



RESEARCH ARTICLE

Technostress and Psychological Well-Being Among Work-From-Anywhere (WFA) Workers in Kalimantan, Indonesia

Novianti Rizky Ramadhina¹, Rahmi Fauzia*², Meydisa Utami Tanau³

Published online: 24 February

Abstract: Work From Anywhere (WFA) arrangements expand geographic flexibility but intensify reliance on information and communication technologies, potentially increasing technostress and undermining psychological well-being. This cross-sectional study examined the association between technostress and psychological well-being among WFA workers in Kalimantan, Indonesia. Using purposive sampling, 171 eligible digital/ICT workers (20–45 years; ≥ 3 months WFA; >40 hours/week; excluding interns and freelancers) completed an online survey (February–March 2025) including the Technostress Creators Scale and Ryff's Psychological Well-Being Scale (PWBS). Participants were predominantly female (55.6%) and worked mainly in IT and digital marketing roles. Assumption checks supported normality and linearity. Simple linear regression showed that technostress was significantly and negatively associated with psychological well-being ($B = -0.873$, $SE = 0.092$, $\beta = -0.591$, $t = -9.628$, $p < .001$). The model was significant, $F(1, 169) = 92.70$, and explained 34.9% of the variance in psychological well-being ($R^2 = .349$; adjusted $R^2 = .346$). These findings suggest that technology-related demands constitute a substantial correlate of well-being in WFA settings and highlight the need for organizational practices that reduce techno-overload and techno-invasion, strengthen digital support, and protect recovery time. Future research should test mechanisms (e.g., strain and detachment) and incorporate key covariates using longitudinal or diary designs.

Keywords: technostress; psychological well-being; work from anywhere (WFA); remote work; boundary management; digital workers; Kalimantan; Indonesia

Abstrak: Pengaturan kerja Work From Anywhere (WFA) memperluas fleksibilitas geografis, namun meningkatkan ketergantungan pada teknologi informasi dan komunikasi sehingga berpotensi meningkatkan technostress dan menurunkan kesejahteraan psikologis. Studi potong lintang ini menguji hubungan antara technostress dan kesejahteraan psikologis pada pekerja WFA di Kalimantan, Indonesia. Dengan teknik purposive sampling, sebanyak 171 pekerja digital/ICT yang memenuhi kriteria (usia 20–45 tahun; menjalani WFA ≥ 3 bulan; bekerja >40 jam/minggu; tidak termasuk magang dan pekerja lepas) mengisi survei daring (Februari–Maret 2025) yang mencakup Technostress Creators Scale dan Ryff's Psychological Well-Being Scale (PWBS). Partisipan didominasi perempuan (55,6%) dan terutama bekerja pada bidang IT serta digital marketing. Pemeriksaan asumsi mendukung normalitas dan linearitas. Regresi linear sederhana menunjukkan bahwa technostress berasosiasi negatif dan signifikan dengan kesejahteraan psikologis ($B = -0,873$, $SE = 0,092$, $\beta = -0,591$, $t = -9,628$, $p < 0,001$). Model signifikan, $F(1,169) = 92,70$, dan menjelaskan 34,9% variasi kesejahteraan psikologis ($R^2 = 0,349$; adjusted $R^2 = 0,346$). Temuan ini menunjukkan bahwa tuntutan terkait teknologi merupakan korelat substansial bagi kesejahteraan dalam konteks WFA, serta menegaskan perlunya praktik organisasi untuk menurunkan techno-overload dan techno-invasion, memperkuat dukungan digital, dan melindungi waktu pemulihan. Riset selanjutnya perlu menguji mekanisme (mis. strain dan detachment) serta memasukkan kovariat kunci melalui desain longitudinal atau diary.

Kata kunci: technostress; kesejahteraan psikologis; work from anywhere (WFA); kerja jarak jauh; manajemen batas; pekerja digital; Kalimantan; Indonesia

^{1,2*,3} Psychology, Faculty of Medical and Health Sciences,
Lambung Mangkurat University

**) corresponding author*

Rahmi Fauzia
Jl. A. Yani km 36 Banjarbaru, Kalimantan Selatan, Indonesia
70712
Email: rahmi.fauzia@ulm.ac.id

INTRODUCTION

Work arrangements have continued to evolve beyond pandemic-era “work from home” practices toward more flexible models enabled by information and communication technologies (ICT). One increasingly visible form is Work From Anywhere (WFA)—a work design that grants employees geographic flexibility (the ability to live and work in a preferred location) alongside temporal flexibility to varying degrees, depending on organizational policy and

job requirements (Choudhury et al., 2021). In contrast, Work From Home (WFH) typically anchors work to the home as the primary worksite, while hybrid work combines office-based days with remote days under prescribed schedules or coordination norms (Leonardi et al., 2024). These distinctions matter because WFA may intensify boundary management demands: employees must manage not only when they work, but also where they work, often across changing physical contexts, connectivity conditions, time zones, and organizational expectations.

