
Stress and Job Satisfaction in Peruvian Public Officials: Engagement as a Mediating Factor

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Abstract: This study investigates the mediating role of work engagement in the relationship between job stress and job satisfaction among employees in Peruvian public institutions. Using a quantitative, non-experimental, and cross-sectional design, data were collected via a five-point Likert scale survey administered to 144 staff members of the National Superintendency of Public Registries (SUNARP). Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to assess the measurement and structural models. Results indicate that work engagement significantly mediates the relationship between job stress and job satisfaction. Specifically, job stress negatively influences work engagement (path coefficient = -0.726), while work engagement positively predicts job satisfaction (0.762). A direct negative relationship was also observed between job stress and job satisfaction (-0.103). These findings underscore the importance of fostering employee engagement to mitigate the adverse effects of occupational stress and enhance satisfaction in the public sector context.

Keywords: Work Stress, Engagement, Public Institution, Job Satisfaction.

Type: Research paper



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1. Introduction

Stress-related health conditions have emerged as defining challenges of the 21st century, with work stress now recognized as a modern occupational disease advancing annually and affecting men and women differently (Martinez-Harlow, 2020). Approximately 35% of workers globally experience work-related stress, imposing significant human and economic costs on organizations (Rojas-Solís et

al., 2021). According to Trinidad Aparicio, a clinical psychologist, multiple factors contribute to this condition—including inadequate salaries, poor working conditions, toxic environments, and even individual personality traits or personal circumstances (Restrepo & Lemos, 2021). The United Nations has formally recognized job stress as a major occupational hazard, and in Peru alone, it is estimated to cost organizations up to US\$2,800 per employee in lost productivity (Osorio-Martínez et al., 2022). As such, work stress adversely affects not only employee well-being but also institutional performance.

Job satisfaction is critical to organizational outcomes, as it influences productivity, adaptability, and staff retention. It is commonly used to evaluate workplace quality, employee well-being, and overall business success. Job satisfaction is shaped by individual cognitions—employees' beliefs, attitudes, and evaluations about their job (Barreto-Aranha et al., 2021). Satisfied public sector employees are more likely to remain committed to their positions, experience fewer absences, and contribute to organizational stability. When workers perceive their employer as supportive, they tend to be more motivated, efficient, and cooperative. Moreover, positive job satisfaction reduces psychosocial risks while enhancing performance across multiple organizational domains. It is a multidimensional construct influenced by salary, interpersonal relationships, work environment, autonomy, and opportunities for growth (Requejo et al., 2023).

Recent studies have highlighted the role of employee engagement as a vital contributor to satisfaction and productivity. Engagement refers to an individual's emotional and cognitive involvement in their work—manifested through enthusiasm, energy, and commitment to organizational goals (Caravaca-Sánchez et al., 2019). Globally, however, only an estimated 13% of employees report being fully engaged at work (Salcedo, 2021). Engagement has gained scholarly traction over the past five years as a key factor in sustaining organizational performance. It supports both individual and team-level outcomes, encompassing interpersonal connection and professional effectiveness.

While job satisfaction has long been studied—particularly in relation to income—recent data reveal that even among those earning over \$50,000 annually, only 52% report being satisfied with their jobs (Cortez-Rodríguez, 2023; De la Cruz-Portilla, 2020). In this context, the present study explores job stress and satisfaction among personnel at the National Superintendency of Public Registries (SUNARP). Based on administrative records and expert input from SUNARP's Administration Unit, there is growing concern about attendance patterns and declining morale. Despite regulations permitting 30 to 50 minutes of monthly tardiness depending on contract type, internal audits revealed that 38% of staff exceeded these limits and were subject to disciplinary measures. This behavioral pattern suggests signs of disengagement, potentially linked to stress and poor job satisfaction.

In light of these issues, it is imperative to address occupational stress within SUNARP to ensure institutional effectiveness and employee well-being. Overloading personnel with additional responsibilities without adequate support may further diminish engagement and satisfaction. Therefore, this study seeks to answer the following research question: How does employee engagement mediate the relationship between job stress and job satisfaction among workers in Peruvian public institutions?

