

Psychological well-being as a driver of MSMEs performance: Insights from Tangkahan ecotourism

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Abstract

Purpose: This study aims to explore the relationship between job satisfaction, mental health, motivation, stress management, and performance of MSME actors engaged in the Tangkahan ecotourism sector. The main focus of this study is to understand what psychological factors and working conditions contribute the most to improving the performance of MSMEs in the sector.

Methodology/approach: This study involved 117 MSME participants from university and government training programs. Data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) and supported by field observations to validate and strengthen the obtained quantitative finding.

Results/findings: The study found that job satisfaction and mental health positively and significantly affect MSME performance, while motivation shows no significant impact. Psychological conditions and work environment play greater roles. Stress management indirectly enhances performance by improving mental health, despite its insignificant direct effect on performance.

Conclusion: This study concludes that psychological well-being and job satisfaction are key factors in improving the performance of MSME actors in the ecotourism sector. Therefore, it is important for stakeholders to create a mentally supportive work environment and implement effective stress management strategies to optimize the productivity of MSMEs.

Limitations: This study has limitations in the geographical scope and characteristics of the respondents, which only includes MSME actors in the Tangkahan ecotourism area. Therefore, the results of this study cannot be generalized to other MSME regions or sectors.

Contribution: This study contributes to MSME empowerment policy by emphasizing mental health and job satisfaction improvement. The findings guide universities, governments, and institutions in designing effective interventions to enhance MSME actors' productivity and overall performance.

Keywords: *CIPP Policy Evaluation, Halal Tourism, West Nusa Tenggara*

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1. Introduction

The Tangkahan tourist area serves as an economic driver for the local community, being one of the favorite destinations both nationally and internationally in North Sumatra. The community benefits economically from Tangkahan's tourist industry Siregar, Prayudi, Sari, Rosalina, and Pratama (2023); Wiratno, Withaningsih, Gunawan, and Iskandar (2022), which has also effectively altered the community's prior practices of relying on forest goods through illicit hunting and logging. The existence of Tangkahan's natural tourism is an opportunity for locals to start businesses in the service and trade sectors. Many Tangkahan residents are involved in MSMEs in the creative economy sector, such as souvenirs, furniture, and tourism services (Prayudi, Pratiwi, Aulia, & Sari, 2023).

According to the BPS Langkat Regency, 117 MSMEs are engaged in handicrafts and tourism services. However, the creative economy industry has not significantly impacted local economic growth (BPS, 2023). Based on researchers' observations, MSME actors involved in tourism are less optimal in seizing business opportunities, especially with foreign tourists, due to several constraints, mainly the ability to communicate in foreign languages and business management issues. The suboptimal utilization of opportunities by residents is relevant to the poverty level in the Tangkahan area, which recorded 7.5% of the population living in poverty in 2023. Given the significant economic potential of Tangkahan's ecotourism sector, efforts to enhance MSME competencies have primarily focused on technical training, such as English language proficiency, marketing strategies, information technology, digital literacy, and business management training. While these skills are essential, an equally important, yet often overlooked, factor is the psychological well-being of human resources.

The sustainability and success of MSMEs are not only driven by technical skills but also by the mental health and overall well-being of their employees (Martínez-Falcó, Sánchez-García, Marco-Lajara, & Millán-Tudela, 2024; Rosiana, Tjahjono, Muafi, & Isfianadewi, 2024). Psychological aspects, including job satisfaction, stress management, motivation, and a sense of belonging, play critical roles in maintaining service quality and customer satisfaction (Filimonau, Matyakubov, Matniyozov, Shaken, & Mika, 2024; Koomson, 2024; Wei, 2023). Without addressing these aspects, MSMEs may struggle with high employee turnover, reduced productivity, and diminished service standards, all of which can hinder the long-term growth of Tangkahan's ecotourism industry (Johansen & Konu, 2025; Lukito et al., 2025). Therefore, integrating psychological well-being into capacity-building programs is essential to ensure a holistic approach to human resource development in the sector (Bakhshi, Agrawal, Mendon, Birau, & Bărbăcioru, 2023; Dagher & Fayad, 2024).

This study focuses on the significance of psychological well-being in supporting the effectiveness of human resource development for MSME actors in the Tangkahan ecotourism sector, emphasizing its impact on service quality, employee retention, and overall sustainability of the local economy. Previous research in human resource management has consistently shown that psychological well-being and job satisfaction are inseparable from compensation systems and the quality of human capital. Compensation was found to play a mediating role that translates employees' educational background and work experience into greater job satisfaction and productivity (Aprilia, Indiworo, & Meiriyanti, 2023). Similarly, employee performance improvement is not merely determined by technical ability but also by internal motivation and satisfaction derived from equitable reward systems. These findings suggest that integrating compensation fairness and psychological support into MSME development policies can further strengthen ecotourism-based businesses' sustainability.

