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RESEARCH ARTICLE

Understanding the Mediating Effects of Commitment and Performance on the Relationship between Job Satisfaction and Engagement among Nurses

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Abstract:

Background:

Job satisfaction, engagement, and commitment are important factors for caregiver well-being and workplace retention. Rewards, organizational and regulatory support, and professional characteristics are important prerequisites for nurses' engagement and should be considered when determining work engagement.

Objective:

This study was conducted in Jordan to investigate the relationships between nurses' job satisfaction, commitment, engagement, and performance.

Methods:

This study employed a cross-sectional design, with a focus on nurses, utilizing a convenience sampling method with a sample size of 216 participants. It assesses work engagement, job performance, job satisfaction, and organizational commitment using validated scales. Data analysis included statistical procedures, such as correlation analysis and structural equation modeling.

Results:

Most participants were female, married, and had a BSN degree. Positive relationships were found among engagement, performance, commitment, and job satisfaction. Satisfaction was strongly correlated with commitment, and moderately correlated with performance. The final model had a good fit (relative chi-square = 2.001, $X^2(1) = 2.001$, $p = 0.157$, GFI = 0.995, AGFI = 0.954, CFI = 0.996, P Ratio = 0.167, RMSEA = 0.068). Direct relationships were significant between engagement, satisfaction, commitment, and performance ($B = 1.433$, $p < 0.001$; $B = 0.319$, $p < 0.001$; $B = 0.797$, $p < 0.001$; respectively). Commitment mediated the relationship between satisfaction and engagement (total effect, $B = 0.663$) and satisfaction and performance (total effect, $B = 0.591$). Performance is directly related to engagement ($B = 0.214$).

Conclusion:

Commitment played a mediating role in the relationship between satisfaction, engagement, and performance. Enhancing job satisfaction and engagement can contribute to increased commitment and improved performance among nurses in healthcare settings. These findings highlight the importance of fostering a supportive work environment to optimize nursing outcomes.

Keywords: Job satisfaction, Commitment, Work engagement, Performance, Structural equation modeling, Mediating role, Nurses.

Article History

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1. INTRODUCTION

Organizational behavior researchers have examined the relationships between job satisfaction, commitment, engagement, and performance. This has been found to sig-

nificantly impact organizational outcomes [1 - 3]. A primary concern for healthcare organizations and policymakers is the maintenance of a sustainable human resource base [4]. By effectively utilizing their nursing workforce and other healthcare professionals, healthcare organizations can gain sustainable and competitive benefits [5]. The relationship between job satisfaction, commitment, performance, and engagement in contemporary organizations is complex and

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multifaceted. Research has demonstrated significant correlations between these constructs and their impact on organizational outcomes [3, 6, 7].

Nurses, who constitute the largest proportion of specialized healthcare professionals in hospitals, play a critical role in patient care and safety through continuous nursing services and interactions [8]. Therefore, it is crucial to focus on improving nursing care quality. The quality of nursing care in the form of job satisfaction, commitment, job performance, and engagement has emerged as a significant consideration for healthcare organizations [9 - 13]. Healthcare organizations ought to prioritize providing conducive working conditions to enhance nurses' job engagement. The factors contributing to improving nursing job engagement should be considered. Ultimately, this can result in improved healthcare outcomes and patient safety [14].

Job satisfaction and commitment have been extensively studied in the context of healthcare services [12, 15]. Job satisfaction refers to a worker's overall attitude towards employment, which can be positive or negative [16]. Additionally, it indirectly predicts the quality of care provided by healthcare institutions [17]. Conversely, commitment represents a strong emotional attachment to an organization's objectives, values, and contributions to achieving them [18]. Both job satisfaction and commitment are crucial for nurses as they directly influence organizational efficiency and success. For instance, a study conducted by [12] found that job satisfaction was positively correlated with commitment among nurses in Saudi Arabia. Nurses who reported higher job satisfaction demonstrated a greater commitment to their organizations. Furthermore, work engagement, characterized by dedication and absorption at work, has been linked to job satisfaction, commitment, and performance [19].

Job satisfaction plays a vital role in ensuring quality patient care and overall organizational productivity [20]. Satisfied nurses perform their duties efficiently, increase productivity, and deliver high-quality care. Conversely, dissatisfied nurses tend to have passive attitudes, leading to conflict, absenteeism, and turnover, ultimately resulting in work inefficiency [21, 22].

Work engagement has been shown to positively influence job performance and patient outcomes [23 - 25]. Therefore, it is important for healthcare organizations to promote work engagement among nursing staff to improve patient care and organizational outcomes. Several studies have examined nurses' job satisfaction and work engagement and found a strong positive correlation [9 - 11]. Therefore, fostering work engagement is crucial for enhancing job performance [24].