2. Literature Review

2.1. Review of Previous Studies

Recent research increasingly supports the notion that work engagement mediates the relationship between occupational stress and job satisfaction. For instance, Lee et al. (2022) found that work engagement significantly mediated the effect of emotional exhaustion on organizational commitment and turnover intention among hospitality employees during the COVID-19 pandemic. Similarly, Chen et al. (2022) reported that work engagement acted as a buffer between job stress and job satisfaction in the tourism and hospitality industry, highlighting its critical role in mitigating the negative effects of stress on employee well-being.

Similarly, Rachmah et al. (2022) explored the mediating role of engagement and job satisfaction in the relationship between transformational leadership and job stress within the Indonesian construction sector, specifically in PT Wijaya Karya (Persero) Tbk. Using PLS-SEM with 344 employees, they found that transformational leadership improves engagement and stress management while promoting job satisfaction. These results underscore that employee engagement can enhance organizational commitment by reducing perceived stress and increasing the sense of being valued in the workplace.

In the context of Saudi Arabia's private sector, Nassani et al. (2023) investigated how job satisfaction and burnout interact with stress and engagement. Analyzing 244 employees, they concluded that job stress leads to burnout and lower satisfaction, which in turn undermines organizational engagement. Their model confirmed that job satisfaction acts as a key antecedent to engagement, while burnout operates as a mediator, exacerbating the impact of stress on disengagement.

Orgambídez-Ramos et al. (2014) further explored the interaction between role stress, engagement, and satisfaction among 586 workers in Spain. Their findings showed that role conflict and ambiguity were strong predictors of lower job satisfaction and engagement. Although engagement positively correlated with satisfaction ($r = 0.44$, $p < 0.01$), it did not fully buffer the negative effects of role stress. The authors suggested that role-related demands directly impair satisfaction and that engagement may only partially mediate this process.

A complementary perspective was offered by Lupano-Perugini and Waisman (2018), who studied employees' and managers' perceptions of engagement. While initially unfamiliar with the term, most participants recognized its underlying behaviors—such as dedication, enthusiasm, and attentiveness—once defined. The study highlighted the dual nature of engagement as both a cognitive and affective state, consistent with the literature's emphasis on its mental, emotional, and behavioral dimensions.

2.2. Work Stress

Stress has been conceptualized in various ways, often as any stimulus capable of eliciting a physiological or emotional reaction (Buitrago-Orjuela et al., 2021). Robles-Medina (2023) describes stress as a global psychophysiological phenomenon, emphasizing the growing need for trained professionals to manage stress in the workplace. Stress encompasses physical, emotional, and behavioral responses to external demands (Burman & Goswami, 2018). While moderate

stress may be adaptive, excessive or chronic stress can result in illness, reduced productivity, and psychological burnout (Nurvianida-Nasrul et al., 2023).

Workplace stress, in particular, refers to the physiological strain and emotional tension resulting from job-related factors (Hernández-Rincón et al., 2022). Empirical studies have shown that role ambiguity—unclear expectations or responsibilities—can significantly undermine mental health (Gede et al., 2023). Likewise, role conflict—competing or contradictory demands—has been positively associated with stress levels among U.S. workers. Clarifying expectations and adjusting workloads are essential to mitigating such stressors.

2.3. Job Satisfaction

Job satisfaction reflects an individual's overall attitude toward their work and their emotional evaluation of job-related experiences. Specchia et al. (2021) define it as a function of job involvement, self-worth, and organizational value alignment. When employees feel satisfied, they are more engaged, productive, and loyal. Dissatisfaction, in contrast, can lead to withdrawal behaviors, turnover, and low morale (Wartenberg et al., 2023).

According to Díaz-Dumont et al. (2023), satisfaction emerges from the alignment between expectations and job realities. Montes y Vázquez (S/N) further argue that satisfaction serves as a mediator between environmental factors and personal/institutional development, making it a useful diagnostic tool for identifying hidden issues within organizations. It not only affects individual well-being but also predicts workplace outcomes and collective performance.