Leadership fairness, justice, and motivation have been widely recognized as determinants of psychological well-being and performance. Studies in organizational contexts have found that fair leadership and transparent communication enhance job satisfaction and reduce counterproductive behaviors (Pradikto, Prasetya, & Hutahayan, 2025). Similarly, motivation, training, and organizational culture significantly affect employee performance in Indonesia's maritime industry (Fazry, 2024). These findings underline that sustainable performance depends on leadership integrity, motivation, and well-being alignment across sectors, including MSMEs and ecotourism.

2. Literature review

2.1. *Tangkahan Ecotourism Context and the Role of MSMEs*

One of Indonesia's most popular ecotourism destinations is Tangkahan, which provides travelers with a singular opportunity to fully immerse themselves in the natural world (Kartika & Riana, 2020). MSMEs are essential for supplying lodging, tour guides, culinary services, and other auxiliary services, and the local community has enthusiastically embraced this industry (Ismarizal, Malihah, & Andari, 2023). However, MSMEs in Tangkahan face several obstacles, such as scarce resources, inconsistent revenue, and trouble sustaining high-quality services. The health of human resources may be severely strained by these difficulties, which may affect their productivity and the viability of the ecotourism industry as a whole (Dwikardana & Teressia, 2022).

Numerous psychological and HRM viewpoints are included in the concept of human resource well-being in the ecotourism industry. The psychological well-being of workers is a multidimensional construct encompassing the emotional, mental, and social aspects of an individual's experience within the workplace. It is influenced by critical factors such as job satisfaction, work-life balance, stress management, and a sense of purpose, each of which plays a vital role in maintaining an individual's motivation and performance stability (Nora, Djatmika, & Pratikto, 2024; Nurhasanah, Pratama, & Nurmaisayah, 2023).

2.2. *HR Well-being in the Ecotourism Sector*

In the ecotourism industry, human resource well-being refers to the general psychological and emotional health of the staff, which can significantly affect their motivation, dedication, and performance (Carvache-Franco, Gutiérrez-Candela, Guim-Bustos, Carvache-Franco, & Carvache-Franco, 2020). In the context of ecotourism, psychological well-being elements, including motivation, stress management, mental health, and work satisfaction, are especially pertinent. For instance, the ecotourism industry's erratic nature and the requirement to deliver top-notch services may cause personnel to become more stressed and burned out, which may have a detrimental effect on both their general well-being and the sector's sustainability as a whole.

Leadership quality and justice are essential in shaping employee satisfaction, motivation, and psychological resilience. Evidence from recent HRM studies indicates that transparent leadership and equitable treatment reduce the likelihood of counterproductive work behavior while fostering trust and engagement (Pradikto et al., 2025). Parallel evidence from maritime organizations also shows that motivation and training serve as strategic levers to strengthen employees' performance, discipline, and loyalty (Fazry, 2024). These perspectives reaffirm that leadership fairness and continuous development initiatives play an integral role in sustaining the psychological well-being of MSME actors in community-based ecotourism.

For MSMEs to succeed and remain viable over the long run, it is imperative that psychological issues be addressed to improve the well-being of human resources in the Tangkahan ecotourism industry. From an organizational behavior perspective, motivation has often been identified as a central channel through which psychological well-being affects work outcomes. Studies by Syahreza, Bahri, Akhyar, Bachri, and Muhamad (2025) revealed that self-efficacy significantly enhances employee motivation and performance, while work discipline and compensation alone show weaker effects if not supported by psychological empowerment. This reinforces the notion that human resource well-being should encompass both internal psychological states and external structural support, such as fair compensation and supportive supervision.

The concept of productivity as a mediator between work behavior and performance has also been emphasized in the manufacturing sector. Ichdan (2024) demonstrated that motivation, work discipline, and Kaizen culture are vital drivers of employee productivity, which, in turn, enhances overall performance. His findings indicate that motivation and discipline indirectly influence performance through productivity, revealing the importance of process improvement and behavioral consistency as psychological reinforcements. Translating these findings into the MSME ecotourism context suggests

that productivity-oriented mindsets rooted in continuous improvement and self-discipline can serve as psychological resources that sustain the performance of small-scale tourism entrepreneurs.

Based on the background and several supporting studies, the research hypotheses are as follows:

H1: Job satisfaction has a positive and significant effect on MSME performance in the Tangkahan ecotourism sector.