Nurses' commitment is also an important factor because of its link to both individual and organizational performance. Performance, as defined by Grant & Ashford, (2008), is the outcome or accomplishment that employees achieve while performing their duties and obligations [26]. Multiple studies have shown a positive and significant relationship between nurses' job commitment and performance [13, 27, 28].

Nurses are more likely to exert extra effort in their work when committed to their organization. This increased effort has the potential to enhance patient outcomes and quality of care

[29]. However, Hakami *et al.* (2020) argued that nursing staff are less committed to a specific hospital and prioritize finding the workplace that provides the highest job satisfaction. Therefore, healthcare organizations should prioritize the development of strategies to enhance nurses' job satisfaction, commitment, and engagement to improve patient care quality, organizational efficiency, and overall performance [12].

The forthcoming research has the potential to make significant contributions to the field of the nursing profession by providing new perspectives on the relationship between job satisfaction, engagement, performance, and commitment. This study can be used to develop interventions aimed at improving employee performance and well-being in the workplace. Using structural equation Modeling (SEM) to assess the relationship between work satisfaction, commitment, performance, and engagement can provide a comprehensive understanding of the interplay between these factors. SEM allows for a comprehensive understanding of the relationships among job satisfaction, engagement, performance, and commitment. By integrating these factors into a single model, researchers can assess both the direct and indirect effects and uncover the underlying mechanisms behind these correlations. This approach provides a mutual understanding of how job satisfaction, engagement, and commitment affect nurses' performance [30].

The purpose of this study was to examine the relationship between job satisfaction, engagement, commitment, and performance among nurses and to provide insights into their effects and specific mechanisms. To gain a deeper understanding of the relationships among job satisfaction, commitment, performance, and engagement among nurses, a hypothetical model was constructed. The model proposes the following hypothetical relationships.

1. Job satisfaction was positively related to commitment.
2. Commitment is positively related to performance.
3. Job satisfaction was positively related to engagement.
4. Engagement was positively related to performance.
5. Job satisfaction was positively related to performance.
6. Commitment is positively related to engagement.
7. Job satisfaction, commitment, engagement, and performance are interconnected and are crucial for enhancing employee motivation and productivity.

2. METHODS

2.1. Setting and Design

This cross-sectional study was conducted in northern Jordan to gather data from nurses working in various units, including the critical care unit (ICU, NICU, SICU, CCU, Burn Unit, and others) and the non-critical care unit (Medical, Surgery, Oncology, Orthopedic, Pediatric, Other). This study was part of a research project titled "Distraction cost among Saudi and Jordanian nurses: a comparative cross-sectional study." The main objectives of this study were to compare the distraction costs between Saudi and Jordanian nurses and to

identify the factors associated with the distraction costs of nurses in the two countries. In addition, this study aimed to identify the work- and performance-related factors associated with productivity loss caused by distraction.

2.2. Sampling, Sample Size, and Calculations

Nurses from government hospitals were recruited through convenience sampling. The required sample size was determined using Raosoft software, considering a margin of error of 5%, a confidence level of 95%, and a population size of 400 nurses according to the head nurses (personal communication dated January 27, 2023). Based on these parameters, the minimum sample size required was 197 nurses [31]. The online survey software QuestionPro (www.questionpro.com) was used to administer a self-administered questionnaire to nurses. The survey was conducted from October 2022 to June 2023, which allowed for adequate duration for data collection.

2.3. Instruments

1. **Work Engagement:** The UWES is a widely recognized and validated tool for measuring work engagement. The scale consists of nine elements or items rated on a seven-point scale from 0 (never) to 6 (always). Each element reflects a specific aspect of work engagement; for example, B. Feeling energized, immersed in work tasks, and excited about work [19, 32]. The reliability of the scale was assessed using Cronbach's alpha, a measure of internal consistency. For this study, Cronbach's alpha coefficient was calculated to be 0.915. Using the Utrecht Work Engagement Scale and achieving a Cronbach's alpha of 0.915, this study ensured a robust and consistent measure of participants' work engagement.

2. **Job Performance Scale:** A 5-point measurement was developed specifically for this purpose by Williams and Anderson. Participants were asked to rate their thoughts on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Each element of the measurement reflects different aspects of work performance and captures participants' perceptions and self-assessments of their workplace performance [33, 34]. For this study, Cronbach's alpha coefficient was calculated as 0.760, which provided a reasonably reliable assessment of the participants' job performance.

