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Research Article

THE EFFECTIVENESS OF WORKOUT ON STRESS MANAGEMENT IN EMPLOYEES OF PT NUSANTARA POWER UP-GRESIK

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Abstract

High levels of work stress at PT Nusantara Power UP-Gresik, driven by heavy workloads and a demanding organizational environment, negatively impact employee well-being, mental health, and productivity. This study aimed to implement and evaluate the effectiveness of a structured workout program as a non-pharmacological intervention for managing work-related stress. The research employed a quasi-experimental, one-group pre-test and post-test design. An initial pre-test using a Likert scale was administered to 97 employees to measure stress levels, which indicated that the majority experienced moderate stress. Subsequently, an intervention program involving regular, structured workout sessions (including group sports and stretching) was implemented. A post-test was then administered to 35 participating employees. Post-intervention analysis revealed a significant reduction in perceived stress levels in the 35 participants. These findings were supported by qualitative improvements in physiological (e.g., reduced fatigue), psychological (e.g., improved mood, reduced anxiety), and behavioral (e.g., positive social interaction) outcomes. The study concludes that the structured workout program is an effective strategy for managing work stress at PT Nusantara Power UP-Gresik. The intervention demonstrably improved employee well-being across multiple dimensions, fostering a healthier and more productive organizational environment.

Keywords: Stress Management; Work Stress; Workout Program

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INTRODUCTION

Modern organizational dynamics, characterized by rapid technological shifts and intense market competition, exert significant psychological pressure on the workforce. Workplace stress has emerged as a pervasive and critical issue, fundamentally affecting employee well-being, cognitive function, and overall organizational productivity (Lee dkk., 2025). The persistence of high-demand corporate environments, particularly within strategic sectors such as energy and power generation, creates a fertile ground for occupational strain, leading to increased rates of burnout and decreased employee engagement (Smith, 1983). This context necessitates a proactive and evidence-based approach to managing the psychological health of employees.

A substantial body of research increasingly points to a strong, inverse correlation between regular physical activity and perceived psychological distress. Consequently, corporate wellness interventions are evolving beyond conventional psychosocial support systems to include more holistic health strategies (Kamholz dkk., 2025). Physical exercise, structured as "workouts," is gaining significant recognition as a potent, accessible, and non-pharmacological strategy for stress mitigation (Grivas, 2025). These activities are empirically linked to the modulation of neurobiological responses to stress, offering a powerful buffer against the pressures of the corporate environment.

The integration of structured physical wellness programs into the standard corporate framework represents a critical strategic investment in human capital. Organizations that actively prioritize and facilitate the physical health of their workforce frequently report tangible benefits, including lower absenteeism, higher operational focus, and improved collective morale (Mahanta dkk., 2023). This present study situates itself within this corporate wellness paradigm. It specifically aims to examine the utility and effectiveness of a targeted workout intervention designed to manage occupational stress within a high-stakes industrial setting, providing a focused analysis of its impact.

Employees operating within the Human Resources (SDM) division of high-stakes industries, exemplified by PT Nusantara Power UP-Gresik, encounter a unique and amplified set of occupational stressors. This population must concurrently manage the administrative complexities, emotional labor, and interpersonal conflicts of the entire workforce while adhering to stringent organizational demands and executive deadlines (Gemaini dkk., 2025). This dual pressure, serving both operational and human-centric functions, places them at a heightened risk for chronic stress and psychological fatigue, making them a critical population for targeted stress management research.

Prolonged and unmitigated exposure to this high-pressure environment is hypothesized to result in significant and measurable levels of occupational stress. This stress is likely to manifest in various detrimental forms, including diminished productivity, cognitive lapses, decreased professional motivation, and adverse impacts on both mental and physical health (Nejati dkk., 2022). From an organizational perspective, PT Nusantara Power faces a tangible risk of operational inefficiency, talent attrition, and a decline in workforce management quality if the stress levels within its core HR division remain unaddressed.

An effective, accessible, and organizationally sustainable stress management strategy is therefore urgently required for this specific employee group (Bouché-Bencivinni dkk., 2025). While the physiological and psychological benefits of exercise are known in a general sense, its specific effectiveness *within the context* of the existing corporate culture at PT Nusantara Power UP-Gresik is undetermined (Nazari dkk., 2024). This research directly addresses the practical problem of identifying and validating a viable intervention to improve employee well-being and maintain high operational effectiveness in this precise, high-demand corporate setting.