While WFA is often framed as a desirable nonpecuniary benefit that can improve autonomy and attract talent, it can also introduce psychosocial risks. Evidence suggests that geographic flexibility can yield performance gains in certain settings, but WFA simultaneously reshapes how workers experience distance, coordination, and technology dependence (Choudhury et al., 2021; Leonardi et al., 2024). From an occupational health perspective, these shifts are consequential because remote work can produce both resources (e.g., autonomy) and demands (e.g., work intensification, social isolation, boundary blurring), which together shape well-being outcomes.

In this study, psychological well-being (PWB) is treated as a central outcome because it reflects more than momentary affect—it captures individuals' positive functioning, purpose, and psychological resources that sustain healthy work and life adaptation (Ryff & Keyes, 1995). In remote and flexible work contexts, PWB is particularly vulnerable when employees face chronic demands that disrupt recovery and undermine a sense of control over work–nonwork boundaries. Research on remote work consistently highlights that boundary management becomes a key self-regulatory task and a major determinant of work–nonwork balance and well-being (Allen et al., 2021; Leonardi et al., 2024). Accordingly, examining pathways that erode boundary control is essential for explaining why WFA may not uniformly improve employee well-being.

One demand pathway that has received sustained attention is technostress. Technostress refers to stress experienced due to the use of ICT and the conditions created by technology-enabled work (Brod, 1984). A widely used framework conceptualizes technostress through “technostress creators,” such as techno-overload (technology increases workload and pace), techno-invasion (technology intrudes into nonwork time and space), and techno-complexity (technology demands new skills and constant learning) (Tarafdar et al., 2007). Contemporary evidence indicates that technostress is reliably linked to deteriorations in multiple well-being indicators, and recent synthesis work identifies techno-overload and techno-invasion as especially prominent drivers of adverse outcomes across studies (Mansuroğlu & Smith, 2026). In WFA settings, heavy reliance on digital tools for coordination, monitoring, and responsiveness can amplify these stressors because “always-on” connectivity becomes normalized and work boundaries become more permeable.

Building on this literature, the present study proposes a clearer mechanism for understanding technostress and PWB in WFA: technostress creators (especially techno-invasion and techno-overload) → disrupted boundary management and reduced psychological detachment/recovery → lower psychological well-being. Boundary theory suggests that when work and nonwork roles become highly integrated, employees must invest additional effort to protect boundaries, and failure to do so increases strain and undermines well-being (Allen et al., 2021). Recovery research further indicates that

psychological detachment from work is a critical process for restoring depleted resources; technology-enabled intrusions can impair detachment and thereby compromise well-being over time. Empirical work in “smart working” contexts supports this pathway, showing that technostress dimensions (notably techno-invasion and techno-complexity) relate to well-being through mechanisms involving workload and psychological detachment (Mondo et al., 2023). Thus, technostress is not merely an unpleasant byproduct of digital tools; it can operate as a meaningful psychosocial demand that erodes recovery and functioning—core components of PWB.

Despite rapid growth in technostress research, important gaps remain for WFA. First, many studies examine remote work in aggregate (often WFH or hybrid) without isolating the distinct conditions of WFA, where geographic flexibility and varying work locations may introduce additional technological and boundary-related demands. Second, recent reviews indicate that technostress and well-being evidence is still concentrated in a limited set of countries and sectors, underscoring the need for cross-contextual research that tests whether established patterns generalize across cultures and regions (Mansuroğlu & Smith, 2026). Third, even when technostress is linked to well-being, studies often stop at statistical significance rather than clarifying the practical meaning of effects in the context of work design and organizational policy. Addressing these gaps requires research that is explicit about what is unique in the studied context and why that context may shape WFA-related technostress dynamics.

