

WORK ENGAGEMENT AND JOB SATISFACTION AMONG HEALTHCARE PERSONNEL IN BAJA CALIFORNIA, MEXICO

ENGAJAMENTO NO TRABALHO E SATISFAÇÃO NO TRABALHO ENTRE PROFISSIONAIS DE SAÚDE EM BAJA CALIFORNIA, MÉXICO

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Abstract

Introduction: Among the antecedents of job satisfaction, work engagement stands out. Work engagement is considered a form of work-related happiness. **Objective:** To test a structural model representing the hypothetical relationships between work engagement and job satisfaction in a sample of nursing professionals completing their social service in northern Mexico. **Methods:** A cross-sectional study using self-administered questionnaires was conducted. The sample consisted of 71 nursing professionals from five hospitals in northern Mexico, with a 100% response rate. **Results:** Work engagement was

Resumo

Introdução: Entre os antecedentes da satisfação no trabalho, destaca-se o engajamento no trabalho. O engajamento no trabalho é considerado uma forma de felicidade relacionada ao trabalho. **Objetivo:** Testar um modelo estrutural que represente as relações hipotéticas entre engajamento no trabalho e satisfação no trabalho em uma amostra de profissionais de enfermagem que realizam seu serviço social no norte do México. **Métodos:** Foi realizado um estudo transversal com questionários autoaplicáveis. A amostra foi composta por 71 profissionais de enfermagem



positively and significantly associated with job satisfaction. Structural equation modeling indicated that engagement is a significant predictor of participants' job satisfaction. Conclusions: Interventions aimed at improving quality of work life help maintain high levels of engagement and job satisfaction among nursing professionals performing social service.

Keywords: Engagement, Job Satisfaction, Nursing, Mexico.

de cinco hospitais do norte do México, com taxa de resposta de 100%. Resultados: O engajamento no trabalho esteve positiva e significativamente associado à satisfação no trabalho. A modelagem de equações estruturais indicou que o engajamento é um preditor significativo da satisfação no trabalho dos participantes. Conclusões: Intervenções destinadas a melhorar a qualidade de vida no trabalho contribuem para manter altos níveis de engajamento e satisfação no trabalho entre profissionais de enfermagem que realizam serviço social.

Palavras-chave: Engajamento. Satisfação no Trabalho. Enfermagem. México.

1 INTRODUCTION

Work-related psychosocial risk factors have become a major concern in healthcare training and service settings, particularly among nursing interns. During their professional social service in public hospitals, nursing interns are frequently exposed to high workloads, intense emotional demands, and administrative pressures that can negatively affect their well-being and job satisfaction (Cifuentes, 2015; Yi *et al.*, 2024). These stressors not only compromise interns' mental health but may also impair their work engagement, professional performance, and overall quality of life (Maslach & Leiter, 2016; Bakker *et al.*, 2023).

Psychosocial risks at work are defined as aspects of job design, organization, and management that may cause psychological or physical harm (European Agency for Safety and Health at Work, 2018). During clinical training and mandatory professional social service, nursing interns are exposed to psychosocial risks such as work overload, time pressure, limited autonomy, insufficient institutional support, and emotional exhaustion arising from continuous interaction with patients, families, and healthcare staff. These risks, which intensify during periods of extreme workload such as the COVID-19 pandemic, can result in significant physical and mental health problems (Panagiotou *et al.*, 2021).

The prevalence of stress and burnout among nursing trainees has been widely documented, particularly in hospital environments where learning demands and clinical

responsibilities converge (Kinman & Wray, 2020). In this context, work engagement—a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli *et al.*, 2002; Flores-Jiménez *et al.*, 2015; Cachón-Zagalaz *et al.*, 2018; Chi *et al.*, 2022)—has emerged as a key protective factor. High engagement levels among nursing interns have been associated with greater job satisfaction, better mental health, and lower intentions to abandon professional training or clinical practice (Salanova *et al.*, 2010; Shimazu & Schaufeli, 2009). Similarly, job satisfaction reflects the degree to which nursing interns feel content and fulfilled in their clinical work, influenced by both intrinsic factors (recognition, responsibility, learning opportunities, personal growth) and extrinsic factors (stipend, working conditions, supervision quality, and organizational support) (Warr, Cook, & Wall, 1979; Pérez & Fidalgo, 2014; Platania *et al.*, 2021).

Understanding the relationship between engagement and job satisfaction among nursing interns is essential for designing institutional and healthcare strategies aimed at promoting occupational well-being, strengthening professional development, and preventing psychosocial risks that generate chronic stress during this critical stage of training (Yildiz *et al.*, 2022; Thielmann *et al.*, 2023). Despite the growing attention to mental health in healthcare education, research specifically addressing these constructs among nursing interns in Latin American contexts remains limited, in contrast to other settings such as Asian countries (Moura *et al.*, 2014; Zhang *et al.*, 2026). The present study aims to test a structural model representing the hypothetical relationships between work engagement and job satisfaction in a sample of nursing professionals completing their social service in public hospitals in northern Mexico.

