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QUALITY OF WORK LIFE AND TURNOVER INTENTION AMONG SAUDI NURSE MANAGERS IN THE MAKKAH REGION IN SAUDI ARABIA

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Abstract
The problem of nurse managers' high turnover rate and its effects on the healthcare system has been examined in previous studies. Through analysing the quality of nurse managers' working lives, the reasons they leave their jobs can be determined. The purpose of this study was to assess the quality of working life and turnover intentions among nurses in the Kingdom of Saudi Arabia. The study employed a cross-sectional correlational research design to study 231 nurse managers who took part in the investigation. The results of the study revealed that the Saudi nurse managers had a moderate level of overall quality of work life (QWL) (118.10±33.64). In addition, all the dimensions of QWL, such as work/home life balance, work context, work design, and work world, were reported as moderate. The nurse managers' intent to leave their jobs in this study was also observed to be moderate. Furthermore, socio-demographic factors such as shift change, compensation, compensation position, and compensation for certificates related to the QWL and their intent to leave ($p < 0.05$). Quality of work life correlated with the intent to leave, and among the dimensions of QWL, only work life and work world predicted the intention of nurse managers to leave their jobs. The findings of this study showed that healthcare institutions must ensure that quality of work life is improved not only for nurse managers, but also for other healthcare professionals through establishing flexible working schedules, favourable working environments, higher compensation, and open communication among colleagues.

Keywords: quality work life, anticipated turnover, nurse, nursing, leaders, manager, Saudi Arabia, Saudi nurse

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LIST OF ABBREVIATIONS

ICU	Intensive Care Unit
MOH	Ministry of Health
SA	Saudi Arabia
QWL	Quality of Working Life
QNWL	Quality of Nursing Working Life
ATS	Anticipated Turnover Scale

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Chapter 1: Introduction

1.1 Background of the study

Nursing is the largest healthcare profession in many countries, including Saudi Arabia, and is integral to the delivery of most healthcare services. Nurses are front liners in the healthcare arena, and their scarcity would have a great impact on organisations as well as patients (Hayes Douglas & Bonner, 2015). Patients who are not receiving the right medical attention are at risk from diseases, and this is one of the problems connected to shortage of nurses (Chen et al., 2015). One important factor affecting the quality of nursing care is nursing shortages, which is one of the many challenges facing nursing and the healthcare sector in general. In Saudi Arabia, there are only 38 nurses for every 10,000 people, according to the annual statistical book issued by the Ministry of Health (Ministry of Health, 2019). Every indication suggests that this shortage is getting worse, and studies indicate that the country is struggling to not just attract nurses but also retain them (Lamadah & Sayed, 2014). Anticipated nursing turnover in the Saudi Arabian healthcare system is an issue worthy of attention, and overreliance on expatriate labour in the healthcare sector makes it even more concerning (Alharthi & Damanhouri, 2018). Alharthi and Damanhouri (2018) found that

61.5% of nurses in MOH hospitals in Jeddah City had indicated an intention to leave the nursing profession, which is a worrying sign.

An increasing amount of nursing turnover is demonstrated to be costly for the government, and estimates may be different with the level of treatment and standards (Choi et al., 2013). The cost is significant because of lower productivity with new employees, and a reduction in staff esteem also reduces productivity (Choi et al., 2013).

To address the problem of nursing shortages, it is imperative that factors contributing to the shortages are identified and addressed. One of the suggested causes of nursing shortages among Saudi Arabian nurses is nursing turnover (Lamadah & Sayed, 2014). High turnover rates among nurses are in turn linked to work-related problems, including poor quality working life and poor job satisfaction (Mosadeghrad, 2013). The quality of working life for nurses is a particular problem the country needs to address because of the poor perception regarding the role of nurses by society and healthcare providers (Alboliteeh et al., 2017). Many nurses indicate great dissatisfaction with their work life and argue that decision makers should improve their working conditions (Alboliteeh et al., 2017).

Even though studies in Saudi Arabia generally attribute high turnover among nurses to the quality of work life, there is a dearth of nursing literature specifically focusing on how quality of work life correlates with this turnover. According to the literature, no study has examined nursing managers' quality of life and corresponding turnover in Saudi Arabia. This study provides the first look at Saudi nurse managers' quality of work life (QWL) and nursing turnover intentions.