The Kalimantan context provides a theoretically meaningful setting to extend the literature. Kalimantan represents a large geographic region with diverse urban–rural conditions and heterogeneous digital environments. National telecommunications statistics show broad expansion of internet access in Indonesia, reflecting increasing readiness for digitally mediated work, yet digital access and quality may still vary across regions and localities (Badan Pusat Statistik, 2025). Industry and association reporting also points to strong internet penetration levels in Kalimantan, supporting the feasibility of digital work while simultaneously highlighting the importance of understanding how ICT dependency is experienced by workers in this region (APJII, 2024). These contextual characteristics are relevant for WFA because fluctuations in connectivity, device adequacy, and digital support systems can influence perceived overload, invasion, and complexity—thereby shaping how technostress translates into well-being outcomes. Conceptually, Kalimantan is not included here merely as a geographic label; it represents a context where WFA may interact with infrastructure and boundary conditions in ways that warrant empirical testing.

Therefore, this study aims to examine the association between technostress and psychological well-being among workers operating in a WFA context in Kalimantan. Grounded in technostress and boundary/recovery perspectives, the study's contribution is operational in three ways: (1) it specifies WFA as a distinct work arrangement characterized by geographic flexibility and heightened ICT dependence; (2) it tests whether technostress is statistically associated with PWB in a context that is underrepresented in the broader technostress literature; and (3) it provides evidence to inform organizational practices that are often proposed but rarely evaluated, such as boundary-protective norms, workload design, and targeted support for technology demands. Consistent with prior evidence, the study expects that higher technostress will be associated with lower psychological well-being among WFA workers.

METHODS

Study Design

This study used a quantitative, cross-sectional correlational design to examine the association between technostress (predictor) and psychological well-being (outcome) among workers operating under a Work From Anywhere (WFA) arrangement in Kalimantan.

Participants and Eligibility Criteria

Eligible participants were adults who (a) had been working under a WFA arrangement for at least the past three months, (b) were 20–45 years old, (c) reported working more than 40 hours per week, (d) were employed in digital or information and communication technology (ICT)-based roles, and (e) resided in Kalimantan. To strengthen occupational comparability and reduce heterogeneity in employment status, interns and freelancers were not included. Individuals who did not meet these criteria were excluded.

Sampling Strategy and Sample Size

Participants were recruited using purposive sampling because a complete sampling frame of WFA workers in Kalimantan was not available, and the study aimed to reach respondents who met specific WFA and occupational criteria. Given the nonprobability nature of recruitment, population-precision formulas (e.g., Slovin) were not treated as the primary justification for sample size. Instead, the target sample size was set a priori to (a) exceed common minimum recommendations for stable estimation in regression-based models with covariates and (b) ensure adequate precision for estimating an association in a social/organizational context. The minimum recruitment target was set at 130 respondents, and the final analytic sample included all eligible respondents who provided complete and valid data ($N = 171$) after data quality screening.

Data Collection Procedure

Data were collected online using a structured questionnaire administered via Google Forms between February–March, 2025. The first page of the survey contained an informed consent statement describing the study purpose, voluntary participation, approximate completion time, confidentiality, and the right to discontinue at any time without penalty. Participants who completed the survey and met data-quality criteria received an e-money incentive. To protect confidentiality, e-wallet information (if collected) was stored separately from survey responses and used only for incentive distribution.

Several safeguards were applied to strengthen response integrity. First, the survey platform settings were configured to reduce the likelihood of duplicate submissions (e.g., restricting multiple submissions where feasible). Second, the dataset was screened for potential duplicates and low-quality responses. Third, attention-check items (instructed-response items) were embedded to identify inattentive responding; responses failing the attention check(s) were excluded from analysis according to a predefined rule (e.g., exclude if ≥ 1 attention check failed). Additional exclusion rules were applied for incompleteness and implausible response patterns.

Measures

Technostress

Technostress was measured using the Technostress Creators Scale (Tarafdar et al., 2007), which assesses five dimensions: techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. The instrument consists of 23 items rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Item scores were summed (or averaged) to create a composite technostress score, with higher scores indicating higher technostress.

Psychological Well-Being

Psychological well-being was assessed using the Psychological Well-Being Scale (PWBS) based on Ryff's framework, comprising 28 items across six dimensions (self-acceptance, positive relations with others, autonomy, purpose in life, personal growth, and environmental mastery). The Indonesian version used in this study followed the adaptation by Fadhill (2021). Items were rated on the same 5-point Likert scale, and a total score was computed such that higher scores indicate higher psychological well-being.