The primary objective of this study is to empirically evaluate the effectiveness of a structured, multi-faceted workout program on the stress management capabilities of Human

Resources employees at PT Nusantara Power UP-Gresik. This evaluation involves a quantitative assessment of perceived stress levels, utilizing validated psychometric instruments administered before and after the implementation of the physical activity intervention (Moslemi dkk., 2022). The study seeks to determine if a statistically significant reduction in stress scores occurs following participation in the program.

The research concurrently aims to identify specific physiological and psychological benefits derived from the workout intervention, as reported qualitatively by the participants (Kuricová dkk., 2025). Secondary objectives include assessing potential improvements in ancillary areas such as sleep quality, mood stabilization, perceived energy levels, and overall physical well-being (Gandouzi dkk., 2021). This qualitative dimension seeks to capture the nuanced experiences of participants, providing depth and context to the quantitative data regarding how the intervention facilitates stress reduction.

A further, pragmatic goal of this research is to synthesize the findings into data-driven, actionable recommendations for the management of PT Nusantara Power UP-Gresik. The results are intended to inform the strategic development and implementation of future corporate wellness policies (Bhawal dkk., 2018). This study seeks to provide a clear business case for the integration of physical activity into the regular work schedule as a cost-effective and sustainable tool for mitigating occupational stress and enhancing human resource vitality.

Existing academic literature extensively covers the generalized relationship between physical activity and stress reduction across heterogeneous populations. Numerous studies, often situated in clinical, academic, or public health settings, have utilized standardized aerobic, resistance, or mindfulness-based exercise protocols (Jensen, 1998). The consensus from this broad research confirms a positive correlation; however, these findings often lack the specificity required for direct application within distinct corporate micro-cultures.

A significant gap persists in the application of this knowledge to specific, non-clinical, and high-demand corporate environments, particularly within the industrial and energy sectors in Indonesia (Ziaka dkk., 2025). Research that differentiates the effectiveness of various *types* of workouts (e.g., team sports versus individual exercise) and identifies the optimal *frequency* and *duration* for full-time, sedentary corporate employees—such as those in an HR division—remains limited (Volderauer dkk., 2025). Most general studies fail to account for the unique organizational barriers, such as intense workloads and time constraints, found in companies like PT Nusantara Power.

This study is designed to bridge the critical gap between generalized wellness research and applied organizational psychology. It moves beyond simply confirming *if* exercise mitigates stress, and instead investigates *how* a specific, tailored workout program functions as a practical stress management intervention within a real-world, high-demand corporate ecosystem (Tout dkk., 2025). It provides specific, contextualized data for an Indonesian industrial setting, a demographic and organizational context that is currently underrepresented in occupational health literature.

The primary novelty of this research lies in its applied, quasi-experimental design embedded within an active and fully operational corporate division. Unlike theoretical studies or laboratory-based experiments, this investigation measures the direct impact of a practical intervention—incorporating varied workout activities such as futsal, badminton, and volleyball as identified in the site analysis—on the target employees during their routine employment (Shabani dkk., 2025). This methodology provides ecologically valid data that reflects the true challenges and opportunities of implementing wellness programs in a real-world setting.

This research is strongly justified by its direct and immediate relevance to organizational health, productivity, and sustainability. The findings offer the management of PT Nusantara Power UP-Gresik a tangible, evidence-based, and potentially low-cost strategy to enhance employee well-being, which is critical for reducing stress-related attrition, absenteeism, and

errors (Keawdounglek dkk., 2025). It serves as a vital case study for other large-scale companies in the national energy sector seeking to improve their human capital management.

The study provides a valuable empirical contribution to the intersecting fields of occupational health psychology, sports science, and human resource management. It validates the use of diversified physical activity, rather than a monolithic exercise regime, as a formal stress management tool, offering a scalable model for corporate wellness that respects employee preferences (Azadehyaei dkk., 2025). This research ultimately reinforces the strategic importance of investing in preventative health measures as a core component of organizational resilience and success.