1.2 Aim and objectives

The main aim of this study is to assess the quality of working life and turnover intention among nurses in the Kingdom of Saudi Arabia. The objectives of this study are as follows:

1- To assess the quality of working life among Saudi nurse managers.
2- To explore turnover intention among Saudi nurse managers.
3- To examine the relationship between QWL and Saudi nurse managers' demographic variables of gender, age, marital status, dependent children, dependent adults, nationality, ethnicity, level of education, nursing tenure, organisational tenure, positional tenure, location of hospital, and payment per month.
4- To examine the relationship between turnover intention and Saudi nurse managers' demographic variables of gender, age, marital status, dependent children, dependent adults, nationality, ethnicity, level of education, nursing tenure, organisational tenure, positional tenure, location of hospital, and payment per month.
5- To assess whether there is a significant relationship between the quality of working life of Saudi nurse managers and their intention to leave their job.

1.3 Research question

1- Do the Saudi nurse managers satisfy with the quality of working life?
2- Are Saudi nursing managers considering leaving their jobs?
3- What is the relationship between QWL and the demographic variables of Saudi nurse managers of gender, age, marital status, dependent children, dependent adults, nationality, ethnicity, education level, duration of nursing, organizational tenure, job, hospital location, and monthly payment?
4- What is the relationship between the intention of the turnover and the demographic variables of Saudi nurse managers of gender, age, marital status, dependent children, dependent adults, nationality, race, education level, duration of nursing, organizational tenure, job, hospital location, and monthly payment?
5- Is there a statistically significant relationship between the quality of Saudi nursing managers' working life and their intention to leave their jobs?

1.4 Significance of the study

This study has significance for nursing research, nursing management, and delivery of high-quality nursing care.

Nursing research. This study has significance for nursing research because it aims to fill a gap in knowledge of the level of the quality of work life among Saudi nurses and their turnover intentions and how these are correlated. Previous studies in SA have been conducted in other settings of the country, but there is a dearth of research on this topic in the Makkah region. The study will also provide new insight into the extent of nursing turnover intentions in the region.

Nursing management. This study has significance for nursing management, which plays an important role in dictating the quality of work life for nurses in healthcare settings. Nurse managers and administrators in SA may be oblivious to the extent of turnover intention among nurse managers. The findings of this study will provide a better picture of the extent of turnover intention and its relationship to nurses' quality of work life.

Recipients of care. Under Vision 2030, Deputy Crown Prince Muhammad Bin Salman has described a healthcare system that optimises and better utilises its hospitals' capacities to enhance the quality of preventive and therapeutic healthcare services (Alharbi, 2018). Low quality of nurses' working lives and high staff turnover means that hospitals' ability to provide high-quality healthcare as described in Vision 2030 is compromised. Nursing turnover and working quality of life has the potential to significantly destabilise hospital services, patient outcomes, staffing processes, and overall healthcare costs (Alharthi & Damanhouri, 2018). The low quality of nurses' working life and high turnover intention leads to high costs of training and recruiting new nurses, which undermines hospitals' operational budgets and provision of services. Nurse turnover also increases the patient-to-nurse ratio, which impacts the ability of remaining nursing staff to provide comprehensive services. Consequently, turnover increases the likelihood of hospital-acquired infections, length of hospital stay, readmission rates, and mortality rates.

1.5 Definition of terms

Nurse turnover: Nurses' voluntary and involuntary leaving of their roles with their organisations.
Nursing turnover intention: Nurses' intentions to voluntarily leave their roles with their healthcare organisations.

Quality of working life: Level of employees' involvement, satisfaction, motivation, and commitment in their workplaces.

Chapter 2: Literature Review and Framework

2.1 Background of quality of working life and intention to leave

There is a worldwide scarcity of healthcare workers and nurses in particular (Almalki et al., 2011). This results in a series of impacts, such as higher hospitalisation expenses, a decrease in nursing care quality, higher patient fatality rates, and surges in staffing expenditures. Internationally, the retention of healthcare workers needs to be addressed in healthcare facilities, as staff decreases can have devastating effects on levels of dissatisfaction among other staff members and higher workloads for remaining staff (Aiken et al. 2010).