Covariates

Demographic and work-related variables were collected and treated as covariates to improve interpretability and reduce confounding. These included age, gender, domicile, tenure/length of employment, and weekly working hours. In the main inferential model, weekly working hours and tenure were prioritized as covariates because they plausibly relate to both ICT exposure/demand intensity and psychological well-being in flexible work contexts.

Statistical Analysis

All analyses were conducted at $\alpha = .05$ using SPSS. Descriptive statistics were computed for all study variables. Before inferential testing, assumptions were evaluated using diagnostic procedures appropriate for regression models, including checks for linearity, normality of residuals, homoscedasticity, multicollinearity (e.g., VIF), and influential observations (e.g., Cook's distance). The primary association between technostress and psychological well-being was tested using linear regression. In addition to the bivariate (simple) regression model, a covariate-adjusted model was estimated in which demographic/work covariates were entered first, followed by technostress (hierarchical regression). Effect size was reported using the coefficient of determination (R^2) for each model, as well as ΔR^2 to quantify incremental variance explained by technostress beyond covariates. Regression coefficients were reported with standard errors, 95% confidence intervals, and p-values.

RESULTS OF STUDY

A total of 171 Work From Anywhere (WFA) workers in Kalimantan participated in this study, exceeding the minimum target sample size of 130. The sample included 95 females (55.56%) and 76 males (44.44%). Most respondents reported having worked under the WFA arrangement for more than six months (55.93%). Participants represented a range of digital-based professions, with the largest groups working in Information Technology (16.37%) and digital marketing (15.78%).

Table 1. Descriptive Categories of Variables

Variable	Score Range	Classification	Frequency	Percentage
Technostress	$X < 42$	Low	62	36.3
	$42 \leq X < 84$	Moderate	109	63.7
	$84 \leq X$	High	0	0
Psychological Well-Being	$X < 42$	Low	0	0
	$42 \leq X < 84$	Moderate	142	83
	$84 \leq X$	High	29	17

Table 2. Assumption Checks for Regression Analyses: Normality and Linearity Test Results

Assumption Test	Indicator/Statistic	Sig. (p-value)	Decision Rule	Interpretation
Normality (Kolmogorov–Smirnov)	Asymp. Sig. (2-tailed)	0.200	$p > .05$	Normal
Linearity	Deviation from Linearity (Technostress–PWB)	0.064	$p > .05$	Linear

Table 3. Integrated Simple Linear Regression Results Predicting Psychological Well-Being from Technostress (Coefficients and Model Fit)

Model	Predictor	B	Std. Error	β	t	Sig. (p-value)	R	R ²	Adjusted R ²
1	Constant	110.815	4.196	–	26.987	< .001	0.591	0.349	0.346
1	Technostress	-0.873	0.092	-0.591	-9.628	< .001	0.591	0.349	0.346

Based on the predefined score cut-offs used in this study (Table 1), technostress levels were primarily in the moderate category: 62 respondents (36.3%) were classified as low technostress, 109 respondents (63.7%) as moderate technostress, and 0 respondents (0%) as high technostress. For psychological well-being, 142 respondents (83%) were classified as moderate and 29 respondents (17%) as high, with 0 respondents (0%) classified as low.

Regression assumptions were evaluated prior to inferential testing (Table 2). The Kolmogorov–Smirnov normality test produced Asymp. Sig. (2-tailed) = 0.200, indicating no statistically significant deviation from normality at the .05 level. The linearity test showed a Deviation from Linearity $p = 0.064$, supporting a linear relationship between technostress and psychological well-being.

Simple linear regression results (Table 3) indicated a statistically significant negative association between technostress and psychological well-being. Technostress significantly predicted psychological well-being, $B = -0.873$, $SE = 0.092$, $\beta = -0.591$, $t = -9.628$, $p < .001$, with a 95% confidence interval for B of approximately $[-1.053, -0.693]$. The overall model was significant, $F(1, 169) = 92.70$, $p < .001$, with $R = 0.591$, $R^2 = 0.349$, and Adjusted $R^2 = 0.346$. This indicates that technostress accounted for 34.9% of the variance in psychological well-being in this sample.

