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Nurses' quality of work life: Determinants of job satisfaction and intent to leave in a tertiary health Centre, eastern province, Saudi Arabia

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Abstract

This study investigates the relationships among nurses' quality of work life (QNWL), their level of job satisfaction, and their propensity to leave their jobs, Saudi Arabia's Eastern Province. A cross-sectional study was conducted from September to November 2022 involving 252 nurses, Saudi Arabia. Data were collected using a four-part questionnaire assessing: (1) demographic and professional characteristics, (2) Quality of Nursing Work Life (QNWL), (3) a single-item measure of turnover intention, and (4) the Index of Work Satisfaction (IWS). The results indicated a positive association between QNWL and job satisfaction ($\beta = 0.67$, $p < 0.001$). Conversely, higher job satisfaction was significantly linked to lower turnover intention ($\beta = -0.36$, $p < 0.001$). QNWL additionally exerted a direct negative effect on turnover intention ($\beta = -0.29$, $p < 0.001$). Job satisfaction partially mediated the QNWL-turnover intention relationship, demonstrating complementary influence. This study identified professional status as nurses' highest satisfaction subdomain and pay as the lowest. For QNWL, work context scored highest, while work world scored lowest. These findings underscore QNWL's critical influence on the quality of patient care. Developing interventions to enhance nurses' working conditions is crucial for improving retention and, ultimately, patient outcomes.

Keywords: Nursing, Personal turnover, Quality of life, Satisfaction, Saudi Arabia, Work-life balance.

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Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Institutional Review Board Statement: The ethical approval for this research proposal (IRB-2022-11-375) was obtained prior to the commencement of the study. All participants provided written informed consent, affirming their voluntary participation.

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1. Introduction

Healthcare leaders prioritize embedding patient safety into daily clinical practice. Since reports of adverse events by nurses as providers serve as direct indicators of safety within the health system, it is essential to investigate how nurses' assessments of these events correlate with their own work environments. Jarrar, et al. [1] nurses' job satisfaction is described as an emotional response and behavioral expression relating to the individual's performance evaluation, work environment, and work life. Job satisfaction emphasizes the emotional side of the employee as a constellation of their attitudes toward work-related factors. Karlsson, et al. [2] low levels of job satisfaction are correlated with employee stress and burnout, as well as employee dissatisfaction and intention to leave. Likewise, evidence suggests that healthcare workers who are truly satisfied with their jobs are more productive and innovative and tend to stay longer at the healthcare facility. Involving healthcare staff and considering their preferences is important for increasing staff morale and satisfaction. Specchia, et al. [3] flexibility and schedule control lead to higher morale and lower turnover rates. Nurses' dissatisfaction will impact the hospital by causing resource shortages from high turnover, absences, and sick leave. As a result, the hospital will experience losses due to subpar performance [4].

It has been proven that nurses' job satisfaction significantly influences patient satisfaction. job satisfaction, scheduling of shifts, workplace atmosphere, and nursing staffing are among the elements that influence the delivery of quality care. Rizany, et al. [5] the quality of care is defined as "the extent to which health services provided to individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge". Vequist IV, et al. [6] a study evaluated the relationship between nurse working environment and turnover intention their current job, founds that extended shifts (≥ 12 hours) were associated with higher dissatisfaction to their work and the flexibility of their working hours as well as indicated that they intended to leave their jobs due to dissatisfaction.

Extended work hours among nurses are thus associated with negative repercussions. High burnout, one such consequence, poses a concurrent safety risk to patients and nurses. Dall'Ora, et al. [7] nurse preferences, hospital policies, work requirements, and other restraints must be considered when arranging shifts, since poorly designed shift schedules can cause fatigue, errors, and lower job satisfaction, thus lowering overall productivity and quality of work. Legrain, et al. [8] research suggests that nurse job satisfaction within Saudi Arabia is both a critical factor influencing workforce retention and healthcare quality, yet findings regarding its prevalence remain inconsistent. While certain studies report moderately high satisfaction levels [9, 10] another reported a high turnover rate in Saudi Arabia [11] especially across different specialties and healthcare settings. This gap highlights the need for targeted studies in this region to better understand local dynamics, inform policy, and develop tailored interventions to enhance nurse satisfaction and retention Therefore, this study investigates the relationships among nurses' quality of work life (QNL), and their level of job satisfaction, with their intention to leave their jobs in the healthcare settings of Saudi Arabia's Eastern Province.