3. **Job satisfaction scale:** The job satisfaction scale used in this study was developed by Brayfield & Rothe (1951) as a psychometric measure for self-assessment. The scale consists of five items that assess the level of job satisfaction of the participants. Participants were asked to rate each item on a five-point Likert scale, ranging from 1 (strongest disagreement) to 5 (strongest agreement) [35]. To assess the internal consistency of the scale, a Cronbach's alpha coefficient of 0.756 was used. This indicated a relatively high level of internal consistency and reliability. In a separate study by Sival & Marôco, (2020), the same scale showed internal consistency of 0.89, further supporting its reliability [36]. The Cronbach's alpha coefficient of 0.756 observed in this study confirmed the scale's reliability in assessing participants' job satisfaction. A high level of internal consistency ensured that

the job satisfaction scale provided a reliable assessment of participants' subjective experiences of job satisfaction.

4. **Organizational Commitment Scale:** A modified version of the nine-point organizational commitment scale developed by Cook and Wall, (1980) was used in this study. Participants were asked to rate each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) [37]. This scale aimed to measure participants' levels of engagement with the organization. The study found a Cronbach's alpha coefficient of 0.677 for the organizational engagement scale. This coefficient indicated an acceptable level of internal consistency for the scale.

2.4. Ethical Consideration

The study procedure was approved by the university's Institutional Review Board (IRB) as the principal investigator was a faculty member. To ensure participant consent, an implied consent approach was employed, wherein participants voluntarily participated in the study without being explicitly requested to sign an informed consent form. The participants were provided with comprehensive information about the study objectives, methods, and voluntary participation through an information document. It was emphasized that their involvement would not result in any physical or psychological repercussions. Furthermore, the confidentiality of the data was strictly maintained, with only the research team having access to the information. Respecting participants' privacy and utilizing implied consent align with ethical standards and guidelines applicable to our field, while the data was protected through secure storage, restricted access, anonymization of personally identifiable information, and compliance with data protection regulations and guidelines.

2.5. Data Analysis

Versions 21 and 22 of Analysis of Moment Structures (AMOS) and SPSS were used to analyze the data. Frequencies and percentages were used for categorical data and means and standard deviations were used for continuous variables. The relationship between the enduring factors was evaluated using the Pearson correlation. The Cronbach's alpha coefficient was used to evaluate the dependability of the scales. Correlation analysis was used to assess the interrelationships among the various variables. The statistical significance of a p-value is deemed to be established if it is less than 0.05. Structural equation modeling was employed to examine the associations between the variables under investigation, and structural equation modeling (SEM) was employed.

The SEM was used to validate the theoretically constructed model, which included engagement, commitment, and performance. We used the chi-square test to determine whether the theoretical model effectively explained the data. The relative chi-square statistic had to be less than or equal to 2.0, the goodness-of-fit index (GFI) had to be greater than or equal to 0.95, the adjusted goodness-of-fit index (AGFI) had to be greater than or equal to 0.90, Comparative Fit Index (CFI) had to be greater than or equal to 0.90, and RMSEA had to be less than or equal to 0.8. Models that were more parsimonious had higher Parsimony Ratios (PRatios). Effects of in its entirety,

both directly and indirectly. Outliers were removed from the dataset using Mahalanobis Distance, and the data satisfied the assumption of a lack of multicollinearity.

3. RESULTS

3.1. Demographic Characteristics

The study included 216 nurses, most of whom were female (63.1%), married (60.8%), and with a BSN degree (68.7%). On average, the participants were 32.3 years old (SD 7.6) and had 9.2 years of experience (SD 7.3).

3.2. Correlation between Variables

Table 1 displays the results of the Pearson product-moment correlation analysis conducted to investigate the associations

between engagement, performance, commitment, and job satisfaction. Engagement was positively related to satisfaction ($r = 0.674, p < 0.01$), engagement ($r=0.571, p<0.01$), and achievement ($r=0.350, p <0.01$). The results indicated that engagement was strongly and positively correlated with satisfaction ($r=0.591, p <0.01$), while achievement had a slight positive association with satisfaction ($r=0.188, p<0.01$).

3.3. Final Model

Fig. (1) represents the final model in addition to the goodness-of-fit scores. The model's fitness was evaluated based on several metrics, including relative chi-square (2.001), chi-square for the goodness-of-fit test ($X^2=2.001, df=1, p=0.157$), GFI (0.995), AGFI (0.954), CFI (0.996), PRatio (0.167), and RMSEA (0.068). The current model appears to fit the data according to all the indicators.