DISCUSSION

The present study examined the association between technostress and psychological well-being among Work From Anywhere (WFA) workers in Kalimantan. The regression results indicate a statistically significant negative relationship, such that higher technostress scores are associated with lower psychological well-being.

Importantly, the proportion of explained variance ($R^2 = .349$) suggests that technostress is not a trivial correlate but a substantive factor linked to well-being in this WFA setting. At the same time, the remaining unexplained variance reinforces that psychological well-being is multidetermined and likely shaped by additional job demands and resources (e.g., workload characteristics, autonomy, supervisor support, and organizational practices) that were not modeled in the current analysis.

This finding is consistent with the broader technostress literature conceptualizing technology-related demands as psychologically taxing when they exceed employees' coping resources. Early foundational work framed technostress as a human cost of rapid technological change (Brod, 1984), and subsequent organizational research has specified "technostress creators" that function as stressors in the workplace (Tarafdar et al., 2007). Empirical studies similarly report that technostress can undermine well-being across occupational contexts, including education during the pandemic (Feronika, 2022) and remote/smart working arrangements (Molino et al., 2020). Evidence that technostress is detrimental to well-being is also observed beyond mid-career samples; for example, technostress has been measured as a threat to well-being among older adults (Nimrod, 2018). In the Indonesian context—particularly in Kalimantan—prior local evidence has also linked technostress-related dynamics with organizational outcomes (Setyadi et al., 2019), making the current findings directionally coherent with both international and local bodies of evidence.

From a theoretical standpoint, the results align with the stressor–strain–outcome (SSO) logic often used to explain how technology demands translate into negative outcomes. However, because this study did not measure strain (e.g., technology exhaustion, anxiety, burnout symptoms, or emotional fatigue), the data only support the stressor → outcome pathway (i.e., technostress → psychological well-

being) rather than a full SSO test. Accordingly, SSO should be positioned here as a conceptual interpretive framework that is consistent with the direction of the association, not as confirmation of the complete mechanism. This distinction is important to avoid overclaiming and to keep inferences commensurate with the measured constructs. Future studies should explicitly model strain as a mediator to evaluate whether technostress affects well-being through impaired recovery, emotional exhaustion, or related psychological processes (Sonnentag, 2018; Tarafdar et al., 2007).

The association observed in this WFA sample is also interpretable using job demands–resources (JD–R) perspectives. In JD–R terms, technology-related demands can operate as job demands that consume energy and erode well-being when resources are insufficient, whereas supportive practices and autonomy can buffer their impact (Bakker & Demerouti, 2017; Demerouti et al., 2001). WFA arrangements may simultaneously increase flexibility and intensify boundary challenges, which can amplify technostress. Boundary management is therefore a plausible pathway: WFA can expand temporal and spatial flexibility but may blur work–nonwork boundaries, increase after-hours availability expectations, and disrupt psychological detachment—each of which is associated with poorer well-being (Allen et al., 2021; Sonnentag, 2018). Relatedly, evidence from smart-worker samples suggests that techno-stress and reduced psychological detachment can jointly explain diminished well-being under high demands (Mondo et al., 2023). In practical terms, when WFA workers remain “always on,” technology becomes a channel for persistent interruptions and role boundary violations, increasing the likelihood that recovery is compromised and well-being declines.

The occupational profile in this study—where many participants work in IT and digital marketing—may further intensify exposure to technostress creators. Roles that are heavily platform-dependent can heighten techno-overload (information volume, multitasking), techno-invasion (permeable boundaries, constant connectivity), techno-complexity (skill demands), and techno-uncertainty (continuous updates and change). Research has shown that such technology antecedents can trigger technostress and carry downstream implications for employees (Ayyagari et al., 2011; Califf et al., 2020; Salanova et al., 2013; Tarafdar et al., 2007). In WFA settings—particularly in regions where digital readiness and infrastructure conditions may vary—technology demands can also be compounded by connectivity instability and uneven access to resources, potentially creating additional friction in task completion and communication (Asosiasi Penyelenggara Jasa Internet Indonesia, 2024; Badan Pusat Statistik, 2025). These contextual factors provide a reasonable explanation for why technostress may emerge as a salient correlate of psychological well-being among WFA workers in Kalimantan.