2. Methods

2.1. Study Design, Sampling, and Participants

A cross-sectional design was selected because it facilitates the determination of the interrelationships among the study parameters within the study's limited time during the period of September to November 2022 at King Fahad Hospital of the University (KFHU), located in Eastern region, Saudi Arabia. The study included a full-time staff nurse with at least one year of bedside care experience at the hospital as the population of interest. Nurses holding administrative positions, such as charge nurses, supervisors, or nurse leaders, were excluded from participation.

The required sample size was computed in G*Power, targeting 80% power to detect a medium effect size at $\alpha = 0.05$, resulting in 180 participants. Anticipating nonresponse and incomplete data, we inflated this estimate by 40%, establishing a final sample of 252 RNs. Recruitment employed a nonprobability convenience sampling strategy.

3. Data Collection

A self-administered questionnaire was given to eligible nurses who provided informed consent to participate after all required approvals were secured. The questionnaire comprised items adapted from Brooks' Quality of Nursing Work Life (QNL) [12] survey and the Index of Work Satisfaction (IWS) [13]. Additionally, a single item assessing intention to leave and questions capturing demographic and work-related characteristics were included [14]. Permission to utilize the copyrighted content from both the QNL and IWS instruments was obtained from the original authors. Prior to the main study, a pilot test involving 10 participants was conducted to assess the clarity, reliability, and the estimated completion time of the survey tools. The reliability of the QNL and the IWS questionnaire was 0.85 and 0.86, respectively, based on Cronbach's α .

The demographic/work-related information comprised 12 items to collect data on selected demographic/work-related variables such as qualifications, age, department and years of experience.

The intention to leave was assessed using a single item: "Do you intend to leave your job within the next 12 months?" Salahat and Al-Hamdan [14] this straightforward method was chosen over more extensive questionnaires to minimize the burden on participants. Responses were recorded on a 5-point Likert scale, ranging from 1 (very likely) to 5 (very unlikely). Participants who indicated that they were either "very likely" or "likely" to leave were subsequently asked to provide their reasons.

QNL scale consists of 42 items distributed across four domains to evaluate the quality of work life among nurses. The "home life/work life" domain (7 items) examines the interplay between nurses' experiences at work and at home. The "work design" domain (10 items) addresses the structure of nursing roles and how nurses carry out their professional

responsibilities. The “work context” domain (20 items) explores the influence of the work environment on both nursing practice and patient care. Lastly, the “work world” domain (5 items) considers the broad impacts of societal trends on the nursing profession. Participants respond to each item using a 6-point Likert scale, with responses ranging from 1 (strongly disagree) to 6 (strongly agree). According to Brooks’ guidelines, overall scores are classified as low (42–112), moderate (113–182), or high (183–252) to indicate the level of QNWL. The IWS, comprises 44 items distributed across six key domains: Pay (6 items), Professional Status (7 items), Autonomy (8 items), Organisational Policies (7 items), Task Requirements (6 items), and Interactions—including both nurse-to-nurse and nurse-to-physician interactions (10 items).

Based on attitude statements about each component, the scale measures nurses’ satisfaction. Each statement is rated on a 7-point scale, from “strongly agree” to “strongly disagree.” Response bias may occur if a respondent is given a list of only positively worded statements. Thus, half the items on the scale are phrased positively, and half are phrased negatively. Items on the scale are phrased either positively or negatively. For positively worded statements, respondents who are highly satisfied tend to choose “strongly agree,” whereas for negatively worded statements, “strongly disagree” reflects higher satisfaction. Scoring is structured such that responses indicating greater satisfaction receive higher point values. According to Stamps, the aggregate possible score on the scale ranges from 44 to 308.

4. Data Analysis

Descriptive analyses presented numeric variables using means $\pm$ SDs and medians, and categorical variables using counts and percentages. For inferential statistics, associations between categorical variables were tested with chi-square or Fisher’s exact tests, while Spearman’s rank correlation assessed relationships involving quantitative or ranked data. Binary regression models were constructed to determine independent predictors of QWL and work engagement. Analyses were considered significant at $p < 0.05$ and were performed using SPSS 25.