2 MATERIALS AND METHODS

2.1 Study design and participants

This study employed a cross-sectional, observational, descriptive, correlational, and analytical design. The sample comprised 71 nursing interns enrolled in the professional social service program across five public hospitals in northern Mexico, with a 100% response rate. Participants were predominantly female (93%), with a mean age

of 28 years ($SD = 9.37$). Regarding marital status, 85% of the participants reported being single.

2.2 Measures

Work Engagement. Engagement was assessed using the Spanish version of the Utrecht Work Engagement Scale (UWES-15) developed by Schaufeli *et al.* (2002). This 15-item instrument evaluates three dimensions:

- **Vigor (Items 1–5):** Refers to high levels of energy, mental resilience at work, willingness to invest effort, and persistence in challenging situations.
- **Dedication (Items 6–10):** Reflects strong involvement in work, encompassing enthusiasm, inspiration, pride, and the perception of work as meaningful.
- **Absorption (Items 11–15):** Characterized by full concentration on work, difficulty detaching from tasks, and experiencing enjoyment and time distortion while engaged.

Participants responded using a 7-point Likert scale ranging from 0 (never) to 6 (every day), with higher scores indicating higher levels of engagement. In the present study, internal consistency was excellent (Cronbach's $\alpha = 0.94$).

Job Satisfaction. Job satisfaction was measured using the Overall Job Satisfaction Scale (Warr, Cook, & Wall, 1979), consisting of 15 items across two subscales:

- **Intrinsic Factors (7 items):** Assess aspects such as recognition, responsibility, promotion, and the meaningfulness of tasks.
- **Extrinsic Factors (8 items):** Evaluate satisfaction with work organization, remuneration, physical work conditions, and administrative support.

Responses were recorded on a 7-point Likert scale from 0 (strongly disagree) to 6 (strongly agree). Higher scores indicate greater job satisfaction. Internal consistency in this sample was high (Cronbach's $\alpha = 0.93$).

2.3 Data collection

Data collection occurred between June and August 2018. The study received approval from the Ethics Committee of the School of Health Sciences, Autonomous University of Baja California, and informed consent was obtained from all participants. Questionnaires were administered individually, allowing sufficient time for completion. Participation was voluntary, and confidentiality and anonymity were strictly maintained.

2.4 Data analysis

Descriptive statistics (minimum, maximum, mean, median, standard deviation) were calculated for all variables. Pearson correlations were used to explore relationships between engagement dimensions and job satisfaction subscales. Internal consistency was assessed using Cronbach's alpha coefficients. Structural equation modeling (SEM) was conducted with LISREL 8.30 to test the hypothesized relationships between engagement and job satisfaction. Model fit was evaluated using standard indices, including Chi-square (χ^2), Goodness-of-Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Comparative Fit Index (CFI), and Parsimony Normed Fit Index (PNFI) (Jak & Cheung, 2020).

3 RESULTS

3.1 Descriptive statistics and reliability

Table 1 presents descriptive statistics for the study variables. Both the UWES-15 and the Overall Job Satisfaction Scale demonstrated excellent internal consistency, with Cronbach's alpha values ranging from 0.84 to 0.94. Participants exhibited moderate to high levels of work engagement and job satisfaction.

Table 1*Descriptive Statistics and Reliability of Study Variables*

Variable	Range	Min	Max	Mean	Median	SD	Cronbach's α
Job Satisfaction	0–90	23	90	64.37	67.00	16.23	0.93
Intrinsic Factors	0–42	7	42	30.08	31.00	8.20	0.90
Extrinsic Factors	0–48	11	42	29.76	31.00	7.38	0.84
Work Engagement	0–90	22	90	70.28	73.00	13.98	0.94
Vigor	0–30	9	30	23.04	24.00	5.05	0.84
Dedication	0–30	10	30	24.21	25.00	5.09	0.88
Absorption	0–30	1	30	23.03	24.00	5.18	0.89

Note: Min = minimum, Max = maximum, Mean = average, Median = median, SD = standard deviation, Cronbach's α = Cronbach's alpha.

3.2 Correlations

Pearson correlation analyses (Table 2) indicated statistically significant, positive associations between overall engagement and job satisfaction. Strong correlations were also observed among the engagement dimensions (vigor, dedication, and absorption) and between intrinsic and extrinsic job satisfaction factors, consistent with theoretical expectations.