H2: Mental health has a positive and significant effect on the performance of MSMEs in the Tangkahan ecotourism sector.

H3: Motivation does not significantly affect the performance of MSMEs in the Tangkahan ecotourism sector.

H4: Stress management has a positive and significant effect on the mental health of MSMEs in the Tangkahan ecotourism sector.

H5: Stress management does not have a significant direct effect on the performance of MSMEs within the Tangkahan ecotourism sector.

H6: Stress management indirectly affects performance through mental health as a mediating variable in MSMEs within the Tangkahan ecotourism sector

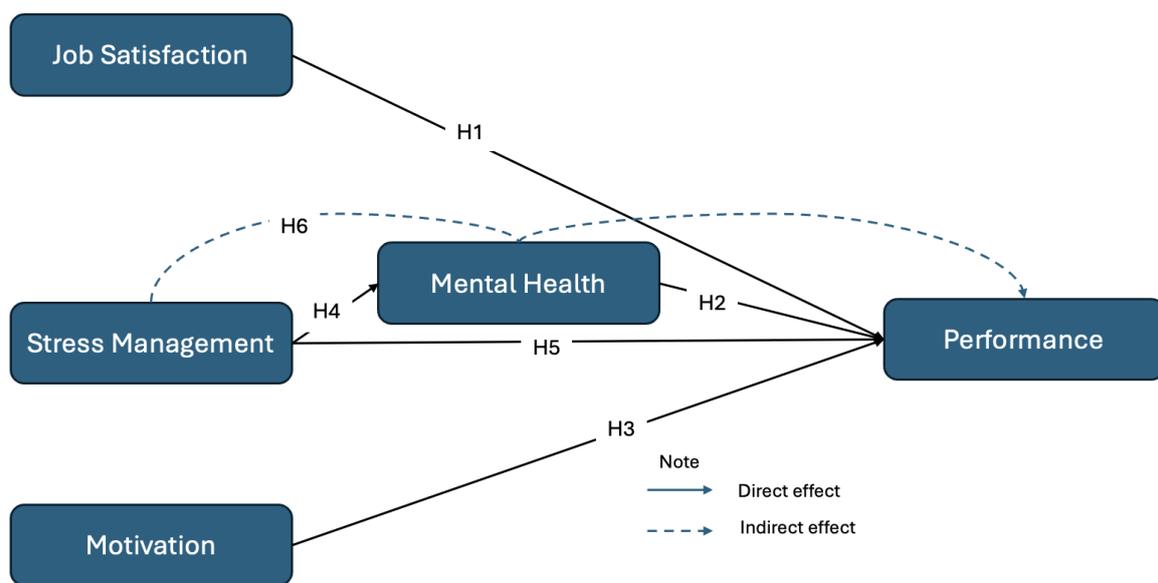


Figure 1. Conceptual Framework

3. Methodology

This study is an experimental research with a population of 117 MSME actors in the Tangkahan area, specifically focusing on those involved in the ecotourism sector. Of the 117 business actors, all were included as research respondents using the total sampling method, in which every member of the population was involved because the number was relatively limited and adequately represented the overall characteristics of the population. Questionnaires were used to collect data. The questionnaire assessed MSME actors' psychological well-being, including motivation, work satisfaction, stress management, and mental health.

Structural Equation Modeling Partial Least Squares (SEM-PLS) analysis was conducted to examine the structural relationships between the variables in the study. SEM-PLS was chosen because it allows simultaneous testing of multiple dependent and independent variables while accounting for measurement errors. Unlike traditional regression techniques, SEM-PLS is particularly useful for analyzing complex models, handling small sample sizes, accommodating non-normal data, and assessing latent constructs measured using multiple indicators.

Several conditions must be met to ensure the validity and reliability of the SEM-PLS analysis. Convergent validity was assessed using the Average Variance Extracted (AVE), which should be

greater than 0.5. Discriminant validity was evaluated using the Fornell-Larcker Criterion and the Heterotrait-Monotrait Ratio (HTMT), which should be below 0.9. Reliability is determined by Composite Reliability (CR) and Cronbach's alpha, both of which should exceed 0.7.

In addition to validity and reliability checks, the structural model assessment includes evaluating the Coefficient of Determination (R^2) to measure explanatory power, Effect Size (f^2) to determine the relative impact of each predictor, and Predictive Relevance (Q^2) to assess model accuracy. The final step involved bootstrapping, a resampling technique used to test the significance of path coefficients and mediation effects, ensuring that p-values remained below 0.05 for statistical significance. By integrating SEM-PLS analysis, this study provides a more comprehensive understanding of how participatory training influences MSME performance, particularly by considering the mediating role of psychological factors such as mental health.