2.4. Work Engagement

Engagement has evolved into a central construct in organizational psychology, encompassing physical, cognitive, and emotional dimensions. Fernández-Galeote et al. (2021) conceptualize it as a positive, enduring psychological state characterized by energy, dedication, and absorption. López et al. (2017) extend the model by including elements such as organizational commitment, emotional involvement, and extra-role behaviors.

Engagement is defined as an active and positive work-related state, involving enthusiasm, persistence, and resilience. Kebede et al. (2022) similarly describe it as a positive cognitive-affective experience. Huttunen et al. (2022) emphasize vigor, or the willingness to invest sustained effort in one's job. Engaged employees are described as robust and resilient, showing a high level of activation and psychological presence at work.

3. Methodology

This study employed a quantitative approach, as it involved the measurement and statistical analysis of variables to test predefined hypotheses (Hernández-Sampieri et al., 2020). Its explanatory scope allowed the identification of potential causal relationships among the constructs, particularly how job stress influences job satisfaction and whether engagement acts as a mediating factor (Vara-Horna, 2015). The research was designed as non-experimental and cross-sectional, meaning that variables were observed in their natural state at a single point in time without manipulation (Hernández-Sampieri et al., 2020).

The target population consisted of 144 officials employed by the National Superintendency of Public Registries (SUNARP) in Peru. To collect data, the study applied a survey technique, utilizing a self-administered questionnaire developed to measure the main constructs under investigation: job stress, job satisfaction, and work engagement. The questionnaire used a five-point Likert-type scale with five response options ranging from “strongly disagree” to “strongly agree,” which is standard in psychometric assessments.

The measurement model was evaluated for reliability and validity following recommendations from Hilkenmeier et al. (2020). Internal consistency was assessed using Cronbach's alpha (α) and composite reliability. Convergent validity was examined using the average variance extracted (AVE), while discriminant validity was evaluated through cross-loadings and the Fornell-Larcker criterion.

To test the structural model and the hypothesized relationships among variables, the study employed Partial Least Squares Structural Equation Modeling (PLS-SEM). This technique is appropriate for exploratory models with latent variables and smaller sample sizes. Using SmartPLS software, the model estimated path coefficients, regression weights, t-values, and statistical significance levels for both direct and indirect effects. Specifically, the model was used to determine whether work engagement mediates the relationship between job stress and job satisfaction.

4. Results

To assess the mediating role of work engagement between job stress and job satisfaction among workers in a Peruvian public institution, data were analyzed using structural equation modeling through the Partial Least Squares (PLS-SEM) method. As a second-generation multivariate technique, PLS-SEM has gained widespread acceptance in social science research due to its robustness and flexibility, particularly in non-normal data distributions and small samples. The model was subjected to a sequence of validity and reliability tests, including internal consistency, convergent validity, and discriminant validity.

4.1. Measurement Model Evaluation

The reliability and validity of the constructs—stress, engagement, and satisfaction—were first evaluated. Internal consistency was confirmed through Cronbach's alpha, rho_A, and composite reliability, all of which exceeded the standard threshold of 0.7. Convergent validity was verified through average variance extracted (AVE), with all values above the recommended 0.5 level.

Table 1 presents the results for internal consistency. Cronbach's alpha values ranged from 0.846 to 0.907, and composite reliability scores from 0.928 to 0.941. The AVE values for all three constructs exceeded 0.8, confirming that a large proportion of variance in the indicators was explained by their corresponding latent variable.

Table 1: Internal consistency and convergent reliability

Construct	Cronbach's α	rho_A	Composite Reliability	AVE
Engagement	0.893	0.894	0.934	0.824

Stress	0.846	0.854	0.928	0.866
Satisfaction	0.907	0.907	0.941	0.843

The results indicate strong internal consistency and convergent validity across all constructs. This confirms that the measurement model is adequately reliable for assessing the hypothesized relationships between job stress, work engagement, and job satisfaction.