5. Results

The study achieved a complete response rate, with all 252 invited RNs returning the questionnaire. Demographic analysis revealed the participants’ average age was 38.23 years ($SD = 6.56$), with ages spanning 20 to 49 years. A significant majority identified as female (90.5%, $n = 228$) and reported being married (69.8%, $n = 176$), as detailed in Table 1.

Table 1.
Participants’ Characteristics.

	Frequency	Percentage (%)	Mean $\pm$ SD
Age			38.23 $\pm$ 6.56
20 - 25	4	1.6	
26 - 30	41	16.3	
31-45	159	63.1	
>45	48	19.0	
Nationality			
Saudi	70	27.8	
Non-Saudi	182	72.2	
Gender			
Male	228	90.5	
Female	24	9.5	
Marital Status			
Married	176	69.8	
Single	65	25.8	
Widow	2	0.8	
Divorced	9	3.6	
Work Experience			11.52 $\pm$ 5.84
2- 6 years	57	22.6	
7- 10 years	56	22.2	
11- 15 years	72	28.6	
16- 20years	55	21.8	
>21years	12	4.8	
Education			
Diploma	46	18.3	
Bachelor	198	78.6	
Master	7	2.8	
PhD	1	0.4	
Certificate			

Yes	120	47.6	
No	132	52.4	
Dependent Children			
Yes	105	41.7	
No	147	58.3	
Salary			8601.19 ± 3255.50
<4000	4	1.6	
4000 - 10000	188	74.6	
>10000	60	23.8	
Rotate Shift			
Yes	158	62.7	
No	94	37.3	
Duration shift			9.32 ± 1.88
8	169	67.1	
12	83	32.9	

Note: Abbreviations: QNWL – Quality of Nursing Work Life; SD – Standard Deviation.

The QNWL, and intention to leave. QNWL was assessed using a 7-point Likert scale, job satisfaction was employed a 6-point Likert scale, and intention to leave was utilised a 5-point Likert scale. For all measures, higher scores indicated stronger participant agreement.

The overall mean score of Job satisfaction (4.23±0.91) indicating moderate satisfaction among respondents; the highest satisfaction level was found for the “Professional status” sub-domain, namely 5.17 (SD = 1.19), and for the “Interaction” sub-domain, namely 4.99 (SD = 1.04), and the lowest level of satisfaction was reported for the “Pay” sub-domain 3.26 (SD = 1.58). The overall mean score for the QNWL is 4.02 (SD = 0.77), indicating participants’ experience a moderate QNWL. These results indicate that the highest level of the QNWL was reported for the “work context” sub-domain, at 4.54 (SD = 0.83), and the lowest level of the QNWL was reported for the “work world” sub-domain, at 3.47 (SD = 1.04). The overall mean score for intention to leave is 3.71 (SD = 1.25), indicating that the nurses in our study have a moderate intention to leave (Table 2).

Table 2.
Descriptive Statistics of all Research Variables.

Variables	Minimum	Maximum	Mean ± SD
Pay	1.000	6.670	3.26 ± 1.58
Professional status	1.000	7.000	5.17 ± 1.19
Autonomy	1.000	7.000	4.55 ± 1.11
Organizational policies	1.000	6.500	4.11 ± 1.31
Task requirement	1.000	7.000	4.24 ± 1.39
interaction	1.000	7.000	4.99 ± 1.04
Job satisfaction	1.590	6.000	4.23 ± 0.92
Work life-home life	1.000	6.000	4.12 ± 0.88
Work design	1.000	6.000	3.94 ± 1.04
Work context	1.000	6.000	4.54 ± 0.83
Work world	1.000	5.330	3.47 ± 1.04
QNWL	1.000	5.370	4.02 ± 0.77
Intention to leave	1	5.000	3.08 ± 1.25

Note: Abbreviations: QNWL – Quality of Nursing Work Life; SD – Standard Deviation.

Squares Structural Equation Modeling (PLS-SEM) implementation began with measurement model evaluation, examining relationships between latent constructs and their indicators. Analysis confirmed that convergent validity for all constructs reached acceptable thresholds after eliminating items with low factor loadings. The results indicate that the average variance extracted (AVE) and composite reliability (CR) are above the acceptable thresholds. The heterotrait monotrait (HTMT) approach was applied to test discriminant validity. Henseler, et al. [15] the calculated HTMT values for all variable pairs fell below the 0.90 threshold, ranging from 0.23 to 0.82. These results confirm adequate discriminant validity among the constructs (Table 3).