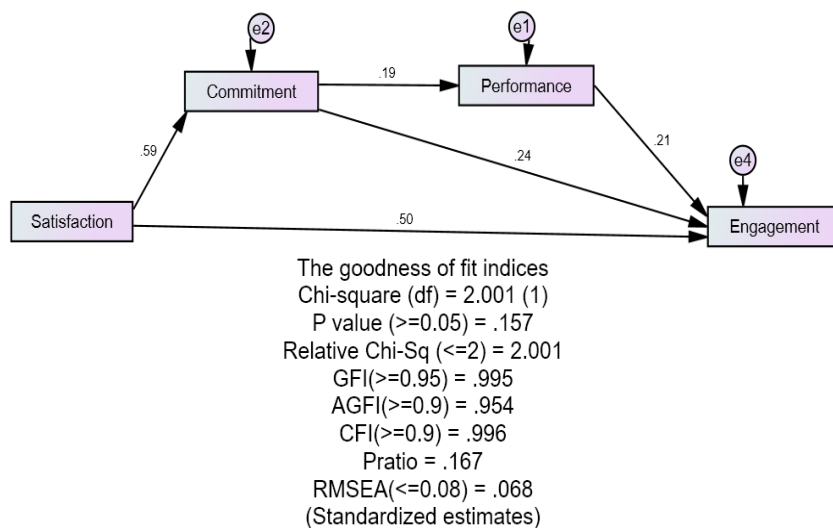


Fig. (1). The final model's pathways and goodness-of-fit indices.

Table 1. Pearson correlation coefficient between variables.

| - | Engagement | Satisfaction | Commitment | Performance |
|--------------|------------|--------------|------------|-------------|
| Engagement | 1 | 0.674** | 0.571** | 0.350** |
| Satisfaction | 0.674** | 1 | 0.591** | 0.188** |
| Commitment | 0.571** | 0.591** | 1 | 0.189** |
| Performance | 0.350** | 0.188** | 0.189** | 1 |

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Table 2. Relation between independent and dependent variables.

| - | - | - | B | b | T stat | P value |
|--------------|---|-------------|-------|-------|--------|---------|
| Satisfaction | → | Engagement | 0.496 | 1.433 | 8.634 | < 0.001 |
| Commitment | → | Engagement | 0.241 | 0.319 | 4.148 | < 0.001 |
| Performance | → | Engagement | 0.214 | 0.797 | 4.527 | < 0.001 |
| Satisfaction | → | Commitment | 0.591 | 1.291 | 10.771 | < 0.001 |
| Commitment | → | Performance | 0.189 | 0.067 | 2.829 | 0.005 |

Note: B = Standardized regression coefficient.
 b = Unstandardized regression coefficient.

The following abbreviations were used: df, degree of freedom; GFI, Goodness-of-Fit Index, AGFI, Adjusted Goodness-of-Fit Index, CFI, Comparative Fit Index, Pratio, Parsimony Ratio, and RMSEA, root mean square error of approximation.

3.4. Significant Relationships Between Observed Variables

According to Table 2, performance, commitment, and satisfaction were all directly related to engagement (b = 1.433, p < 0.001; 0.319, p < 0.001; and 0.797, p < 0.001, respectively). Satisfaction and commitment were directly related (b = 1.291, p < 0.001). However, performance was a direct result of dedication (b = 0.067; p < 0.005).

3.5. Mediating Factors

Table 3 shows the impact of both independent variables on the dependent variables both directly and indirectly. Satisfaction and engagement are influenced by the mediators of commitment and performance. Engagement was directly and indirectly related to satisfaction (mediated by commitment and performance; total effect B = 0.663). Commitment showed direct and indirect relationships with satisfaction, which were mediated by performance, resulting in a total effect of 0.591. Furthermore, performance exhibited a direct relationship with engagement with a value of 0.214.

Table 3. The overall, direct, and indirect impacts of the independent variables on the dependent variables.

| Dependent Variable | Independent Variable | | | |
|--------------------|----------------------|--------------|------------|-------------|
| | Effect ^a | Satisfaction | Commitment | Performance |
| Engagement | Total | 0.663 | 0.282 | 0.214 |
| | Direct | 0.496 | 0.241 | 0.214 |
| | Indirect | 0.167 | 0.04 | 0 |
| Commitment | Total | 0.591 | 0 | 0 |
| | Direct | 0.591 | 0 | 0 |
| | Indirect | 0 | 0 | 0 |
| Performance | Total | 0.112 | 0.189 | 0 |
| | Direct | 0 | 0.189 | 0 |
| | Indirect | 0.112 | 0 | 0 |

Note: ^a Standardized regression weight (B).