Gratification in work, and nursing in particular, is a crucial issue for healthcare institutions to examine, as labour expenses increase and scarcity is common, and job satisfaction among healthcare workers declines. Healthcare workers' job satisfaction has been credited as having an overwhelming effect on performance, lowering expenses, and influencing the standards of patient care. When nurses' job satisfaction decreases, turnover rates increase (Zaghloul et al., 2016). Furthermore, gratified workers exhibit more productiveness, dedication, and creativity (Biswas &

Soumendu, 2016). Work dissatisfaction may result in decreased performance, productivity, and a high rate of intention to leave (Zaghloul et al., 2016).

It has been noticed that high QWL of workers influences the performance and dedication of employees in a variety of institutions (Gifford, 2012; Hsu, 2016). An increased degree of QWL is essential to encourage recruitment and maintain the workforce. Accordingly, healthcare institutions are implementing approaches to solve difficulties in hiring and maintaining workers by attaining a high rate of QWL (Akdere, 2016). Focusing on enhancement of the QWL to promote the joy and satisfaction of workers will result in many benefits for workers, institutions, and stakeholders. These involve empowering dedication to the organisation, enhancing standards of service and improving productivity of both employees and the institution. According to Sirgy and colleagues (2016), a contented employee is productive, committed, and dedicated. Failing to handle these things will result in a negative effect on employees' attitudinal responses.

2.2 Quality of work life and turnover intention among nurses

Low QWL has been found to be the main reason for nursing shortages. Internationally, many studies have examined QWL among nurses. One study by Eren and Hisar (2016) explored the work life quality of nurses and their level of commitment. It revealed that QWL is at the medium levels of QWL and organisational commitment. Findings also revealed that QWL was directly and significantly related to organisational commitment. Similarly, Moradi Maghaminejad and Azizi-Fini (2014) conducted a study in Iran to investigate the quality of nurses' working life in hospitals in Kashan and found that the overall QWL score was moderate with a mean of 84.36±21.64.

Another study was conducted by Morsy and Sabra (2015) about the connection between QWL and job satisfaction among nurses in Egypt. The findings showed that 66.7% of nurses were dissatisfied with the quality of their working life. It was also found that QWL was significantly related to work satisfaction. The implication of this study suggests that nurses must be supported to boost their QWL. A similar study was conducted in India by Nayak (2016), who found that healthcare employees had a low degree of QWL and job commitment, while turnover intention was reported to be high. The author suggested that actions be undertaken to lessen the turnover intentions of nurses.

Lee et al. (2017) examined the QWL of Taiwanese nurses and their intent to leave their work. It was found out that 56.1% of the nurses had plans on leaving their jobs and 31 out of 720 (2.5%) planned to leave the profession after a year. Furthermore, the QWL of these nurses predicted their leaving. This study indicates that nurse leaders should formulate plans and interventions to mitigate these decisions of nurses to leave.

Similarly, Faraji et al. (2017) studied the link between the QWL of Iranian nurses and their plans to leave their profession. The results showed that 61% of the nurses expressed low levels of QWL and 39.7% of the sample had intentions to leave. It was found that the nurses' intent to leave was directly associated with the status of their employment ($p = 0.01$) and also to their gender of the nurses ($p = 0.03$). Furthermore, QWL is significant and inversely associated with the intention to leave. This clearly shows that if the QWL of nurses increases, the intention to leave decreases.

Lee et al. (2013) studied QWL as a predictor of Taiwanese nurses' intentions to leave their jobs. It utilised a cross-sectional survey design and studied 1,283 nurses. The findings revealed that low QWL predicted nurses' intentions to leave their profession and organisation. Furthermore, three dimensions of QWL emerged: workload, nursing care, and staffing and work-life balance. These three dimensions predicted nurses' intent to leave. It was also revealed that nurses who had a higher intent to leave their profession were more likely to be single and assigned to general care wards. The study indicates that soaring turnover rates are damaging to the value of nursing care in the institution, which is why it needs to be decreased by enhancing QWL and increasing retention of nurses.