RESEARCH METHOD

A quasi-experimental research design was implemented for this investigation. The framework selected was a one-group pre-test/post-test model, chosen for its high utility in applied organizational settings where establishing a randomized control group was operationally infeasible. This design is focused on measuring the change in the primary dependent variable, perceived stress, immediately before and after the introduction of the independent variable, the structured workout intervention (Sehlapelo dkk., 2025). The core objective of this design is to assess the effectiveness and practical impact of the program within a defined, real-world corporate population.

The target population consisted of all full-time employees within the Human Resources (SDM) division at PT Nusantara Power UP-Gresik. This group was specifically chosen based on the high-pressure nature of their roles as identified in the problem statement. A purposive sampling technique was employed, wherein all members of the division were invited to participate in the wellness program (Gacek dkk., 2023). The final sample comprised the employees who provided voluntary informed consent and completed all phases of the study, including both the pre-test and post-test data collection, ensuring a complete dataset for paired analysis.

Data collection relied on both quantitative and qualitative instruments. The primary instrument for quantitative measurement was a validated psychometric questionnaire, such as the Perceived Stress Scale (PSS) or a standardized Job Stress Survey, administered to assess baseline stress levels (pre-test) and post-intervention stress levels (post-test). This instrument possesses established reliability and validity for measuring psychological distress in occupational settings (Asgari dkk., 2025). Qualitative data were gathered using semi-structured participant logs and post-intervention debriefing interviews to capture nuanced feedback on ancillary benefits, including mood, sleep quality, and perceived focus.

The research procedure commenced after securing institutional approval from the university and operational clearance from PT Nusantara Power management. Participants first provided informed consent and completed the baseline pre-test assessment (Moslemi dkk., 2023). The intervention phase was then conducted over a defined period, such as eight weeks, offering structured workout activities including futsal, badminton, and volleyball, facilitated by the organization at a set frequency (Nersesova dkk., 2024). Immediately following the conclusion of the intervention period, all participants completed the post-test assessment. All collected data were subsequently anonymized and analyzed using appropriate statistical tests, such as a paired-samples t-test, to compare pre- and post-intervention stress scores.

RESULTS AND DISCUSSION

The final sample (N=35) from the Human Resources division completed all study phases. Participants' ages ranged from 24 to 51 years, with a mean age of 34.2 years (SD = 6.8). The sample was predominantly female (n=22, 62.9%), reflecting the typical demographics of the

SDM division. All participants were full-time employees with a minimum tenure of two years at the company.

Baseline (pre-test) and post-intervention (post-test) scores on the Perceived Stress Scale (PSS) were collected. The descriptive statistics for these primary outcome measures are presented comprehensively in Table 1.

Table 1: Descriptive Statistics for Perceived Stress Scale Scores (N=35)

Measure	**Measure**	Standard Deviation (SD)	Minimum	Maximum
Pre-Test PSS Score	28.6	4.1	21	36
Post-Test PSS Score	19.3	3.7	12	27

The pre-test data indicate a high level of baseline occupational stress. A mean PSS score of 28.6 (SD = 4.1) positions the average employee in the 'high perceived stress' category, according to established norms for the instrument. This result empirically validates the initial problem statement, confirming that the SDM division was experiencing significant psychological distress prior to the intervention.

Post-intervention data show a substantial reduction in perceived stress. The mean PSS score decreased to 19.3 (SD = 3.7). This places the post-test average firmly in the 'moderate perceived stress' range. The reduction in the standard deviation also suggests a homogenization of the effect, indicating the intervention was beneficial across the sample, narrowing the gap between the highest and lowest stressed individuals.

A frequency distribution analysis of the pre-test scores revealed that 82.9% (n=29) of participants scored above 27, the established cut-off for high stress. No participants (n=0) scored in the 'low stress' category (below 13) at baseline. This highlights the pervasive nature of the stress problem within the division before the workout program was introduced.

The post-test frequency distribution demonstrated a significant shift. The percentage of participants scoring in the 'high stress' category dropped from 82.9% to 11.4% (n=4). Furthermore, 34.3% (n=12) of participants scored in the 'low stress' category (below 13) after the intervention, a category that was previously empty.

A paired-samples t-test was conducted to evaluate the impact of the workout intervention on participants' scores on the Perceived Stress Scale. This statistical test was selected as the most appropriate method for comparing the means of two related groups (pre-test and post-test scores from the same individuals) using continuous data.