The practical implications should be articulated in a way that maps recommendations to specific technostress dimensions, rather than offering generic calls for “better management.” Delphi-based evidence on preventing technostress highlights concrete organizational levers, including work design, leadership practices, and technology governance (Berger et al., 2024). First, to mitigate techno-complexity, organizations can provide structured digital skills training, role-tailored onboarding to new tools, and responsive technical support; such approaches are consistent with evidence linking digital competence and technostress outcomes in applied settings (Golz et al., 2021).

Second, for techno-invasion, organizations should implement explicit availability norms (e.g., communication-hour policies, delayed-send defaults, escalation protocols) and build employees’ boundary management capabilities (Allen et al., 2021; Shockley et al., 2024). Third, techno-overload can be addressed through workload calibration, coordination of platforms to reduce redundant channels, and norms that reduce interruption intensity (e.g., asynchronous-first practices for non-urgent communication), consistent with recovery-oriented recommendations emphasizing the need to protect unwinding time (Sonnentag, 2018). Fourth, to reduce techno-uncertainty, organizations can adopt change management routines (e.g., phased rollouts, advance communication, user involvement, and feedback loops) that lower cognitive burden during transitions (Califf et al., 2020; Berger et al., 2024). Finally, where techno-insecurity is salient, reskilling pathways and transparent communication about technology-related role changes may buffer threat perceptions and support psychological well-being (Ayyagari et al., 2011; Tarafdar et al., 2007). These targeted strategies can be complemented by remote work best-practice guidance emphasizing autonomy-supportive leadership and boundary support as key levers for sustainable well-being in flexible work arrangements (Shirmohammadi et al., 2022; Shockley et al., 2024; Lyzwinski, 2024).

At the same time, any applied claims should be framed cautiously. Several popular and industry reports suggest that remote work trends are expanding and that employees increasingly prioritize work–life balance, with concerns about burnout and well-being frequently noted (Goodlife, 2024; Gallup, 2025; PwC Indonesia, 2023). These sources can be used as contextual background to motivate the relevance of technostress in contemporary work but should not be treated as primary evidence for causal claims or intervention effectiveness. In the current study, because the design is cross-sectional and observational, the results support association-based interpretations and do not establish that reducing technostress will necessarily improve psychological well-being, even though such a pathway is plausible and supported by theory.

Several limitations should be explicitly acknowledged to guide interpretation and future research. First, the cross-sectional design prevents directional inference; reverse or reciprocal relationships remain possible (e.g., lower well-being may heighten perceived technostress). Second, reliance on self-report measures may introduce common method bias and inflate observed associations. Third, the current model did not include strain indicators or key covariates (e.g., working hours, tenure, job role demands, organizational support), limiting the ability to test mechanisms and boundary conditions. Future research would be strengthened by (a) incorporating strain as a mediator (e.g., technology exhaustion, emotional fatigue), (b) adding job resources and organizational practices as moderators, and (c) adopting stronger designs such as longitudinal, diary, or mixed-method approaches to capture within-person fluctuations in technostress and recovery processes over time (Sonnentag, 2018; Shockley et al., 2024). Such extensions would enable a more rigorous test of the SSO mechanism and a more actionable identification of levers that protect psychological well-being in WFA contexts.

CONCLUSION AND RECOMMENDATION

This study provides empirical evidence that technostress is negatively associated with psychological well-being among Work From Anywhere (WFA) workers in Kalimantan. In the tested model, higher technostress scores were linked to lower psychological well-being, and technostress accounted for 34.9% of the variance in psychological well-being ($R^2 = .349$), indicating a substantive statistical contribution within this sample. However, because the design is cross-sectional and relies on self-reported data, the findings should be interpreted as associational rather than causal, and the remaining unexplained variance suggests that other job and personal resources/demands not included in the current model likely also shape psychological well-being.

Practically, the findings underscore the need for organizations implementing WFA arrangements to manage technology-related demands more intentionally—particularly by strengthening digital skills support (to reduce techno-complexity), calibrating workload and communication flows (to reduce techno-overload), establishing clear availability norms and boundary-protection policies (to reduce techno-invasion), and applying structured change management when introducing new systems (to reduce techno-uncertainty). For future research, stronger inference and greater generalizability can be achieved by recruiting larger and more diverse samples beyond a single region, incorporating key covariates (e.g., tenure, working hours, job demands/resources), and directly testing mechanisms by measuring strain-related constructs and using longitudinal/diary or mixed-method designs.