2.3 Quality of working life and turnover intention of nurse managers

Many studies have examined nurses' quality of life and intention to leave around the world. However, few studies have focused on the same for nurse managers. Warhsawksy and Havens

(2014) studied the work satisfaction of nurse managers and their intent to leave, and found that 70% out of the 291 nurse managers working in US hospitals were satisfied with their jobs. However, 72% of the respondents had plans to leave in the next five years. It was further found that the most common reasons given by participants were career burnout (30%), promotion (15%), changing careers (27%), and retirement (22%).

Hewko et al. (2015) also explored the reasons nurse managers stay or leave their jobs in Canada. The results revealed that 28 of the 95 nurse managers had intentions to leave. The participants who indicated this identified the factors that led them to such decisions. It was found that heavy workload, lack of resources, recognition, and empowerment were most likely to influence nurse managers to leave their positions. It was also reported that the managers who had plans to leave their jobs had lower satisfaction and higher levels of burnout. The results of the study suggest that a support system must be provided to nurse managers to create an environment that retains them.

Steege et al. (2017) explored fatigue being experienced by 21 nurse leaders in midwestern states in the U.S.A. They found that nurse managers experienced high levels of fatigue due to intense role executions and accountability. Signs and symptoms reported by the nurse managers were committing career mistakes, frustrations, anxiety, disengagement, and decreased quality of work. It was also shown that the consequences of the nurse leaders' fatigue influenced their decisions, their work life balance, and intent to leave their profession. It was indicated that workload determined the number of years they would be able to stay in their profession. Several policies can be adapted to cater to the needs of nurse leaders in order to minimise fatigue.

Labrague (2019) examined the turnover intention of nurse managers in selected hospitals in the Philippines. It was found that work and family issues and work satisfaction were directly related to turnover intention. The results revealed that the participants had a low level of professional turnover intention, while the organisational turnover intention was moderate. Nurses who experienced less work satisfaction, those who managed more than 16 staff nurses, and those who were currently working in smaller facilities reported higher turnover intentions. This suggests that the turnover intention of the nurse managers in the Philippines needs active involvement from different institutions to help retain nurses in the sector. There is a need to further examine nurse managers' quality of life and intentions to leave.

2.4 QWL and turnover intentions among nurses in Saudi Arabia

Few studies have been conducted in the Saudi Arabian context that examined the relationship between QWL and nursing turnover or turnover intentions in Saudi Arabia. Almalki et al. (2012) studied 508 nurses to examine the relationship between QWL and turnover intentions in the Jazan region in Saudi Arabia. The study found that most nurses were dissatisfied with their work life, and 40% expressed an intention to leave. There was a significant relationship between quality of life and turnover intention. Furthermore, 26% of the turnover intention variance was attributed to QWL ($p < 0.001$, $R^2 = .0263$). Using the hierarchical multiple regression, 19% of the turnover variance was predicted by QWL after controlling for demographic variables ($p < 0.001$).

Al-Ahmadi (2014) examined anticipated turnover among a large sample of nurses (5,423 nurses) in 80 different hospitals, and the effect of work environment, organisational factors, and personal variables on turnover intentions. The findings suggested that there was no significant relationship between work satisfaction and the intention to stay, as most respondents were in the counselling arena. The results ($r = 0.23$, $p = 0.003$), however, were indicative that career satisfaction was related to the intention to stay. The study also posited that there was a relationship between career satisfaction and amount of income, which affected turnover intentions. It was found that the Saudi nurses who had been working for a long period and who performed various tasks were content with their current work and planned to stay in their profession to achieve the highest salary. Nurses from abroad who were assigned to different departments also indicated they would stay in their current work for a long time. Their definition of work satisfaction was receiving salaries high enough to meet their requirements and improve their living conditions.

Alsadah (2017) examined the relationship among three dimensions that were potentially correlated with nurses' work engagement: demographic factors, quality of nurses' work life, and turnover intentions. Of the 600 questionnaires sent, 207 were returned by registered nurses in Saudi Arabia. The results indicated that a significant correlation existed between the three dimensions. In particular, there was a positive correlation between QWL and work engagement, but a negative correlation between strong work engagement and their intent to leave.