Table 3.

Convergent Validity and Reliability Assessment of Measurements.

Construct	No items	No of removed items	Loading	Crombach's α	CR	AVE
Pay	6	3	0.62-0.89	0.69	0.83	0.62
Interaction	10	5	0.65-0.81	0.79	0.86	0.54
Professional status	8	4	0.51-0.79	0.67	0.80	0.50
Organizational policies	7	3	0.63-0.80	0.73	0.83	0.55
Autonomy	8	3	0.63-0.80	0.56	0.77	0.53
Task requirements	6	3	0.79-0.81	0.72	0.84	0.64
Work design	10	3	0.60-0.82	0.88	0.91	0.60
Home life/Work life	7	2	0.75-0.80	0.83	0.88	0.60
Work context	20	7	0.56-0.80	0.93	0.94	0.53
Work world	5	2	0.80-9.83	0.76	0.86	0.67

Note: Abbreviations: CR – composite reliability; AVE – average variance extracted.

The bootstrapping findings show that six sub-dimensions of job satisfaction, including Autonomy ($\lambda = 0.69$; $p < .001$), interaction ($\lambda = 0.76$; $p < 0.001$), and organizational policies ($\lambda = 0.84$; $p < 0.001$), pay ($\lambda = 0.44$; $p < 0.001$), professional status ($\lambda = 0.81$; $p < 0.001$), and task requirements ($\lambda = 0.79$; $p < 0.001$) contribute significantly to job satisfaction as a second-order latent variable. Likewise, four sub-dimensions of the QNWL, including “work context” ($\lambda = 0.92$; $p < 0.001$), “work design” ($\lambda = 0.884$; $p < 0.001$), “work world” ($\lambda = 0.66$; $p < 0.001$), and “home life/work life” ($\lambda = 0.71$; $p < 0.001$) contributed significantly to the QNWL as a second-order latent variable (Table 4).

Table 4.

Second Order Assessment of Measurements using Bootstrap.

Second order	First order	Loading	SE	T	P
IWS	Autonomy	0.69	0.05	14.60	<0.001*
	Interaction	0.76	0.04	17.45	<0.001*
	Organizational policies	0.84	0.02	42.3	<0.001*
	Pay	0.44	0.07	6.85	<0.001*
	Professional status	0.81	0.03	30.55	<0.001*
	Task requirements	0.79	0.03	25.94	<0.001*
QNWL	Work context	0.91	0.02	52.63	<0.001*
	Work design	0.88	0.02	58.10	<0.001*
	Work world	0.66	0.04	14.95	<0.001*
	Homelife/Worklife	0.71	0.05	14.52	<0.001*

Note: Abbreviations: IWS – Index of Work Satisfaction; QNWL – Quality of Nursing Work Life, SE – Standard Error.* $p < 0.05$.

Structural equation modeling was applied to examine the impact of QNWL variables on the intention to leave, with job satisfaction serving as a mediating factor. The coefficient of determination (R^2) for intention to leave was found to be 0.38, indicating that 38.0% of the variation in employees' intention to leave is accounted for by job satisfaction and QNWL. Additionally, the adjusted R^2 for job satisfaction was 0.44, suggesting that the QNWL factors can explain 44.2% of the variability in job satisfaction (Figure 1).