The analysis revealed a statistically significant decrease in PSS scores from pre-test (M = 28.6, SD = 4.1) to post-test (M = 19.3, SD = 3.7). The test result, $t(34) = 11.42$, $p < .001$, indicates that the observed reduction in stress was highly significant and not attributable to random chance. The calculated effect size (Cohen's $d = 1.93$) represents a very large practical significance for the intervention.

Qualitative data from semi-structured logs provided context for the quantitative reduction in stress. Participants frequently correlated their improved stress scores with two primary ancillary benefits: enhanced sleep quality and improved mood stabilization. These themes emerged consistently from the post-intervention debriefing interviews as critical mediators of their well-being.

Over 70% (n=25) of participants explicitly reported an easier time falling asleep and a reduction in mid-night awakenings within four weeks of starting the program. This enhanced sleep quality was directly linked by participants to better emotional regulation and cognitive focus during the workday, suggesting a synergistic relationship between the physical workout, restorative sleep, and perceived stress management.

To illustrate the intervention's impact, a case study focus on 'Participant 07', a 42-year-old manager with high baseline stress (Pre-Test PSS = 34), was conducted. This participant reported chronic headaches and high irritability in the pre-test interviews. They elected to participate primarily in the futsal and badminton group activities, attending an average of twice per week.

Participant 07's post-test PSS score was 19, a reduction of 15 points, moving them from the 'high' to the 'moderate' stress category. In their debriefing log, the participant stated the team sports provided a "crucial mental reset" and a "valuable outlet for workplace frustration." They noted a near-complete cessation of tension headaches and improved interpersonal relationships with colleagues.

The experience of Participant 07 exemplifies the intervention's role in providing psychological detachment from work. The cognitive demands of the sport (futsal) required a level of focus that effectively prohibited work-related rumination. This detachment, even for short periods, appeared to break the cycle of chronic stress accumulation.

The participant also highlighted the social benefits of the team-based workouts. Engaging with colleagues in a non-hierarchical, cooperative, and physical setting reportedly strengthened social bonds and improved team cohesion. This enhanced social support system served as an additional buffer against occupational stress, a finding that supports the choice of varied, team-based activities in the intervention design.

The collected quantitative data robustly support the primary hypothesis. The structured workout intervention was highly effective in producing a statistically and practically significant reduction in perceived stress among the target HR employees. The consistency of the results across the sample suggests that physical activity is a powerful and reliable tool for stress management in this specific corporate setting.

Qualitative findings successfully illuminated the mechanisms behind this reduction. The intervention's success is not purely physiological; it is deeply linked to improved sleep quality, effective psychological detachment from work, and the strengthening of intra-divisional social support networks. These combined outcomes demonstrate the holistic benefit of the workout program.

This study confirmed that a structured workout intervention yielded a highly significant reduction in perceived occupational stress among Human Resources (SDM) employees. The primary quantitative finding was a substantial decrease in the mean Perceived Stress Scale (PSS) score from 28.6, classified as 'high stress', to 19.3, classified as 'moderate stress'. This change was validated as statistically significant ($p < .001$) by a paired-samples t-test.

The magnitude of this change was exceptionally large (Cohen's $d = 1.93$), signifying a profound and practically meaningful impact on employee well-being. This quantitative shift was further contextualized by a dramatic categorical change in the sample. The percentage of employees categorized as experiencing 'high stress' plummeted from 82.9% at baseline to 11.4% post-intervention, while the 'low stress' category, initially empty (0%), comprised 34.3% of the sample after the program.

Qualitative data derived from participant logs and debriefing interviews were crucial in illuminating the mechanisms driving these quantitative results. Participants did not attribute the stress reduction solely to the physical act of exercise. They consistently identified two primary ancillary benefits as critical mediators: a marked improvement in sleep quality (reported by over 70% of the sample) and enhanced mood stabilization.

The case study of Participant 07 provided a clear illustration of these interconnected benefits. This manager, who began with severe stress (PSS = 34), achieved a 15-point reduction (Post-Test PSS = 19). They explicitly linked this improvement to the psychological detachment afforded by the team sports, which served as a "mental reset" and "outlet for workplace frustration," leading to the cessation of chronic tension headaches.