Kaddourah et al. (2018) assessed the nurses' QWL, intent to leave, and the correlation between the two. Nurses were recruited from two hospitals: King Fahad Medical City and King Faisal Specialist Hospital. A total of 364 nurses with at least one year of experience comprised the final sample. Results showed that the majority of nurses (54%) were dissatisfied with their working life, and even more (94%) had the intention to leave. About 93.3% of the nurses who reported being satisfied with their work life still indicated their intention to leave. They found a weak relationship between QWL and nursing turnover ($r = -0.024$) that was not statistically significant ($p = 0.206$).

Alsaqri (2014) investigated QWL and nurses' intent to leave the profession but stopped short of quantifying the extent of the relationship. The study employed a correlational study design with factor analysis to identify nurses' turnover intention through measures of job satisfaction, burnout, and stress. A sample of 297 nurses from the northern province of Ha'il in Saudi Arabia was used. The majority of respondents reported intending to leave their profession due to job uncertainty, stress, and burnout. These factors were linked to QWL, but the study did not explicitly examine that link. The study's limitation is the poor generalisability of the study to other settings, given that it was only conducted in two hospitals.

Al-Manea and Hasan (2019) conducted a study about the predictors of the nurse's plan to stay, work satisfaction, dedication to their organisation, and self-efficiency. The results showed that the salary level was directly related to job satisfaction. This led to nurses' decisions to stay in their current positions. Furthermore, older Saudi nurses had a higher tendency to stay in their jobs because of high salaries and repetitive simple tasks. Organisational commitment was reported as an insignificant determining factor of nurses' intent to leave.

Alharbi et al. (2019) also studied the quality of job life that Saudi nurses had. Their results revealed that the QWL of these nurses was moderate with a mean score = 165; SD = 26.8. It was also revealed that non-Saudi status, career experience, marital status, shifting, and full-time employment were factors that contributed to the increase of QWL scores. The study suggests that nurse managers must set goals to boost recruitment and retention among nurses for the sustainability of nursing staff.

In a study of healthcare front liners in Saudi Arabia, it was suggested that nurses were not satisfied with their colleagues, particularly doctors (Alhusaini, 2016), from whom they encountered low degrees of respect, support, and appreciation. Moreover, they had poor connections and interventions with the doctors. Previous studies also found the influence of professional enhancement opportunities, such as the promotional system accession to higher education, on the QWL of nurses (Hsu 2016, Khani 2018 and Webster, 2009). In the workplace context, findings from various studies suggested that healthcare workers were not satisfied with security and safety in their work environment (Alhusaine, 2016; Khani 2018). Moreover, the insufficiency of patient care facilities and supply were related to dissatisfaction with healthcare workers and other healthcare practitioners. A series of healthcare investigations in Saudi Arabia noted the inadequacy of patient supplies, particularly in primary healthcare (PHC) facilities (Al-Khaldi et al., 2012).

The studies mentioned above provide clear evidence that the QWL of nurses affects the quality of nursing care, their ability to make decisions about their career, and their likelihood of staying in the position. Several factors must be considered in order to counteract the issue of nurses leaving their jobs, including QWL and its relationship to the turnover intentions of nurses.

2.5 Gap in the literature

Few studies have examined QWL and nurse manager turnover intentions in Saudi Arabia. However, all of these studies focus on how QWL correlates with nursing intentions to leave. No study was

found in the literature that examined this important topic specifically for nurse managers in Saudi Arabia. This is the first study to examine Saudi nurse managers' quality of work life and their intentions to leave their jobs.

Chapter 3: Methodology

3.1 Research design

This study used a quantitative cross-sectional correlational research design where the quality of working life was assessed in relation to the nurses' turnover intentions. This allowed the researcher to observe the variables at one specific point in time and examine whether changes in QWL were associated with changes in the turnover intentions of the nurses. This is an observational study, so causality cannot be assumed, and it is worth remembering that any reported relationships may also be caused by other underlying factors (Privitera, 2015). The use of a cross-sectional design is convenient because it enabled the researcher to take a representative sample from the population, and the survey was completed quickly and efficiently.

3.2 Sample of the study

3.2.1 Sample size

G-power analysis with a z-test and two independent Pearson r was utilised to calculate the sample size. For an effect size of 0.5, alpha of 0.05, and a power of 0.80, the minimum sample size is 132.