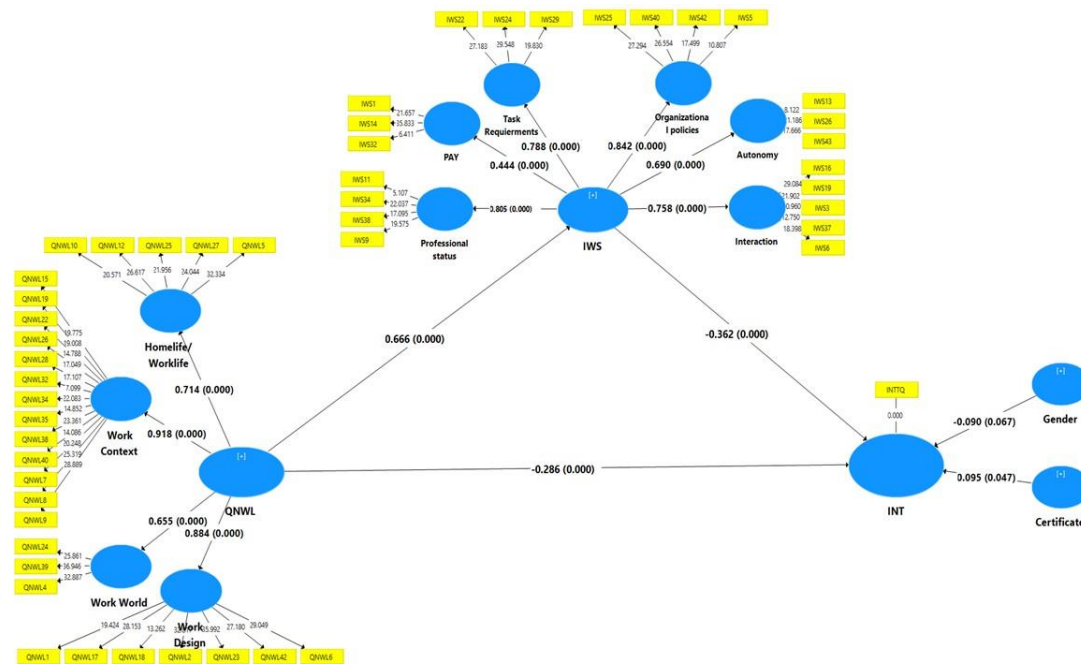


Figure 1.
Structural Model Using Bootstrapping Methods.

The standardized path coefficients (β) and their significance levels (p -values), derived through a bootstrapping method, indicate a direct significant influence of QNWL on job satisfaction ($\beta = 0.67$; $p < 0.001$). Additionally, the findings demonstrate that, increased levels of job satisfaction are significantly associated with a reduced intention among nurses to quit their positions ($\beta = -0.36$; $p < 0.001$), highlighting the inverse relationship between job satisfaction and nurses' turnover intentions.

The result reveals a negative statistically significant relationship between QNWL and nurses' turnover intentions ($\beta = -0.29$; $p < 0.001$). This association persisted even when accounting for the significant confounding influences of gender and certification level

PLS-SEM was found that the indirect effect of the QNWL on intention to leave ($\beta = -0.24$, $p < 0.001$) is also negative and significant. Since both the direct and indirect QNWL on intention to leave are significant, it can be concluded that, there is a kind of partial and complementary mediation. Cohen's effect size was also calculated, and it was found that the effect of the QNWL on intention to leave is between small and medium ($f^2 = 0.07$), while the effect of work satisfaction on intention to leave is almost medium ($f^2 = 0.12$). The results also show that the Q^2 value of intention to leave ($Q^2 = 0.38$) is greater than zero, indicating the predictability of intention to leave based on this model (Table 5).

Table 5.
Path Model Assessment using Bootstrapp.

Path	β	SE	T	P
Path a (IV to Mediator)				
QNWL -> IWS	0.67	0.06	12.09	<0.001*
Path b (Mediator to DV)				
IWS -> INT	-0.36	0.07	5.21	<.001*
Path c' (Direct effect of IV to DV)				
QNWL -> INT	-0.29	0.07	4.31	<0.001*
Confounders				
Certificate -> INT	0.10	0.05	1.99	0.047
Gender -> INT	-0.09	0.05	1.83	0.067

Note: Abbreviations: DV – Dependent variable; QNWL – Quality of Nursing Work life; IV – Independent variables; IWS – Index of Work Satisfaction; INT – Intention to leave; SE – Standard Error* $p < 0.05$.

6. Discussion

Our study explores uncharted territory, being the first “to our knowledge” to evaluate QNWL and job satisfaction in relation to intention to leave, Eastern Province of Saudi Arabia. Our result showed that the satisfaction and QNWL levels among respondents were moderate. This result is consistent with previous studies that found nurses' job satisfaction scores similar to the results of this study. Henseler, et al. [15]; Masum, et al. [16] and Yilmazel [17] however, contrasting results were found in a Turkish study that reported that most nurses were dissatisfied with their jobs. Sabanciogullari and Dogan [18] furthermore, some studies have reported that Iranian nurses had low happiness due to high workloads, difficult work conditions, and the negative feelings they experienced during patient care delivery, and they were ready to leave their jobs.