4. Results and discussion

4.1. Results

4.1.1. Respondent Profile

A total of 117 artisans who made souvenirs participated in the survey as respondents. Table 2 shows the respondents' demographic distribution by age, education, and gender. According to the data collection results, sixty-seven people, or fifty-seven percent of the respondents) were female, and fifty people, or forty-three percent, were male. In terms of age, nearly half of the respondents (49.57%) were aged between 31 and 40 years, followed by 21.37% in the 21 to 30 age group. Meanwhile, 17.95% of respondents were aged 41–50, 7.69% were in the 51–60 age range, and only 3.42% were aged 61–70. This data indicates that the majority of handicraft MSME participants in Tangkahan fall within the productive age category, which is often associated with innovation and adaptability to new skills acquisition.

Regarding education, the majority of respondents (58.97%) had completed high school, followed by 25.64% who had completed junior high school. Additionally, 6.84% had obtained a diploma, 4.28% had a bachelor's degree, and 4.27% had completed only elementary school. This distribution suggests that most handicraft MSME participants have a relatively strong educational background, allowing them to engage effectively in training programs and business development initiatives in the area.

Table 1. Respondent Profile

	Characteristic	Frequency	Percent
Gender	Male	50	43%
	Female	67	57%
Age	< 20	0	0
	21 - 30	25	21.37%
	31 - 40	58	49.57%
	41 - 50	21	17.95%
	51 - 60	9	7.69%
	61 – 70	4	3.42%
Education	Elementary School	5	4.27%
	Junior High School	30	25.64%
	High School	69	58.97%
	Diploma	8	6.84%
	Bachelor's Degree	5	4.28%

4.1.2. SEM-PLS Analysis

The outer loadings in the proposed model all had values above 0.7, indicating strong indicator reliability. In Structural Equation Modeling-Partial Least Squares (SEM-PLS), an outer loading above 0.7 suggests that the observed variables (indicators) have a strong correlation with their respective latent constructs, confirming convergent validity. All these values exceeded the 0.7 threshold (figure 2). This

confirms that the indicators of each construct effectively measure the intended latent variables, ensuring measurement validity in the SEM-PLS analysis.