3.2.2 Sampling of this study

A convenience sampling technique was used to study nurse managers who were available and interested. Saudi nurse managers of all levels, as mentioned in Section 3.2, were invited to participate in the study. Of the 452 invited, 231 agreed, making the response rate 51.1%.

3.2.3 Inclusion and exclusion criteria

The primary inclusion criteria are i) Saudi Arabian nationality, ii) registered nurse managers, and iii) at least one year of work experience in the current setting. Any nurse that did not meet the three criteria was not considered for the research.

3.3 Research instruments

This study had two major variables: quality of work life and turnover intention. For QWL, the quality of nursing work life (QNWL) survey was used. The QNWL was developed by Beth A. Brooks in the USA in 2001 to evaluate nurses' QWL. It is a 42-item instrument with four subscales that focus on work life/home life, work context, work design, and work world. It has a reliability of 0.90 and a construct validity of 0.89 (Almalki et al., 2012). It has been used by studies based in Saudi Arabia, such as those by Almalki et al. (2015) and Kaddourah et al. (2018) and found to be valid for the population.

For turnover intention, the instrument used was the anticipated turnover scale (ATS). This instrument was developed by Hinshaw and Atwood in 1978, and it measures nurses' intentions to voluntarily leave their current roles. It is a 12-item questionnaire with items rated on a 7-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. It has a Cronbach's alpha value of 0.84, which indicates high internal consistency (Kaddourah et al., 2018).

A pilot test was used to evaluate the accuracy, validity, and reliability of the questions presented in the questionnaire. The current study showed that the pilot study for the anticipated turnover scale achieved significant and positive correlations and ranged between ($r = 687$, $p < 0.01$) and ($r = 366$, $p < 0.05$). However, the Cronbach's alpha was high ($\alpha = 0.79$), so it can be confirmed that the scale is reliable and suitable for the study. The QNWL scale achieved significant and positive correlation, ranging between ($r = 806$, $p < 0.01$) and ($r = 414$, $p < 0.05$). The Cronbach's alpha was very high ($\alpha=0.94$). As a result, it can be confirmed that the scale is reliable and suitable for the study.

3.4 Data collection

After ethical approval, the researcher communicated with hospital administration and met with them and with the training and education department to explain the aim, nature, and benefits of the study. The researcher started the data collection in two ways. In the beginning, the plan was to use printed questionnaires as well as online; however, due to COVID-19, the online questionnaire was only the method of data collection used. Reminders were sent to the participant three times in weeks 3, 6, and 9. Data collection was scheduled to commence January 13 and run for 10 weeks until March 23, 2020.

3.5 Data analysis

Data were analysed using SPSS version 23.0. The frequencies, percentages, means, and standard deviations were computed for the items, subscales, and main scales; it was also used to calculate demographic factors. A one-way ANOVA, independent t-test, and Pearson correlation were used to test the relationship between the main variables of the study and the socio-demographic information. Linear regression was conducted to test the relationship between QWL and intention to leave. A *p*-value of less than 0.05 was considered statistically significant.

3.6 Ethical Consideration

Permission to conduct the study was sought from the university's Institutional Review Board Ministry of Health (HAP-02-T-067333). The study was guided by the ethical principles of non-maleficence, justice, and autonomy. No physical harm to participants was anticipated in this study because it did not involve any experimental procedures. Nevertheless, measures were taken to ensure participants did not suffer any psychological or emotional harm from participating. This involved fully disclosing the purpose and objectives of the study before requesting informed consent. No participant was coerced or misled. The autonomy of the participants was respected. Data collected was handled through a secure chain of custody to protect against breaches of confidentiality and patient anonymity. Anonymity was ensured by not using personally identifiable nurse information.

Chapter 4: Research Results

4.1 Characteristics information

As shown in Table (1), 231 Saudi employees working in the Saudi health sector participated in the current study, including 54.5% male employees and 45.5% female. Most (67.5%) were married. Age was classified into four groups; most were in the 30-39 age group (63.6%). Participants lived in the western region, with 44.6% in Taif and 27.7% each in Makkah and Jeddah. Seventy-one percent were in charge nurses, and the participants worked in five hospitals, with more coming from King Faisal Medical complex (34.2%) than any other. They worked in 10 departments with the highest number coming from medical and surgical (28.1%) and the intensive care unit (25.1%). A total of 59.3% were taking care of their parents or spouse, 51.1% could change their shifts, and 57.6% were required to change it. 70.6% did not offer compensation for changing the shift. 51.1% had offered compensation for getting certificates in nursing, and 58.9% received certificates related to the positions.