Alipour and Agah Heris [19]; Dadghar, et al. [20] and Erdem, et al. [21] by comparison, studies conducted in Saudi Arabia, Jordan, Turkey, and India found the QNWL levels to be moderate; [10, 22, 23] also, the QNWL is significantly associated with job satisfaction, where employees' satisfaction with their jobs is influenced by their QWL. Alharbi, et al. [10]; Baysal and Yildiz [24] and Sabanciogullari and Dogan [25] a study in Thailand showed that the mean score of the QNWL level among professional nurses was moderate. Personal factors such as status, position, age, education, experience, and salary were not considered in the QNWL. QNWL was positively correlated with occupational satisfaction. At the same time, organizational climate, commitment, and job characteristics were positively, moderately linked to the QNWL. Wallapa Boonrod [26] by contrast, other studies conducted in Bangladesh, Jordan, and Iran demonstrated that the level of QNWL was lower to moderate, [27-29] while in Nepal, the scores were lower compared to our study [30].

This study identified significant correlations between job satisfaction and its professional status, sub-dimensions autonomy, pay, interaction, organizational policies, and task requirements. Notably, professional status, and task requirements exhibited negative correlations with job satisfaction, aligning with prior research. Al Momani [31]; Erdem, et al. [21]; Lo, et al. [32] and Masum, et al. [16] furthermore, QNWL significantly contributed to the work life domains/home, work context, work world, and work design.

A study among 860 nurses in Saudi hospitals found an association between the QNWL and working hours per shift, income ranges, and other variables; for example, the income difference was around 41.0% between nurses with a high QNWL compared to nurses with a moderate QNWL. Al Mutair, et al. [9] Furthermore, a study conducted among 374 Omani nurses found moderate to high levels of QNWL among nurses based on their professional status, task requirements, and pay. Al-Maskari, et al. [33] another study in Thailand found a moderate level of QNWL among professional nurses, where organizational climate, commitment, and job characteristics were positively linked to the QNWL. Wallapa Boonrod [26] a Jordanian study conducted among 193 nurses showed a moderately strong correlation between job satisfaction, QWL, and occupational satisfaction, while the QNWL was positively linked with job satisfaction and negatively with intent to leave. Work-related and sociodemographic variables such as educational level, hospital type, and salary reported significant differences and correlations with at least one of the main variables [14].

Our results indicate that the influence of the QNWL on job satisfaction is positive and significant. Job satisfaction negatively and significantly affects the intention to leave the organisation. The direct effect of the QNWL on intention to leave is also negative and significant once two significant confounders (gender and degree) are included in the model based on a bivariate analysis. This is consistent with another study by Kagwe, et al. [34] which reported that nurses with higher degrees and certifications were less satisfied with their jobs and more willing to leave, possibly due to the lack of incentives for nurses who obtain higher degrees and certifications.

Previous research has identified a significant relationship between turnover intention and gender, with men demonstrating a greater propensity to consider leaving their jobs. This trend is often attributed to men's role as primary earners in their families, which may drive them to seek better employment opportunities. Al Momani [31] and Salahat and Al-Hamdan [14] in this regard, factors such as professional development opportunities, initiatives to strengthen colleague relationships, and a study reported that higher compensation, initiatives to strengthen colleague relationships, and professional development opportunities were identified as significant enhancers of nurses' QNWL in the USA and Canada [35].

7. Limitations

First, the use of self-report questionnaires introduces the potential for social desirability bias, where participants may provide socially acceptable rather than fully authentic responses. Second, as the data were collected from a single healthcare institution, the findings may not be generalizable to other healthcare settings across Saudi Arabia.

8. Conclusion

The current study found that the highest satisfaction level was in the professional status subdomain, while the lowest level of satisfaction was reported in the pay subdomain. Also, the results show that the highest level of the QNWL belongs to the work context subdomain, and the QNWL's lowest level belongs to the work world. Therefore, further investigation into this area is essential for formulating effective strategies to enhance retention and motivation of nurses. In addition, healthcare authorities need to develop strategies to improve nurses' working conditions and QNWL so that nurses can better care for their patients. This study provides insight into the working lives of nurses in Saudi Arabia as a first step towards a deeper understanding of their work.

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