Table 2*Pearson Correlations Among Latent Variables*

Latent Variables	1	2	3	4	5	6	7
1. Job Satisfaction	1						
2. Intrinsic Factors	0.970**	1					
3. Extrinsic Factors	0.970**	0.891**	1				
4. Work Engagement	0.670**	0.712**	0.584**	1			
5. Vigor	0.529**	0.573**	0.447**	0.914**	1		
6. Dedication	0.645**	0.676**	0.571**	0.935**	0.820**	1	
7. Absorption	0.659**	0.699**	0.580**	0.888**	0.585**	0.742**	1

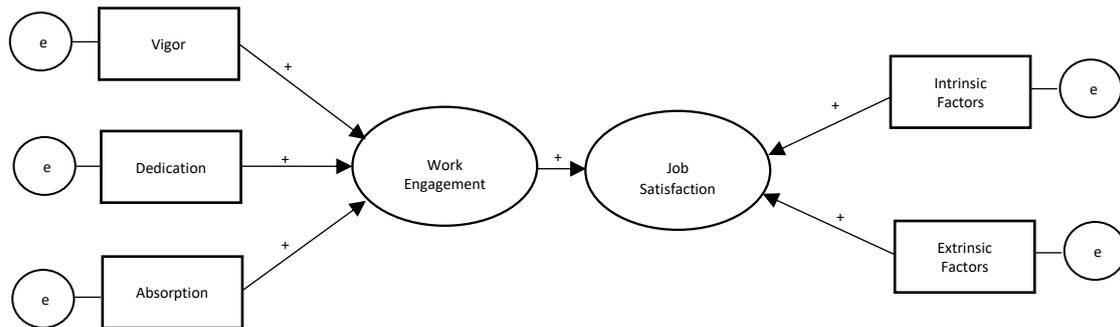
** $p < 0.01$

Structural Equation Modeling (SEM)

A structural model was proposed with work engagement as a predictor of job satisfaction. The hypothesized paths, including the effects of vigor, dedication, and absorption on satisfaction, are illustrated in Figure 1.

Figure 1

Design of the Directions and Expected Loadings of the Model



Source: Authors' own elaboration.

The SEM analysis indicated an acceptable overall model fit, with the exception of the GFI, which suggested limited explained variance. Nevertheless, all other fit indices were within recommended thresholds (Table 3 and Figure 2), supporting the hypothesized relationships between work engagement and job satisfaction.

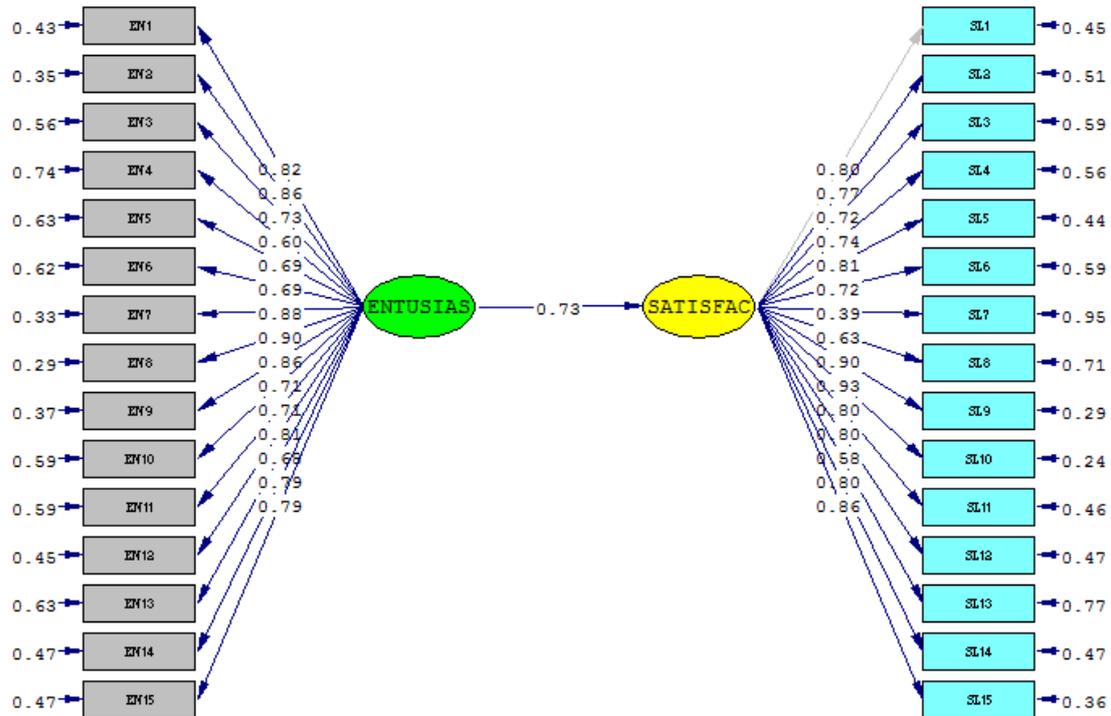
Table 3

Global Fit Indices for the Structural Model

Fit Index	χ^2	df	p	χ^2/df	GFI	RMSEA	NNFI	NFI	CFI	PNFI
Value	760.04	404	0.000	1.88	0.58	0.084	0.97	0.91	0.97	0.97

Note: GFI = Goodness-of-Fit Index; RMSEA = Root Mean Square Error of Approximation; NFI = Normed Fit Index; NNFI = Non-Normed Fit Index; CFI = Comparative Fit Index; PNFI = Parsimony Normed Fit Index.