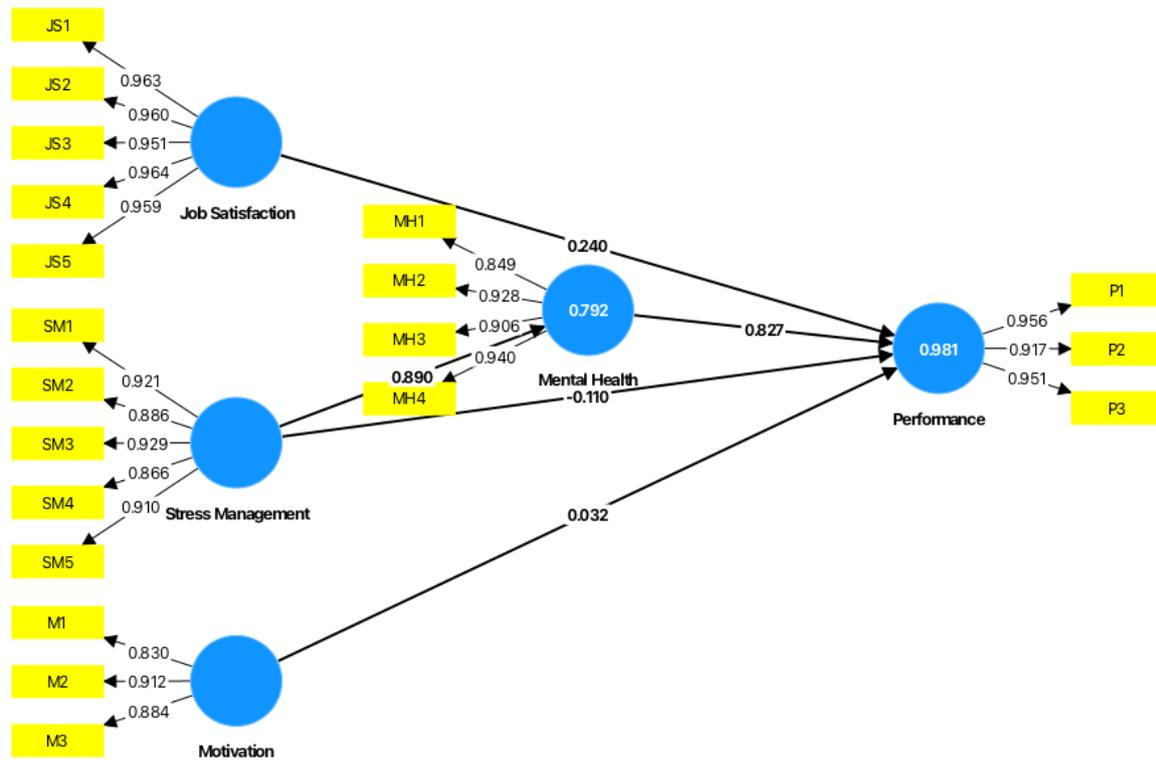


Figure 2. Outer Loading and R-Square

The R-squared (R²) value in the SEM-PLS analysis is an essential measure of how well the independent variables explain the dependent variable. A higher R² value indicates a stronger model, meaning that the latent variable is well explained by the predictors in the structural equation model. In this study, the Mediating Variable (Mental Health) had an R² value of 0.792, meaning that 79.2% of its variability was explained by the independent variables influencing it. This suggests that the predictors in the model significantly contributed to explaining the mediating construct.

Meanwhile, the Dependent Variable (performance) has an R² value of 0.981, indicating that 98.1% of the variation in performance is explained by the influencing variables in the model. This exceptionally high R² value demonstrates that the model is highly effective in capturing the relationship between constructs. Generally, an R² value above 0.75 is considered strong, a value between 0.50 and 0.74 is moderate, and a value between 0.25 and 0.49 is weak. Because the R² values in this model are mostly above 0.75, the results indicate that the model has a strong predictive ability, making it valid for explaining the relationships between variables in the SEM-PLS analysis.

Table 2. Cronbach's Alpha and AVE

	Cronbach's alpha	Composite reliability (rho a)	Composite reliability (rho c)	Average variance extracted (AVE)
Job Satisfaction	0.978	0.978	0.983	0.920
Mental Health	0.927	0.928	0.948	0.822
Motivation	0.849	0.862	0.908	0.767
Performance	0.936	0.936	0.959	0.886
Stress Management	0.943	0.945	0.957	0.815

In this study, the validity and reliability assessments confirmed that all measurement criteria were met, ensuring the robustness of the measurement model. The Average Variance Extracted (AVE), which measures convergent validity, should be larger than 0.5 to show that the concept accounts for more than

half of the variance of its indicators. Because all the AVE values in the model exceeded this threshold, it confirmed that the constructs effectively captured their intended variables, demonstrating strong convergent validity.

Discriminant Validity was evaluated using cross-loading analysis, which requires that each indicator loads more strongly on its associated construct than on any other construct. The results show that all indicators meet this requirement, confirming that each construct is distinct and does not overlap significantly with the others. This ensured that the discriminant validity of the model was well established. Reliability was measured using Composite Reliability (CR) and Cronbach's alpha, both of which must be greater than 0.7 to indicate internal consistency. The findings confirm that all constructs surpassed this threshold, demonstrating that the indicators consistently measured their respective constructs with high reliability.

Table 3. PLS Output

No	Variables	Std. Beta	Std. Error	T statistics	P values	Effect	Hypothesis
1	Job Satisfaction -> Performance	0.240	0.008	2.984	0.003	Direct	Accept
2	Mental Health -> Performance	0.827	0.101	8.189	0	Direct	Accept
3	Motivation -> Performance	0.032	0.067	0.479	0.632	Direct	Reject
4	Stress Management -> Mental Health	0.890	0.025	35.671	0	Direct	Accept
5	Stress Management -> Performance	-0.110	0.059	1.877	0.061	Direct	Reject
6	Stress Management -> Performance	0.736	0.719	0.083	0	Indirect	Accept

4.2. Discussion

4.2.1. The Impact of Job Satisfaction on Performance

The relationship between Job Satisfaction and Performance was analyzed in this study, and the results indicated a significant positive effect. The path coefficient value of 0.24 suggests that job satisfaction has a moderately positive influence on performance. This means that as job satisfaction increases, performance improves. The standard error of 0.08 indicates variability in the estimated effect, ensuring that the results are statistically reliable. The t-value of 2.984 exceeds the critical threshold of 1.96, which is commonly used in hypothesis testing at a 95% confidence level. This high t-value provides strong evidence that job satisfaction significantly contributes to performance.