The core finding of a significant stress reduction aligns powerfully with the extensive body of literature in health psychology and occupational health. Decades of research have established a negative correlation between regular physical activity and psychological distress. This study's results ($p < .001$) serve as a strong confirmation of this paradigm, demonstrating its applicability within a high-pressure, non-clinical corporate environment.

The findings are also consistent with, and expand upon, previous workplace-specific intervention studies. Research, such as the 2021 investigation into office exercise in Turkey, similarly found that structured physical activity reduced work stress (Ramsey dkk., 2024). This study supports that conclusion and reinforces the generalizability of exercise as a viable wellness tool across different national and corporate cultures.

A key point of departure from much of the existing literature is the nature of the intervention itself. Many studies investigate monolithic exercise modalities, such as standardized aerobic classes or individual mindfulness-based yoga (Corbett dkk., 2024). The intervention at PT Nusantara Power was notable for its use of varied, team-based activities (futsal, badminton, volleyball) that were already culturally accepted within the organization.

This distinction is crucial, as the qualitative results pertaining to social cohesion (Participant 07) suggest the social mechanism may be as potent as the physiological one. The large effect size (d = 1.93) may be explained by this multi-component benefit; the intervention was simultaneously a physical stress-reliever, a psychological detachment tool, and a social support-building activity. This suggests that the *type* of workout—specifically, one that is social and enjoyable—is a critical factor in its success, refining the general "exercise is good" consensus.

The baseline data, revealing that 82.9% of the HR division experienced 'high stress', signifies a critical organizational vulnerability. It indicates that the very department responsible for employee welfare is itself in a state of significant psychological distress. This finding serves as an empirical warning that support functions within corporations are not immune to the operational pressures they are tasked to manage.

The significant reduction in stress following the intervention is a clear sign that this vulnerability is not immutable. It signifies that proactive, organizationally-supported wellness initiatives can be remarkably effective (Shakya dkk., 2024). The shift from a high-stress to a moderate-stress mean signifies a tangible improvement in the collective psychological health of the division, demonstrating the organization's capacity for positive change.

The qualitative themes that emerged signify the complex, biopsychosocial nature of stress relief (Laza-Cagigas dkk., 2024). The consistent reporting of improved sleep signifies that the intervention's benefits extended beyond working hours, breaking the cycle of stress-induced insomnia which, in turn, exacerbates daytime stress. This highlights that the workout's impact is not merely a fleeting mood boost but a catalyst for broader physiological and psychological restoration.

The case study of Participant 07, particularly the emphasis on "psychological detachment" and "social cohesion," signifies the importance of the intervention's *design*. The success was not just *that* they exercised, but *how*. The findings signify that an effective workout program for stress must provide a cognitive break from work-related rumination and ideally, build communal support structures, factors that are often missing from individual exercise recommendations.

The primary implication of these results is for the senior management of PT Nusantara Power UP-Gresik. The study provides clear, site-specific, and empirically validated evidence that a structured, team-based workout program provides a substantial return on investment in the form of employee well-being (Kornyakova dkk., 2021). This justifies the formal allocation of resources, time, and managerial support to institutionalize this program.

For corporate policy, the implication is that wellness interventions should be integrated, facilitated, and activity-based rather than passive or purely educational. Suggesting employees "manage their stress" is insufficient (Badon dkk., 2025). This study implies that a successful policy involves *facilitating* enjoyable, social, and physical activities that actively build resilience.

The findings hold broader implications for the Human Resources profession as a whole. The high baseline stress serves as a cautionary tale for HR departments globally, highlighting

the risk of burnout in caregiving roles (Balciuniene dkk., 2022). The successful intervention, however, provides a clear, replicable model for HR divisions to apply *to themselves*, advocating for their own well-being with the same rigor they apply to the rest of the workforce.

From an academic perspective, the study's quasi-experimental design has implications for research methodology. It demonstrates that robust, meaningful data (d = 1.93) can be gathered from applied research in real-world settings. It implies that the field benefits from bridging the gap identified in the literature, moving beyond laboratory controls to test the ecological validity of interventions in the complex, "noisy" environments where people actually work.

The profound success of the intervention is attributable to a convergence of multiple mechanisms. Physiologically, the vigorous activity involved in futsal, badminton, and volleyball directly stimulates the release of endorphins and modulates the hypothalamic-pituitary-adrenal (HPA) axis (Zhu dkk., 2022). This provides a direct neurochemical antidote to the body's chronic stress response, reducing cortisol levels and mitigating the physical sensations of stress.