4.2. Convergent and Discriminant Validity

Convergent validity was further examined through cross-loadings of each item. Table 2 presents the factor loadings for all indicators across the three constructs. Each item exhibited the highest loading on its intended construct. For instance, Role Ambiguity loaded at 0.939 on Stress, with comparatively lower loadings of –0.704 on Engagement and –0.655 on Satisfaction. Similarly, Vigor loaded 0.911 on Engagement and significantly lower on the other two constructs. These findings confirm that each indicator is more closely associated with its own latent variable than with others, satisfying the condition of convergent validity.

Table 2: Indicator loadings (convergent validity)

Indicator	Stress	Engagement	Satisfaction
Role Ambiguity	0.939	–0.704	–0.655
Role Conflict	0.922	–0.644	–0.562
Absorption	–0.645	0.897	0.744
Dedication	–0.691	0.915	0.782
Vigor	–0.639	0.911	0.753
Environment Satisfaction	–0.603	0.748	0.917
Performance Satisfaction	–0.599	0.768	0.915
Supervisor Satisfaction	–0.605	0.788	0.923

Discriminant validity was assessed using the Fornell–Larcker criterion, as shown in Table 3. The square roots of the AVEs are displayed along the diagonal and exceed the inter-construct correlations, confirming that each latent construct is distinct from the others. For example, the square root of AVE for Engagement is 0.908, which is greater than its correlation with Stress (–0.726) and Satisfaction (0.837). Similar patterns are observed for the other constructs.

Table 3: Fornell–Larcker criterion

Construct	Engagement	Stress	Satisfaction
Engagement	0.908		
Stress	–0.726	0.931	
Satisfaction	0.837	–0.656	0.918

These results validate the discriminant integrity of the measurement model, as each construct shares more variance with its indicators than with other constructs.

4.3. Structural Model and Hypothesis Testing

The structural model analysis revealed substantial correlations between job stress, work engagement, and job satisfaction. The standardized regression coefficient between engagement and job satisfaction was 0.762, suggesting a very strong positive association.

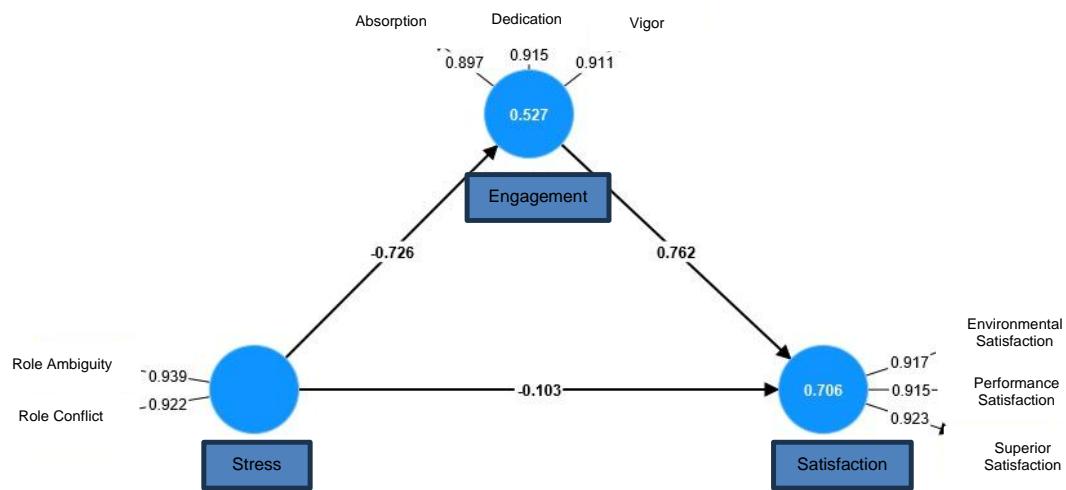


Figure 1: Path coefficients (standardized regression coefficients)