DECLARATIONS

Ethics Approval And Consent To Participate

According to the Research Ethics Committee of the Faculty of Medicine and Health Sciences, Lambung Mangkurat University, this study was exempt from requiring formal ethical approval because the research involving surveys, interviews, or questionnaires where responses are completely anonymous and do not include sensitive or personal data and with no potential risk of harm to participants. Nevertheless, the study was conducted in accordance with the 1964 Declaration of Helsinki and its later amendments or equivalent ethical standards.

Consent For Publication

Not Applicable

Availability Of Data And Materials

The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.

Conflicts Of Interest Statement

The authors declare that they have no competing interests.

Funding

Not Applicable

Artificial Intelligence-Assisted Technology.

The authors declare that artificial intelligence-assisted tools (ChatGPT by OpenAI and Gemini by Google) were used to improve language clarity and grammar. All intellectual content, analysis, and interpretation of the results were

conducted by the authors, who take full responsibility for the manuscript.

Authors' contributions.

Novianti Rizky Ramadhina contributed to the conceptualization, methodology, formal analysis, data collection and writing of the original draft. Rahmi Fauzia contributed to the conceptualization, review and editing of the manuscript, and provided supervision. Meydisa Utami Tanau contributed to investigation, and reviewing the final manuscript. All authors have read and approved the final version of this manuscript.

ABOUT THE AUTHORS

Novianti Rizky Ramadhina has recently completed her undergraduate studies in Psychology at Universitas Lambung Mangkurat. Her research interests focus on industrial and organizational psychology, as well as human resource development.

Rahmi Fauzia is a lecturer in the Department of Psychology at Universitas Lambung Mangkurat. She earned her undergraduate degree in Psychology from Universitas Muhammadiyah Surakarta and obtained her Master of Arts (M.A.) in Psychology from Universitas Gadjah Mada. She is also a clinical psychologist who is currently undertaking various professional training programs in forensic psychology. In addition, she is an active member of HIMPSI South Kalimantan and the Indonesian Association of Forensic Psychologists.

Meydisa Utami Tanau is a lecturer in the Department of Psychology at Universitas Lambung Mangkurat. She completed both her undergraduate and professional master's degrees in Psychology at Universitas Gadjah Mada, and she is a licensed psychologist. Her research interests lie in positive and clinical psychology, and she is also an active member of HIMPSI South Kalimantan.

REFERENCES

- Allen, T. D., Merlo, K., Lawrence, R. C., Slutsky, J., & Gray, C. E. (2021). Boundary management and work-nonwork balance while working from home. *Applied Psychology*, 70(1), 60–84. <https://doi.org/10.1111/apps.12300>
- Asosiasi Penyelenggara Jasa Internet Indonesia. (2024). *Survei penetrasi internet Indonesia 2024* [Report]. APJII. <https://survei.apjii.or.id/survei/group/9>
- Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *MIS Quarterly*, 35(4), 831–858. <https://doi.org/10.2307/41409963>
- Badan Pusat Statistik. (2025). *Statistik telekomunikasi Indonesia 2024* [Annual report]. BPS-Statistics Indonesia.
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Berger, M., Schäfer, R., Schmidt, M., Regal, C., & Gimpel, H. (2024). How to prevent technostress at the digital workplace: A Delphi study. *Journal of Business Economics*, 94(7–8), 1051–1113. <https://doi.org/10.1007/s11573-023-01159-3>
- Brod, C. (1984). *Technostress: The human cost of the computer revolution*. Addison-Wesley.