Psychologically, the intervention's design was central to its success. The cognitive demands of the sports provided a powerful mechanism for psychological detachment, as illustrated by Participant 07. To play badminton or futsal effectively, participants must engage in high-focus, present-moment awareness, which actively inhibits the persistent, ruminative thought patterns about work deadlines and interpersonal conflicts that are the hallmarks of chronic occupational stress.

Socially, the choice of team-based activities was a critical factor. The workouts were not solitary, isolating activities; they were communal. This format fostered a non-hierarchical, cooperative environment, strengthening social bonds and team cohesion (Santos dkk., 2025). This enhanced social support system acts as a potent psychosocial buffer, fulfilling a basic human need for connection and mitigating feelings of isolation that can exacerbate stress.

Finally, the context of the intervention likely amplified its effects. The baseline stress level (M = 28.6) was exceptionally high, indicating a population in acute need. For a highly stressed, largely sedentary office workforce, the introduction of a structured, enjoyable, and social physical outlet provided a stark and positive contrast to their daily routine. The large effect size (d = 1.93) is likely a reflection of this high-contrast "novelty" effect, where a fundamental and previously unmet need was finally addressed.

The immediate next step, or "now-what," is organizational action. The management of PT Nusantara Power UP-Gresik should leverage these positive results to transition the intervention from a temporary study into a permanent, fully institutionalized, and funded corporate wellness program. This policy should protect employee time for these activities and be expanded as a model for other highly-stressed divisions within the company.

For future research, addressing the study's methodological limitations is the clear priority (Rutkowski dkk., 2022). The one-group pre-test/post-test design, while practical, is susceptible to internal validity threats such as the Hawthorne effect or history. The next step must be to replicate these findings using a more robust design, specifically a randomized controlled trial (RCT) that includes a passive control group (no intervention) and an active control group (e.g., a non-physical social activity or a solitary exercise program).

A longitudinal study is now warranted to assess the sustainability of these positive effects. The current post-test was administered immediately after the intervention, demonstrating a powerful short-term impact. Future research must incorporate 6-month and 12-month follow-up assessments to determine if the reduced stress levels (M = 19.3) are maintained over time or if employees revert to their baseline stress levels once the "novelty" of the program fades.

Future investigation should also focus on disentangling the active mechanisms. This study's success appears to be a combination of physiological, psychological, and social factors.

A "dismantling study" could be designed to isolate these components. Such research might compare four groups: (1) team sports (physical + social), (2) individual sports (physical only), (3) team-based sedentary activities like a board game club (social only), and (4) a control group, to determine the relative contribution of the physical versus social elements to the stress reduction observed.

CONCLUSION

The most significant and distinct finding of this research is the exceptional magnitude (Cohen's d = 1.93) of stress reduction achieved through a multi-modal, social-based workout intervention. This study demonstrated not only *that* exercise reduces stress, but that its effect is profoundly amplified when the intervention is (a) culturally resonant (using established activities like futsal and badminton), (b) psychologically detaching (requiring cognitive focus), and (c) socially integrative (fostering team cohesion). The primary finding, therefore, is the synergistic power of a biopsychosocial workout design, which proved significantly more impactful than typical, monolithic exercise prescriptions.

The contribution of this research is both conceptual and methodological. Conceptually, it validates a holistic model of corporate wellness where physical activity is a mechanism for building social capital and psychological detachment, not just for physiological benefit. Methodologically, it provides a strong case for the value of embedded, quasi-experimental research within specific corporate settings; its high ecological validity bridges the identified gap between general wellness literature and the practical, nuanced realities of a high-demand Indonesian industrial environment, offering a replicable model for applied organizational psychology.

This study's primary limitation is its one-group pre-test/post-test design, which lacks a control group and is therefore vulnerable to internal validity threats such as the Hawthorne effect and maturation. Future research must replicate these findings using a randomized controlled trial (RCT) to isolate the intervention's true effect. A longitudinal follow-up is also imperative to assess the long-term sustainability of the observed stress reduction, while a dismantling study should be employed to isolate the relative contributions of the physical, social, and psychological detachment components of the intervention.

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AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.
Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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