Figure 2 illustrates the standardized path coefficients, indicating that engagement in the workplace is a significant positive predictor of job satisfaction, confirming the study hypothesis.

Figure 2*Directions and Loadings of the Structural Equation Model*

Chi-Square=760.04, df=404, P-value=0.00000, RMSEA=0.084

Source: Authors' own elaboration.

4 DISCUSSION

The present study examined the relationship between work engagement and job satisfaction among nursing interns performing professional social service in northern Mexico. Results indicated that work engagement, operationalized through vigor, dedication, and absorption, was a significant positive predictor of overall job satisfaction, corroborating previous research on healthcare professionals (Orgambídez-Ramos & Borrego-Alés, 2017; Spence-Laschinger, 2012).

These findings are consistent with the theoretical framework of positive psychology, which highlights the importance of individual strengths and the positive perception of work experiences in fostering occupational well-being (Adiasany *et al.*, 2024). Nursing interns who demonstrate higher levels of engagement report greater energy, commitment, and immersion in their clinical duties, which, in turn, enhances their satisfaction with both intrinsic aspects of work (e.g., recognition, responsibility, and the

meaningfulness of tasks) and extrinsic aspects (e.g., stipends, working conditions, and institutional support) (Flores-Jiménez *et al.*, 2015; Caballero, 2002).

The results of the structural equation model further support the notion that engagement serves as a precursor to job satisfaction. Specifically, the multidimensional nature of engagement—vigor, dedication, and absorption—contributes differentially but synergistically to employees' overall positive evaluation of their work. These outcomes are consistent with prior evidence showing that psychological states associated with engagement improve coping capacity, perception of work environment, and professional well-being (Spence-Laschinger, 2012).

Despite these promising results, the study has some limitations. The cross-sectional and correlational design precludes definitive causal inference. Although the SEM analysis allows for testing directional hypotheses, longitudinal studies are recommended to better establish causality between engagement and job satisfaction. Additionally, the sample consisted predominantly of female nursing interns, which may limit the generalizability of findings to other populations or professional contexts.

Nevertheless, the study offers valuable insights for organizational and occupational health interventions. Enhancing engagement among nursing staff may contribute to higher job satisfaction, which is directly linked to improved quality of care and overall organizational performance. Interventions could include structured social support networks, training in emotional intelligence, mentorship programs, and systematic feedback mechanisms—all aimed at fostering a sustainable and positive work environment (Juárez, 2015; Carrilo-García *et al.*, 2015).

5 CONCLUSIONS

In conclusion, work engagement emerged as a robust and significant predictor of job satisfaction among nursing interns performing professional social service in northern Mexico. The UWES-15 and the Overall Job Satisfaction Scale proved to be reliable and valid instruments for assessing engagement and satisfaction in this population.

These findings underscore the importance of promoting engagement in healthcare organizations as a means of enhancing both employee well-being and organizational quality. Future research should explore longitudinal and intervention-based designs to

further examine the causal mechanisms linking engagement and job satisfaction and to develop evidence-based strategies for improving workforce satisfaction in nursing and other healthcare professions.

5.1 Study limitations

This study has several limitations. First, the cross-sectional and correlational design does not allow for establishing causal relationships between the variables. Although structural equation modeling was used to test the proposed relationships, it only suggests associations rather than definitive causation. Second, the sample consisted of 71 nursing social service interns from five public hospitals in northern Mexico, which may limit the generalizability of the findings to other regions, healthcare settings, or professional groups. Third, all data were collected through self-report questionnaires, which could introduce response bias or social desirability effects. Finally, the study focused exclusively on engagement as a predictor of job satisfaction, without considering other potential influencing factors such as organizational culture, leadership style, or personal coping mechanisms, which may also play a role in shaping employees' work experiences.

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M. A. Contreras-Preciado: Interpretation, original draft writing, writing, review and editing.

M. E. Nava-Gómez: Conceptualization, methodology, data acquisition, original draft writing, writing, review and editing

J. F. Brito-Ortiz: Study design, methodology, validation, data acquisition, project administration.

A. A. Cruz-Gonzalez: formal analysis, writing, review and editing.

J. H. Plascencia: Questionnaire design, analysis, and interpretation.

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The authors have nothing to declare.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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