According to Figure 1, this result was statistically significant, with a p-value of less than 0.05. This indicates that as engagement increases, job satisfaction also increases to a considerable degree. This finding is consistent with previous studies emphasizing the role of intrinsic motivation and psychological commitment as key determinants of satisfaction in the workplace. It underscores the importance of fostering engagement not just as a motivational tool, but as a structural driver of satisfaction outcomes in public institutions. Conversely, a path coefficient of -0.726 was found between job stress and engagement, indicating a statistically significant negative correlation. This result, also significant at $p < 0.05$, suggests that employees who experience higher levels of stress at work tend to be less engaged in their roles. In other words, as stress intensifies, psychological withdrawal and disengagement increase. This has serious implications for employee morale, productivity, and organizational cohesion. Managing job-related stress is therefore critical for preserving high levels of engagement and preventing downstream dissatisfaction. The direct relationship between job stress and job satisfaction, without including engagement as a mediator, is indicated by a weaker path coefficient of -0.103 . While this coefficient is negative—suggesting that increased stress is associated with lower satisfaction—it is considerably smaller than the effect size observed for the mediated path. Nonetheless, this direct path is statistically significant at $p < 0.05$, indicating that stress independently contributes to dissatisfaction, although to a lesser degree.

4.4. Mediation Analysis

The mediation analysis in Table 4 provides further insights into how engagement influences the relationship between job stress and job satisfaction. The indirect effect of job stress on job satisfaction, mediated through engagement, was -0.553 . This result was statistically significant, with a t-value of 11.462 and a p-value of less than 0.05 . This confirms the presence of a robust mediating effect: stress not only has a direct negative influence on satisfaction but also exerts a compound impact by reducing engagement, which in turn reduces satisfaction.

Table 4: Indirect effect

Path	Original Sample	Sample Mean	Std. Dev.	T Statistic	p-value
Stress → Satisfaction (indirect)	-0.553	-0.553	0.048	11.462	0.000

This indirect pathway suggests a cascading mechanism: stress reduces engagement, and lower engagement subsequently lowers satisfaction. It highlights that the negative effects of stress on job satisfaction are magnified when engagement is weakened. Therefore, engagement serves as a key psychological buffer, mitigating the detrimental effects of stress on employee well-being. The strength and significance of this mediated pathway underline the importance of designing workplace interventions that go beyond surface-level stress reduction. Organizations must actively promote engagement by fostering positive work environments, recognizing employee contributions, and creating opportunities for growth and autonomy. In doing so, they not only buffer against the harmful effects of stress but also enhance job satisfaction and organizational performance.

The PLS-SEM results support all hypothesized relationships: job stress negatively affects engagement, engagement positively affects job satisfaction, and engagement partially mediates the relationship between stress and satisfaction. Notably, engagement captures a significant portion of the stress–satisfaction dynamic, underscoring its importance in public sector well-being models. These findings suggest that improving employee engagement may significantly mitigate the adverse effects of workplace stress, leading to enhanced satisfaction and organizational performance. The model confirms the theoretical assumption that engagement serves as a protective factor, making it a critical target for intervention in high-stress institutional environments.

These results have clear implications for organizational leadership and human resource policy. Work engagement emerges as a critical leverage point in the stress–satisfaction relationship. It is not enough to simply manage stress through reactive measures. Instead, proactive strategies aimed at cultivating engagement—such as promoting employee involvement, providing supportive supervision, and enabling task autonomy—are essential. By doing so, organizations can reduce the adverse effects of stress and amplify positive outcomes related to job satisfaction.

Furthermore, this study reinforces existing theoretical frameworks, particularly those suggesting that engagement mediates the link between negative work conditions and positive psychological outcomes. The findings support the view that engagement is not merely an outcome variable but also a mechanism of change. By understanding and investing in this mechanism, institutions such as SUNARP can improve employee well-being, reduce absenteeism and turnover, and enhance institutional effectiveness.

Access to recycling services for sanitary waste is positively associated with responsible disposal habits, with a coefficient of 0.40. This finding indicates that the likelihood of proper sanitary waste disposal increases when recycling services are available. Establishing formal recycling programs, incentivizing environmentally friendly disposal, and promoting biodegradable menstrual products could significantly reduce sanitary waste pollution.

