



The Corelation of Work Patterns, Physical Activity, and Physiological Factors with Well-Being in Female Workes

Betania Jumponi Hastuti^{1✉}, Heny Setyawati²

¹ Universitas Negeri Semarang, Indonesia; betaniajumponi@students.unnes.ac.id

² Universitas Negeri Semarang, Indonesia; henysetyawati@mail.unnes.ac.id

Article Info

History Articles

Received:
December 2025
Accepted:
December 2025
Published:
June 2026

Keywords:

Female Workers, Physical Activity, Spiritual Buffer, Well-Being, Work Pattern

Abstract

This study investigates the complex relationship between work patterns, physical activity, and physiological indicators specifically resting heart rate and blood pressure with the psychological well-being of female office workers at Tritunggal Christian School Semarang. Given the high administrative demands often faced by female workers, this research utilized a quantitative approach with a total sampling method (N=78). Well-being was measured using the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), and data were analyzed through Spearman's Rank correlation. The statistical results revealed that all null hypotheses were accepted ($p > 0.05$): Work Pattern ($p=0.290$; $\rho=-0.150$), Physical Activity ($p=0.697$; $\rho=0.045$), Resting Heart Rate ($p=0.783$; $\rho=0.031$), and Blood Pressure ($p=0.661$; $\rho=0.045$). These findings suggest that physiological and behavioral factors are not direct predictors of well-being in this specific community. The lack of significance is largely attributed to the "restriction of range" in physiological data and the dominant role of Christian spirituality and social support as a "super buffer" (Colossians 3:23 and 2 Timothy 1:7). This spiritual foundation effectively maintains well-being stability by framing work as a divine calling, regardless of job demands. Consequently, this research recommends prioritizing internal psychological and spiritual resources for future employee well-being interventions.

© 2026 Universitas Negeri Semarang

✉ Address correspondence:
Universitas Negeri Semarang, Kampus Sekaran, Gunungpati,
Semarang
E-mail: (betaniajumponi@students.unnes.ac.id)

INTRODUCTION

Psychological well-being is a fundamental aspect of human health that significantly impacts organizational productivity and individual quality of life [1]. For female office workers, achieving optimal well-being is often challenging due to the "double burden" of professional responsibilities and domestic roles [2]. According to the Job Demands-Resources (JD-R) model, prolonged exposure to high administrative demands without adequate recovery can lead to physiological strain [3], such as increased blood pressure and elevated resting heart rates [4]. While previous research has consistently highlighted the benefits of physical activity in mitigating stress, there remains a gap in understanding how these variables interact within specific value-based environments, such as faith-based educational institutions [5].

At Tritunggal Christian School Semarang, preliminary observations indicate that female staff members navigate intensive work patterns and high accountability. While theoretical frameworks suggest that sedentary work patterns and low physical activity should negatively correlate with well-being [6], unique cultural factors is specifically social support and spirituality may act as intervening variables [7]. This study is important because it explores whether traditional physiological and behavioral predictors of well-being hold true in a community that utilizes spiritual resilience as a primary coping mechanism [8]. Therefore, this research aims to develop previous findings by examining the correlation between work patterns, physical activity, and physiological indicators (resting heart rate and blood pressure) with the well-being of female office workers in this specific context [9]. The purpose of this study is to

determine the extent to which these physical factors contribute to the psychological state of employees within a Christian organizational framework.

METHODS

This study employed a quantitative correlational design with a cross-sectional approach to ensure the objective measurement of variables [10]. The research was conducted at Tritunggal Christian School Semarang, involving a total population of 78 female office workers. A total sampling technique was applied, ensuring that all participants met the inclusion criteria, including being active employees and providing informed consent. No missing values were recorded during the data collection process, allowing for a robust final analysis (N=78).

To measure the primary variables, three types of instruments were utilized. First, the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), consisting of 14 Likert-scale items (ranging from 1 "Never" to 5 "Always") [11], was used to assess psychological well-being [12]. Second, work patterns and physical activity levels were documented through validated structured questionnaires [13]. Third, physiological data specifically Resting Heart Rate (RHR) and Blood Pressure (BP) were measured using a standardized Omron digital tensimeter to ensure clinical accuracy. Participants were required to rest for five minutes before measurements were taken to obtain a true baseline heart rate [14].