Additionally, the p-value of 0.003 is well below the significance level ($\alpha = 0.05$), confirming that the relationship between job satisfaction and performance is significant. Since the p-value is less than 0.05, the hypothesis stating that "Job Satisfaction positively affects Performance" is accepted. These findings align with existing theories in organizational behavior and human resource management, where job satisfaction is recognized as a key driver of employee productivity and performance. Employees who are satisfied with their work environment, compensation, and job roles tend to be more motivated, engaged, and committed to achieving the organization's goals. Consequently, companies that invest in improving job satisfaction through better working conditions, recognition programs, and employee engagement strategies are likely to see improvements in overall performance.

This result is consistent with findings that compensation and job satisfaction jointly enhance employee motivation and productivity (Aprilia et al., 2023). These findings are also consistent with Pradikto et al.'s (2025) review of leadership justice Pradikto et al. (2025), which concluded that effective leadership and organizational fairness significantly enhance job satisfaction and suppress counterproductive behaviors, thereby strengthening sustainable performance.

4.2.2. The Impact of Mental Health on Performance

The relationship between Mental Health and Performance was statistically significant, as indicated by a path coefficient of 0.827. This suggests that Mental Health has a strong positive influence on performance, meaning that better mental health conditions contribute to higher performance levels. The t-statistic value of 8.189 exceeds the critical value of 1.96 (for a 95% confidence level), confirming that the effect is significant. Additionally, the p-value was 0.000, which is below the 0.05 threshold, further validating the significance of the relationship. This means that there is less than a 5% probability that this relationship occurs by chance, ensuring the reliability of the findings.

In parallel, Fazry (2024) emphasized that training, work motivation, and leadership directly strengthen employee performance in Indonesia's maritime sector. Their findings revealed that well-designed training programs improve competence and discipline, whereas transformational leadership cultivates loyalty and a collective purpose. Translating these insights into MSME settings suggests that investing in motivation and leadership development can reinforce the psychological well-being and productivity of ecotourism entrepreneurs.

Because the relationship is directly accepted, it implies that mental health improvements can lead to better job performance without the need for additional mediating factors. Employees with good mental health tend to be more productive, engaged, and resilient at the workplace. Conversely, poor mental health negatively impacts concentration, decision-making, and overall job effectiveness. These results align with existing research highlighting the importance of mental well-being for workplace productivity. Organizations aiming to enhance performance should consider implementing mental health programs, stress management strategies, and employee well-being initiatives to create supportive work environments.

4.2.3. The Impact of Motivation on Performance

The relationship between Motivation and Performance was found to be statistically insignificant, as indicated by the path coefficient of 0.032. This suggests that motivation has a very weak positive influence on performance; however, the effect is minimal and not meaningful in this study. The t-statistic value of 0.479 is far below the critical value of 1.96 (for a 95% confidence level), indicating that the relationship is not strong enough to be considered significant. Additionally, the p-value is 0.632, which is much higher than the 0.05 threshold, confirming that the effect is insignificant. This means that there is a high probability (63.2%) that this relationship occurs by chance; thus, it cannot be reliably concluded that motivation directly impacts performance in this context.

As the relationship is directly rejected, this implies that motivation alone does not significantly contribute to performance improvement. This result could be explained in several ways. First, other stronger factors, such as mental health or job satisfaction, may have a more dominant influence on performance, overshadowing the effect of motivation. Second, the way motivation is defined and measured in this study may not fully capture its true impact on performance. For instance, intrinsic and extrinsic motivation might have different effects, and their combined influence might dilute the results of the study.

Additionally, workplace context may play a crucial role. In certain environments, motivation alone may not be sufficient to enhance performance. Employees may also require better working conditions, clear goals, adequate resources, and proper training to translate their motivation into higher performance. These findings highlight the need for a more comprehensive approach to performance improvement that integrates motivation with other factors such as leadership, organizational support, and skill development. Future research could explore whether motivation indirectly impacts performance through mediating variables such as job satisfaction, engagement, or workplace culture.

Interestingly, this finding contrasts with Nanjundeswaraswamy, Nagesh, Bharath, and Vignesh (2024), who demonstrated that motivation plays a significant mediating role between self-efficacy and employee performance in the textile and garment sector, suggesting that contextual and cultural factors may determine whether motivation becomes an effective performance driver. These results also

correspond with Ichdan (2024), who found that motivation and work discipline enhance employee productivity, which then translates into better performance. This highlights that in contexts such as MSME ecotourism, motivation may exert an indirect influence through improved operational consistency and productivity rather than through direct behavioral changes.