5. Discussion

This study aimed to examine the mediating role of work engagement in the relationship between job stress and job satisfaction among employees of the National Superintendency of Public Registries (SUNARP) in Peru. Beyond validating prior theoretical frameworks, the findings contribute contextual insight into how these psychological dynamics unfold in Peruvian public institutions. The general hypothesis proposed that public sector employees would report higher levels of job satisfaction when work engagement serves as a mediator between job stress and satisfaction. To evaluate this, the model's psychometric properties were rigorously tested, including internal consistency using Cronbach's Alpha, composite reliability (ρ_A and ρ_C), and average variance extracted (AVE). Discriminant validity was assessed via the Fornell-Larcker criterion, and the measurement model's indicators confirmed the structural model's robustness.

The results revealed a significant negative relationship between job stress and work engagement. This finding supports theories that posit chronic, unmanaged workplace stress can deplete emotional and cognitive resources, thereby diminishing employees' psychological availability and motivation to fully engage in their tasks (Bakker et al., 2023). Within the SUNARP context, this negative association suggests that heightened stress levels may be eroding employees' emotional connection to their roles and diminishing their capacity for active engagement. These results are consistent with the study conducted by Mosquera (2021), who reviewed seven empirical investigations, six of which confirmed the negative correlation between stress and engagement in work settings. Similarly, García (2021), in a study among young and adult employees in Huaral, found a statistically significant and inverse relationship between job stress and engagement, confirming the expectation that increased stress levels result in lower engagement.

However, not all studies align with this pattern. Estrada and Vargas (2017), in their research on logistics personnel in a mass consumption food company, found no significant negative relationship between job stress and engagement. This divergence was also highlighted by Peña et al. (2022), suggesting that in

certain organizational contexts, stress and engagement may operate through more complex or moderated pathways.

On the other hand, the study found a strong and statistically significant positive relationship between work engagement and job satisfaction. This supports the conceptualization of engagement as a crucial antecedent of job satisfaction (Bakker et al., 2023). Highly engaged employees are typically more enthusiastic, energetic, and psychologically invested in their work, which enhances their affective evaluation of the workplace and promotes a positive perception of their job and organization. This finding is consistent with Messarina (2019), who observed higher job satisfaction and engagement among workers in a Lima-based glass and aluminum firm. Similarly, Aghdasi et al. (2011) reported that disability support workers in Jeonbuk, South Korea, experienced greater satisfaction when their organizational roles were linked with higher engagement. In line with these findings, Rachmah et al. (2022) emphasized that job satisfaction fosters organizational involvement, highlighting a reciprocal dynamic where supportive environments enhance both engagement and satisfaction.

Nevertheless, not all empirical studies affirm this linkage. Estrada and Vargas (2017), in their study of logistics employees in a food manufacturing company, found no significant association between involvement and satisfaction, suggesting that sectoral or task-specific dynamics may moderate this relationship. These mixed results underscore the importance of contextual and organizational variables in shaping how engagement translates into satisfaction.

The most crucial insight from this study lies in the mediating role of engagement between stress and job satisfaction. The data reveal that stress has both a direct negative effect on satisfaction and an indirect effect mediated through engagement. This aligns with the Job Demands–Resources (JD-R) model (Bakker et al., 2023), which posits that job demands, such as stressors, can deplete psychological resources like engagement, leading to negative work outcomes, including reduced satisfaction. This chain of influence implies that workplace stress can undermine satisfaction not only directly but also by suppressing the very engagement that contributes to satisfaction.

Supporting this theoretical model, López et al. (2017) found that engagement moderates the relationship between work stress and job satisfaction. Similarly, Hasan et al. (2021) reported that organizational involvement partially mediates the relationship between stress and satisfaction, reinforcing the pivotal role of engagement in workplace well-being. Orgambídez-Ramos et al. (2014) also emphasized that job satisfaction is significantly predicted by engagement and role stress, although their findings suggest that in some contexts, the direct effect of role stress on satisfaction may be stronger than the indirect path through engagement. They argue that role stress, being a hindrance demand, may overwhelm any buffering effects of engagement in certain organizational environments.

Overall, these findings underscore the complex and dynamic interactions among stress, engagement, and satisfaction. Within the SUNARP institutional context, the results emphasize the need for targeted interventions that both reduce stress and promote engagement as a means of fostering satisfaction.