The data collection procedure involved distributing digital and physical questionnaires followed by direct physiological screenings conducted on-site. The quantitative data were processed using SPSS version 26. Descriptive statistics (mean, standard deviation, and frequency

distribution) were calculated to profile the participants. Given the non-parametric nature of the behavioral data, Spearman's Rank Correlation (ρ) was utilized to test the research hypotheses, with a significance level set at $\alpha = 0.05$. This methodological transparency ensures that the study can be replicated in similar institutional settings.

RESULTS AND DISCUSSION

The descriptive analysis of the 78 female office workers at Tritunggal Christian School Semarang revealed a mean age of 40.68 years, representing a middle-aged professional demographic. The majority of respondents maintained a stable physiological profile, with blood pressure and resting heart rate (RHR) predominantly within the normal range. Based on the Spearman's Rank correlation analysis, the following results were obtained:

1. Work Pattern (WP) and Well-Being: The analysis showed a correlation coefficient of (ρ) = -0.121 with a significance value of $p = 0.290$ ($p > 0.05$). This indicates a very weak, negative, and non-significant relationship.
2. Physical Activity (PA) and Well-Being: A coefficient of (ρ) = 0.045 and $p = 0.697$ ($p > 0.05$) was found, suggesting that higher levels of physical activity did not linearly correspond to higher well-being scores in this group.
3. Resting Heart Rate (RHR) and Well-Being: The correlation was (ρ) = 0.000 with $p = 1.000$, showing absolutely no statistical relationship between resting pulse and psychological state.
4. Blood Pressure (BP) and Well-Being:

The analysis yielded (ρ) = 0.050 and $p = 0.661$ ($p > 0.05$), indicating no significant

connection between arterial pressure and well-being.

The rejection of all null hypotheses suggests that traditional behavioral and physiological indicators are not direct predictors of well-being for female workers in this specific organizational context. Theoretically, this lack of significance can be analyzed through the "Restriction of Range" phenomenon. Statistical variance was limited because the respondents' physical health data were highly homogeneous; most participants were in good health, which effectively masked any potential correlation that might appear in a more diverse population.

Beyond statistical limitations, the findings highlight a profound psychological mechanism at work. Despite intensive work patterns and high administrative demands, the well-being of the employees remained stable and relatively high [15]. This stability is driven by what this study identifies as a "Super Buffer" a combination of robust social support and deep-rooted Christian spirituality [16]. In the environment of Tritunggal Christian School, social support acts as a primary resource that mitigates the impact of work stress.

Furthermore, the integration of faith plays a critical role. Based on the values of Colossians 3:23, respondents tend to internalize their professional duties as a "calling" or service to God, rather than a mere secular burden. This spiritual reframing, supported by the resilience found in 2 Timothy 1:7, provides a psychological shield that prevents work-related stress from translating into physiological strain or decreased mental health. Consequently, internal spiritual resources appear to override the influence of external work patterns and

physical habits in determining the quality of life for these workers [17].

CONCLUSION

This study concludes that work patterns, physical activity, and physiological markers such as blood pressure and resting heart rate do not have a significant correlation with the well-being of female office workers at Tritunggal Christian School Semarang. The primary finding suggests that psychological well-being in this specific demographic is preserved by internal spiritual resilience and organizational social support, which function as a "super buffer" against workplace stressors. This research contributes to the field of sports science and organizational psychology by demonstrating that in value-driven institutions, spiritual resources can be more dominant than physical behaviors in maintaining mental health. Future interventions for employee well-being should therefore prioritize the enrichment of spiritual and psychosocial support systems alongside physical health programs.

ACKNOWLEDGEMENT

The authors would like to express their deepest gratitude to the management of Tritunggal Christian School Semarang for granting permission and providing excellent cooperation throughout the data collection process. Special appreciation is extended to all the female office workers who participated as respondents; their willingness and time were vital to the completion of this study. This research was independently funded by the authors and did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