- Califf, C., Sarker, S., & Sarker, S. (2020). The bright and dark sides of technostress: A mixed-methods study involving healthcare IT. *MIS Quarterly*, 44(2), 809–856. <https://doi.org/10.25300/MISQ/2020/14818>
- Choudhury, P., Foroughi, C., & Larson, B. (2021). Work-from-anywhere: The productivity effects of geographic flexibility. *Strategic Management Journal*, 42(4), 655–683. <https://doi.org/10.1002/smj.3251>
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- Feronika, F. (2022). Pengaruh technostress terhadap kesejahteraan psikologis guru di masa pandemi covid-19. *Jurnal Pendidikan Tambusai*, 6(2), 8979–8984. <https://doi.org/10.31004/jptam.v6i2.3811>
- Gallup. (2025). *State of the global workplace report* (R. Pendell, Ed.). Gallup Press.
- Golz, C., Peter, K. A., Müller, T. J., Mutschler, J., Zwakhlen, S. M. G., & Hahn, S. (2021). Technostress and digital competence among health professionals in Swiss psychiatric hospitals: Cross-sectional study. *JMIR Mental Health*, 8(11), e31408. <https://doi.org/10.2196/31408>
- Goodlife. (2024). *Work-life balance di era digital* [Report]. Goodlife.
- Leonardi, P. M., Parker, S. H., & Shen, R. (2024). How remote work changes the world of work. *Annual Review of Organizational Psychology and Organizational Behavior*, 11(1), 193–219. <https://doi.org/10.1146/annurev-orgpsych-091922-015852>
- Lyzwinski, L.-N. (2024). Organizational and occupational health issues with working remotely during the pandemic: A scoping review of remote work and health. *Journal of Occupational Health*, 66(1), uiae005. <https://doi.org/10.1093/joccuh/uiae005>
- Mansuroğlu, E., & Smith, A. P. (2026). Technostress and employee well-being: A systematic review of empirical evidence. *Computers in Human Behavior Reports*, 21, 100941. <https://doi.org/10.1016/j.chbr.2026.100941>
- Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., & Cortese, C. G. (2020). Wellbeing costs of technology use during covid-19 remote working: An investigation using the Italian translation of the technostress creators scale. *Sustainability*, 12(15), 5911. <https://doi.org/10.3390/su12155911>
- Mondo, M., Pileri, J., Barbieri, B., Bellini, D., & De Simone, S. (2023). The role of techno-stress and psychological detachment in the relationship between workload and well-being in a sample of Italian smart workers: A moderated mediated model. *Social Sciences*, 12(10), 530. <https://doi.org/10.3390/socsci12100530>
- Nimrod, G. (2018). Technostress: Measuring a new threat to well-being in later life. *Aging & Mental Health*, 22(8), 1086–1093. <https://doi.org/10.1080/13607863.2017.1334037>
- PwC Indonesia. (2023). *The future of remote work in Indonesia* [Report]. PwC Indonesia.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719–727. <https://doi.org/10.1037/0022-3514.69.4.719>
- Salanova, M., Llorens, S., & Cifre, E. (2013). The dark side of technologies: Technostress among users of information and communication technologies. *International Journal of Psychology*, 48(3), 422–436. <https://doi.org/10.1080/00207594.2012.680460>
- Setyadi, H. J., Taruk, M., & Pakpahan, H. S. (2019). Analisis dampak penggunaan teknologi (technostress) kepada dosen dan staff karyawan yang berpengaruh terhadap kinerja di dalam organisasi (studi kasus: perguruan tinggi di kalimantan timur). *Informatika Mulawarman: Jurnal Ilmiah Ilmu Komputer*, 14(1), 1. <https://doi.org/10.30872/jim.v14i1.1792>
- Shirmohammadi, M., Au, W. C., & Beigi, M. (2022). Remote work and work-life balance: Lessons learned from the COVID-19 pandemic and suggestions for HRD practitioners. *Human Resource Development International*, 25(2), 163–181. <https://doi.org/10.1080/13678868.2022.2047380>
- Shockley, K. M., Allen, T. D., & Grant, R. S. (2024). *Remote work: Post-COVID-19 state of the knowledge and best practice recommendations* (SIOP White Paper Series). Society for Industrial and Organizational Psychology. <https://www.siop.org/resource/post-covid-19-state-of-the-knowledge-and-best-practice-recommendations/>
- Sonnentag, S. (2018). The recovery paradox: Portraying the complex interplay between job stressors, lack of recovery, and poor well-being. *Research in Organizational Behavior*, 38, 169–185. <https://doi.org/10.1016/j.riob.2018.11.002>
- Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1), 301–328. <https://doi.org/10.2753/MIS0742-1222240109>

ADDITIONAL INFORMATION

Correspondence All inquiries and requests for additional materials should be directed to the Corresponding Author.

Publisher's Note Utan Kayu Publishing maintains a neutral stance regarding territorial claims depicted in published maps and does not endorse or reject the institutional affiliations stated by the authors.

Open Access This article is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0), which permits others to share, adapt, and redistribute the material in any medium or format, even for commercial purposes, provided appropriate credit is given to the original author(s) and the source, a link to the license is provided, and any changes made are indicated. If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. To view a copy of this license, visit <https://creativecommons.org/licenses/by-sa/4.0/>.

© The Author(s) 2026

This page has been intentionally left blank