4.2.4. The Impact of Management on Mental Health

The relationship between Stress Management and Mental Health was found to be strong and statistically significant. The **path coefficient of 0.89** indicates a highly positive effect, suggesting that better stress management practices significantly improve the mental health. Individuals who can effectively manage stress are more likely to experience emotional stability, reduced anxiety, and overall psychological well-being. The t-statistic value of 35.671 is far above the critical threshold of 1.96 (for a 95% confidence level), confirming that the effect is significant. Additionally, the p-value of 0.000 (less than 0.05) indicates that this relationship is not due to a random chance. These results highlight the crucial role of stress management in shaping mental health outcomes, emphasizing that interventions aimed at stress reduction can have a substantial impact on mental health.

This finding underscores the importance of implementing structured stress management programs, particularly in high-stress environments such as MSMEs in the Tangkahan Ecotourism sector. Workers and entrepreneurs in this field often face operational uncertainties, financial pressures, and fluctuating workloads, making stress management a key component in maintaining mental well-being. Organizations should consider integrating stress management training, wellness programs, and psychological support systems to enhance employees' well-being.

Practical strategies for effective stress management include providing stress management training, encouraging work-life balance, creating a supportive work environment, and offering access to counseling services. Additionally, promoting physical activity, mindfulness practices, and healthy lifestyle choices can help individuals cope with stress more effectively. This study confirmed that stress management is a critical factor influencing mental health. Organizations that invest in stress management initiatives can create healthier and more resilient workforces. Future research should explore whether stress management indirectly affects performance through its impact on mental health, providing deeper insights into its role in workplace effectiveness.

4.2.5. The Impact of Management on Mental Health

The relationship between Stress Management and Performance was found to be statistically insignificant, indicating that improving stress management does not necessarily lead to better performance. In some cases, it may have a slight adverse impact. This finding indicates that while managing stress is crucial for mental health, its direct effect on performance is not straightforward. The t-statistic of 1.877 is below the critical threshold of 1.96, and the p-value of 0.061 exceeds the significance level of 0.05. Because the p-value is slightly above the acceptable threshold, this suggests that the relationship is not statistically significant, leading to the rejection of the hypothesis. In other words, there is insufficient evidence to confirm that stress management directly and meaningfully influences performance.

One possible explanation for this result is that while stress management helps individuals cope with pressure, it does not necessarily translate into higher productivity or efficiency in the workplace. In some cases, moderate stress levels can act as motivators, pushing individuals to meet deadlines and perform efficiently. Therefore, excessive stress reduction might lead to complacency or reduced urgency in work tasks. Additionally, this finding suggests that the impact of stress management on performance may be indirect rather than direct. As seen in previous analyses, stress management significantly enhances mental health, which in turn, plays a crucial role in improving performance. This indicates that stress management might contribute to performance improvement through mental health as a mediating variable rather than having a direct effect.

For practical applications, organizations should focus on a balanced approach to stress management, ensuring that employees have adequate coping mechanisms without eliminating performance-driven

stress. Instead of solely focusing on reducing stress, companies should promote resilience training, productivity-enhancing strategies, and mental well-being programs to maximize workplace efficiency and effectiveness. While stress management is vital for overall well-being, this study found no direct evidence that it enhances performance. Future research should explore its indirect effects, particularly through mental health, to gain a deeper understanding of how stress influences productivity in the workplace.

4.2.6. The Indirect Effect of Stress Management on Performance

The analysis revealed that Stress Management had an indirect effect on performance, with a path coefficient of 0.736, standard deviation of 0.719, and t-value of 0.083, which was statistically significant ($p = 0.000$). The acceptance of this indirect relationship suggests that stress management influences performance through an intermediary variable rather than directly affecting it. Given that the direct effect of Stress Management on Performance was previously found to be insignificant (with a path coefficient of -0.11 and $p = 0.061$), this indirect pathway highlights the importance of mediating variables in understanding how stress management contributes to improved performance. One possible explanation is that stress management enhances mental health, which, in turn, leads to better job performance.

This finding underscores the significance of mental well-being for workplace productivity. While directly improving stress management may not immediately translate into higher performance, its positive effects on psychological stability, emotional resilience, and overall well-being can create conditions that ultimately lead to improved job performance. Therefore, organizations and individuals should focus on holistic interventions that not only reduce stress but also strengthen mental health and motivation to ensure long-term performance enhancement.

4.3. Several Studies

The findings of this study are consistent with several international studies that demonstrate a strong link between psychological well-being and organizational performance in MSMEs, particularly in the tourism industry. For instance, Purnomo and Purwandari (2025) developed an MSME empowerment model in rural tourism villages in Indonesia, highlighting that socio-psychological indicators, such as job satisfaction and sense of belonging, are essential in promoting sustainable service delivery.