REFERENCES

- Badan Pusat Statistik(BPS). (2023). *Keadaan Angkatan Kerja di Indonesia Agustus 2023*.
- Bekiros, S., Jahanshahi, H., & Munoz-Pacheco, J. M. (2022). A New Buffering Theory of Social Support and Psychological Stress. *National Library of Medicine*, 17(e0275364).
- Christianto, D. A. (2018). Hubungan Aktivitas Fisik Terhadap Kejadian Obesitas Berdasarkan Indeks Massa Tubuh Di Desa Banjaroyo. *Berkala Ilmiah Kedokteran Duta Wacana*, 3(2), 78. <https://doi.org/10.21460/bikdw.v3i2.97>
- Dharmansyah, D., & Budiana, D. (2021). Indonesian Adaptation of The International Physical Activity Questionnaire (IPAQ): Psychometric Properties. *Jurnal Pendidikan Keperawatan Indonesia*, 7(2), 159–163. <https://doi.org/10.17509/jpki.v7i2.39351>
- Dwi Laksono, R., Sanusi, A., & Arifin, S. (2023). *Work Stress And Well-Being In Indonesia: The Role Of Social Support And Healthy Life*. <https://doi.org/10.5281/zenodo.10441858>
- Elvera, Dr. SE. , Ms., & Astarina, Y. SE. , Ms. (2021). *Metodologi penelitian* (E. S. Mulyanta, Ed.; 1st ed.).
- Fruscione, S., Malta, G., Verso, M. G., Calascibetta, A., Martorana, D., & Cannizzaro, E. (2024). Correlation among job-induced stress, overall well-being, and cardiovascular risk in Italian workers of logistics and distribution. *Frontiers in Public Health*, 12.

- 2
<https://doi.org/10.3389/fpubh.2024.135821>
- Ganster, D. C., & Rosen, C. C. (2013). Work Stress and Employee Health: A Multidisciplinary Review. In *Journal of Management* (Vol. 39, Issue 5, pp. 1085–1122). <https://doi.org/10.1177/0149206313475815>
- Kovács, K., Borbély, S., Dobay, B., Halasi, S., Vajda, I., & Hideg, G. (2025). Factors influencing the well-being of Central and Eastern European university teachers: the role of physical activity and the sources of stress and resources in the workplace. *BMC Public Health*, 25(1). <https://doi.org/10.1186/s12889-025-24241-7>
- Rahman, M. A., Das, P., Lam, L., Alif, S. M., Sultana, F., Salehin, M., Banik, B., Joseph, B., Parul, P., Lewis, A., Statham, D., Porter, J., Foster, K., Islam, S. M. S., Cross, W., Jacob, A., Hua, S., Wang, Q., Chair, S. Y., ... Polman, R. (2024). Health and wellbeing of staff working at higher education institutions globally during the post-Covid-19 pandemic period: evidence from a cross-sectional study. *BMC Public Health*, 24(1). <https://doi.org/10.1186/s12889-024-19365-1>
- Sastroasmoro S, I. S. (2016). *Dasar-Dasar Metodologi Penelitian Klinis* (Sagung Seto, Ed.; 5th ed., Vol. 5). CV. Sagung Seto.
- Shi, X., Xu, X., Shi, H., Xie, X., Liu, Y., Wang, Q., & Wang, J. (2025). Parental Social Support and Preschoolers' Oral Health Behaviours: The Mediating Role of Parental Stress and Self-Efficacy. *International Dental Journal*, 75(5). <https://doi.org/10.1016/j.identj.2025.100856>
- Sulastra, M. C., Analya, P., Fun, L. F., Trijayanti, U., Joelin, G. C., Tallar, R. Y., Kiswantomo, H., Yuspendi, Edwina, O. I. P., Omega, S. P. D., Anindya, E. A. A. S., Kadiyono, E. V. A. L., Ningrum, F. A. D. P., & Kuntari, C. M. I. S. R. (2020). *Spiritualitas Dan Kesejahteraan Psikologis* (R. T. Manurung, Ed.; Zahir Publishing, Vol. 132). Zahir Publishing.
- Supriherti, E. (2023). *Penurunan Produktivitas Guru Akibat Stres Di SMKN 1 Blitar Dan Cara Mengatasinya*.
- Tabrani, W. A. (2025). *Pengaruh Stres Kerja dan Beban Kerja Terhadap Motivasi Kerja Di Paket Kegiatan Belajar Masyarakat Cita Kasih Bangsa* [Tesis]. Universitas Kristen Indonesia.
- Ulfiana, D., Ikhtiar, M., & Suharni. (2023). Analisis Pengaruh Kesehatan Keselamatan Kerja (K3) Dan Stres Kerja Terhadap Produktivitas Kerja Karyawan Di PT Pelindo Terminal Petikemas New Makassar Terminal 2. *Journal of Muslim Community Health (JMCH)*, 4(4), 51–64. <https://doi.org/10.52103/jmch.v4i4.1311>
- University of Warwick. (2025, May 12). The Warwick-Edinburgh Mental Wellbeing Scales - WEMWBS. *Warwick Medical School*.