4. DISCUSSION

This study examined the structural relationship between satisfaction and engagement through commitment and performance among nurses. Engagement had a positive relationship with satisfaction, commitment, and performance. Satisfaction has a strong positive relationship with commitment and a mildly positive relationship with performance. The level of engagement had direct and indirect influences on satisfaction. Commitment and performance moderated this influence. Similarly, commitment also had direct and indirect effects on satisfaction, which was mediated by performance.

The findings of the current study suggest that nurses' engagement, satisfaction, commitment, and performance were positively correlated. This suggests that individuals who are more engaged in their work tend to experience higher levels of satisfaction and commitment and ultimately perform better in

their roles. The positive association between engagement and satisfaction is consistent with previous research [27, 28, 38]. The findings indicate a significant correlation between nurses' job satisfaction and commitment. This can be rationalized by the fact that nurses who feel content with their work are inclined to exhibit greater loyalty towards their place of work [39]. This result emphasizes the importance of considering nurses' satisfaction when fostering long-term engagement and loyalty to the workplace. Therefore, this result further expresses the concern about cherishing an engaging work environment to increase nurses' satisfaction.

In addition, nurses' satisfaction was found to have a slightly positive association with performance. Although the association is not as strong as that for engagement, this suggests that satisfied nurses tend to perform better in their job roles. This result is consistent with those of previous studies [40 - 42]. One study of 412 nurses in Pakistan found that the internal service quality of an organization has a direct effect on nurses' satisfaction and performance [40]. Hence, Organizations may strive to create a positive and satisfying work environment that maximizes employee performance [43].

In addition, this study showed that nurses' engagement had both direct and indirect effects on satisfaction. This result is supported by those of previous studies [44 - 47]. This result can be explained by the fact that hospitals with higher levels of engagement are less likely to report poor quality and low safety ratings. Higher levels of nurse involvement are associated with higher patient satisfaction with organizational services and healthcare provision [46]. Thus, this result highlights the multifaceted nature of engagement, its significant role in increasing nursing satisfaction, and its effect on patient satisfaction.

In summary, this study provides valuable insights into the complex relationships among nurse engagement, satisfaction, commitment, and performance. The results underscore the importance of creating an engaging work environment that promotes nurses' satisfaction and engagement and leads to better performance. Future research should explore the mechanisms by which these factors interact, and examine additional variables that may affect these relationships. Healthcare organizations can build a productive and efficient nursing workforce by understanding and capitalizing on these dynamics, ultimately contributing to their long-term success.

5. LIMITATIONS

This study has several limitations. As the participants were initially only nurses working in government hospitals, the use of an appropriate sampling method can lead to sample bias and limit the generalizability of the results. Second, the cross-sectional design of the study prevented causal relationships from being established and prevented an understanding of changes over time. Third, reliance on self-report measures for variables such as job engagement, job performance, job satisfaction, and organizational engagement can result in a response bias and potentially fail to capture the objective or differentiated aspects of these constructs. Fourth, although reliability coefficients were provided, the specific sample and context could have affected the generalizability of these

measures. In addition, the assumptions and limitations of structural equation modeling (SEM) should be considered, as the validity of the model and the fit indices used may not capture all aspects of the relationships between variables. Furthermore, the study is limited in that it focuses on a single hospital type in Jordan, which limits the generalizability to other hospital types in Jordan and healthcare facilities in different countries with different geographic and socio-political contexts. Caution should be exercised when extrapolating these results to different hospital settings or international contexts. Future research should include a broader range of hospital types and geographic contexts to improve generalizability.

CONCLUSION

These results have important implications for nursing practice. Nurse performance, engagement, and satisfaction can be significantly improved by fostering an engaging work environment and by promoting job satisfaction. It is important for healthcare organizations to prioritize these factors to create a supportive and fulfilling atmosphere for nursing teams and ultimately improve patient care outcomes. Further research is needed to examine the additional variables and mechanisms that influence these associations, thus allowing for a fuller understanding of the factors that contribute to nursing excellence.

LIST OF ABBREVIATIONS

| | | |
|------|---|------------------------------|
| SEM | = | Structural Equation Modeling |
| ICU | = | Intensive Care Unit |
| NICU | = | Neonatal Intensive Care Unit |
| SICU | = | Surgical Intensive Care Unit |
| CCU | = | Cardiac Care Unit |

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study procedure was approved by the university's Institutional Review Board (IRB).

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All procedures performed in studies involving human participants were in accordance with the ethical standards of institutional and/or research committees and with the 1975 Declaration of Helsinki, as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data and supportive information are available within the article.

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None.

CONFLICT OF INTEREST

The authors declare no conflict of interest financial or otherwise.

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