Similarly, Abolnasser, Abdou, Hassan, and Salem (2023) applied a serial mediation model and found that job satisfaction and psychological well-being significantly mediated the relationship between employee engagement and service quality among Egyptian hotel MSMEs. In contrast, Sisodia and Jan (2025) found that entrepreneurial leadership styles during crises had varying effects on employees' emotional well-being in Indian MSMEs, especially those without structured psychological support systems. This highlights the contextual differences in leadership culture and organizational support. Meanwhile, Hermawati (2020) developed a model linking responsible marketing and HR performance in tourism-based MSMEs in Indonesia, emphasizing the importance of "human-centered" indicators such as well-being and motivation in sustainable tourism.

In a cross-national comparison, Kimbu, Adam, Dayour, and de Jong (2023) noted that socio-psychological well-being was significantly lower among tourism MSME workers in sub-Saharan Africa post-pandemic than those in Southeast Asia, affecting organizational recovery speed. While prior studies have primarily examined psychological well-being in urban or developed tourism markets, this study contributes novel insights by focusing on remote ecotourism-based MSMEs. The findings underscore the importance of integrating psychological support and human-centered training in underdeveloped tourism zones such as Tangkahan, where MSMEs rely heavily on social capital and long-term worker commitment.

Furthermore, the findings of this study resonate with Ichdan (2024), who emphasized that productivity functions as a bridge linking motivation, discipline, and performance in manufacturing. Adopting

similar principles in MSME ecotourism could help business actors translate their motivation and work discipline into measurable productivity. A Kaizen-inspired approach centered on small, continuous improvements can foster psychological resilience, intrinsic motivation, and sustainable performance among ecotourism entrepreneurs.

These results align with prior HRM research emphasizing the integrative role of compensation and motivation in driving job satisfaction and performance. In industrial contexts, fair compensation and recognition systems have been proven to strengthen psychological well-being and employee engagement (Ahmada, Fakhr, & Divers, 2023). Extending these insights to the ecotourism MSME sector highlights the importance of combining financial equity, psychological support, and human-centered training to achieve sustainable workforce performance.

These results are consistent with the broader HRM literature, indicating that leadership fairness, training, and motivation synergistically promote job satisfaction and well-being. Evidence from various sectors, including maritime (FazryFazry (2024) and manufacturing industries (Pradikto et al. (2025), demonstrates that equitable leadership and consistent skill development are indispensable for fostering sustainable performance. Applying these frameworks to MSME-based ecotourism emphasizes the universal relevance of fairness, trust, and capacity building for achieving long-term success.

5. Conclusions

5.1. Conclusion

This study indicates that job satisfaction has a positive and significant impact on performance, suggesting that higher job satisfaction leads to better individual performance. Additionally, mental health significantly contributes to performance improvement, highlighting the crucial role of psychological well-being in enhancing productivity. However, motivation did not significantly affect performance, implying that other factors may play a more dominant role in determining work outcomes than motivation alone. Stress management has a strong influence on mental health, reinforcing the idea that effective stress management can enhance psychological well-being. However, its direct impact on performance was not significant, indicating that merely managing stress does not necessarily lead to increased productivity. Nevertheless, stress management has a significant indirect effect on performance, meaning that its positive impact occurs through an intermediary, most likely by improving mental health. In other words, while directly managing stress does not necessarily boost performance, its effect on mental well-being can create conditions that support greater productivity in the long run.

5.2. Limitations and Suggestions

This study had some limitations. First, the research was geographically limited to MSME actors in the Tangkahan ecotourism area, which may not represent the broader characteristics of MSMEs in other regions or industries. Second, the study employed a cross-sectional design, which restricted its ability to capture dynamic psychological and performance changes over time. Third, the sample size, although representative of the Tangkahan population, remains relatively small, thus limiting the statistical generalization. Finally, the study primarily relied on self-reported data, which may introduce subjective bias in measuring psychological constructs such as satisfaction, motivation and mental health.

Future studies should expand the research scope by including diverse MSME sectors and comparative locations to validate these findings. Longitudinal and mixed-method approaches can be employed to explore the long-term effects of psychological well-being on performance and deepen the understanding of causal mechanisms. Additionally, integrating variables such as leadership style, organizational culture, and external environmental support may provide a more holistic perspective on the factors influencing MSME sustainability. Strengthening partnerships between universities, local governments, and MSME associations is also recommended to design evidence-based interventions that enhance psychological well-being, productivity, and sustainable development in community-based ecotourism.

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