Organizational policies should prioritize stress management programs, while also building structures that enhance employee involvement through recognition, autonomy, leadership support, and meaningful work. The study not only informs SUNARP's internal human resource practices but also contributes to the broader literature by providing empirical evidence from a Latin American public sector context, an area often underrepresented in global organizational research.

6. Conclusion

The findings of this study clearly demonstrate the significant interrelationships among job stress, work engagement, and job satisfaction in the context of public sector employment in Peru. Specifically, a strong negative relationship was found between job stress and work engagement, with a standardized coefficient of -0.726 . This result suggests that as job stress increases among SUNARP employees, their engagement levels decline. In practical terms, heightened stress appears to erode employees' emotional commitment, energy, and psychological connection to their work—ultimately diminishing engagement. The statistical significance of this pathway emphasizes the importance of effective stress management interventions within public institutions to preserve employee well-being and engagement.

Moreover, the study confirmed a strong and positive association between work engagement and job satisfaction (coefficient = 0.762). This indicates that when employees are actively engaged—characterized by dedication, absorption, and vigor—they are more likely to report higher levels of satisfaction in their roles. In this sense, engagement serves as a motivational and emotional resource that enhances how employees perceive their work environment, colleagues, and institutional mission. These findings underscore the value of engagement-enhancing strategies, such as employee recognition, participatory leadership, and meaningful work assignments, in driving job satisfaction.

Critically, the mediation analysis revealed that work engagement plays a substantial mediating role in the relationship between job stress and job satisfaction, with an indirect effect of -0.553 ($p < 0.05$). This implies that work engagement not only suffers under stress but also transmits its adverse effects to job satisfaction. In line with engagement theory and the Job Demands–Resources (JD-R) model, the results highlight engagement as a pivotal psychological mechanism through which stress influences satisfaction. Engagement thus operates as a protective buffer: when maintained, it can mitigate the negative impacts of stress on employees' affective outcomes.

Overall, this study reinforces the notion that job satisfaction is not solely a function of individual stress levels or working conditions, but also of how emotionally and cognitively engaged employees feel in their roles. These insights have direct implications for institutional management at SUNARP and similar public entities. Strategies aimed at reducing job stress—through workload management, clearer role definitions, and supportive leadership—must be complemented by initiatives that actively promote employee engagement. Only

by addressing both dimensions can organizations cultivate a more satisfied, resilient, and productive workforce.

In the broader scope of human resource management, particularly in public sector contexts, the creation of a work environment that actively supports both the psychological well-being and engagement of staff is essential. Given that work engagement mediates the effect of stress on satisfaction, investing in its development offers a powerful, evidence-based approach to improving organizational climate, performance, and employee retention within national registry systems and beyond.

While this study provides valuable insights into the mediating role of work engagement in the relationship between job stress and job satisfaction among employees of a Peruvian public institution, several limitations should be acknowledged. First, the research design was cross-sectional, which limits the ability to draw causal inferences. Longitudinal or panel data would be beneficial in future studies to track changes in stress, engagement, and satisfaction over time and better capture causality and dynamics within these constructs. Second, the study was confined to a single public institution—SUNARP—which may limit the generalizability of the findings to other organizational settings, sectors, or countries. The specific cultural, administrative, and institutional context of Peruvian public service likely influenced the observed relationships. Replicating the model in other public and private sector institutions, both within Peru and internationally, would help validate and expand the applicability of the results. Third, while the structural equation model captured key latent constructs, it did not account for potential moderating variables such as age, tenure, leadership style, job autonomy, or organizational climate. These factors could condition the relationships between stress, engagement, and satisfaction and should be explored in future studies using moderated mediation frameworks. Lastly, although engagement was treated as a global construct in this model, it may be worthwhile to disaggregate its dimensions (vigor, dedication, absorption) to assess whether they differentially mediate the stress–satisfaction link. Future research can explore these pathways in more depth, offering a more granular understanding of which aspects of engagement are most effective in buffering workplace stress.

Despite these limitations, the study contributes important evidence to the understanding of occupational well-being in the public sector and lays a foundation for further inquiry into the psychological mechanisms that influence employee outcomes. Continued exploration of these dynamics is essential for developing more effective, evidence-based human resource policies and organizational interventions.

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