatigue. These findings contributed to exercise psychology and counselor wellbeing research by clarifying that naturalistic yoga engagement in occupational settings did not function as a standalone protective factor against compassion fatigue but instead appeared to reflect coping behavior within emotionally demanding professional contexts. The study advanced understanding of how self initiated physical activity operates in real world helping professions and suggested that effective compassion fatigue prevention required integration of individual self regulation practices with institutional support structures and manageable workload conditions. Future research should employ longitudinal and intervention designs to determine whether structured and guided yoga programs reduce compassion fatigue over time and should incorporate qualitative indicators of practice quality beyond frequency and duration measures.

Conflict of Interest

The author has no conflict of interest regarding the author or results of other studies.

Financing

We would like to express our gratitude to Indonesian Education Scholarship (BPI), Center for Higher Education Funding and Assessment (PPAPT), and Indonesian Endowment Fund for Education (LPDP) which has provided funding support and opportunities (BPI ID: 202209090546).

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