Table 1 Socio-demographic information (n=231)

Factor		Frequency	Percent
Gender	Female	105	45.5
	Male	126	54.5
MS	Single	56	24.2
	Married	156	67.5
	Divorced	14	6.1
	Widowed	5	2.2

Age	20-29	41	17.7
	30-39	147	63.6
	40-49	36	15.6
	50+	7	3.0
Residency	Makkah	64	27.7
	Jeddah	64	27.7
	Taif	103	44.6
Education level	Diploma	80	34.6
	Bachelor	105	45.4
	Master	36	15.6
	PhD	10	4.3
Position	In charge nurse	164	71
	Head nurse	46	19.8
	Nursing supervisor	21	9.1
Hospital	King Faisal Medical complex	79	34.2
	King Fahad Hospital	54	23.4
	Alnoor Hospital	52	22.5
	King Abdulaziz Hospital specialist	29	12.6
	King Abduallah Medical complex	17	7.4
Department	Medical and surgical department	65	28.1
	Intensive care unit	58	25.1
	Emergency room	34	14.7
	Nursing administration	32	13.9
	Long-term care unit	16	6.9
	Outpatient department	10	4.3
	Maternity department	6	2.6
	Paediatric department	6	2.6
	Isolation department	2	0.9
	Oncology department	2	0.9
Taking care of parents or spouse	No	94	40.7
	Yes	137	59.3
Shift Change	No	113	48.9
	Yes	118	51.1
Shift change status	Required	133	57.6
	Optional	98	42.4
Shift compensation	No	163	70.6
	Yes	68	29.4
Compensation certificate	No	113	48.9
	Yes	118	51.1
Position certificate	No	136	58.9
	Yes	95	41.1

Table (2) presents the number of children; 68.07% did not have children, and the mean score of total children was (M=2.68 ±2.76).

Table 2 Number of children (n=231)

	Number of children

	0	1	2	3	4 or more
N	966	278	96	35	11
%	68.07	24.30	5.64	1.46	0.49
Mean ±SD	**2.68 ±2.76**				

4.2 Descriptive analysis of nurses' QWL

The nurse's QWL consisted of four sub-scales / dimensions, and it was measured using a 5-point Likert scale from 'strongly agree'=5 to 'strongly disagree'=1. Item (20) was a reserve score. The range was calculated using the following formula:

Interval level = (biggest number –smallest number) / (number of points)

Interval level = (5-1) / 5=0.80

(The level is presented in Table 3 from very high to very low)

Table 3 Interval level of the 5-point Likert scale

Interval level	Level
1-1.79	Very low
1.80-2.59	Low
2.60-3.39	Moderate
3.40-4.19	High
4.20-5	Very high

4.2.1 Evaluation of QWL

The QWL was measured using 41 items, which was measured by four subscales, and the evaluation was based on the total score mean in order to meet the theoretical results. As shown in Table 4 and Figure 1, the participants achieved a range of scores from 41 to 205 (M=118.10±33.64), which was less than the average (120). A score of 120 suggests a good quality of life satisfaction. The achieved results provided indication that the employees were dissatisfied and with their quality of life; however, it was close to 120. It can be concluded that overall, QWL was moderate.

Regarding the subscales, home life/work life achieved scores ranging from 7 to 31 (M=20.34±5.92), which was only slightly less than the average (20.4). Work design achieved scores ranging from 9 to 41 (M=25.22±7.28), which was less than the average (26.2), but very close. Work context achieved scores ranging from 20 to 100 (M=58.81±18.62), which was slightly more than average (58.33). The work world scale achieved scores ranging from 5 to 25 (M=14.37±4.49), which was more than the average (14.58).

Table 4 Total scores and subscale scores of the items

Scale	Possible Range	Average	Achieved Range	Mean	SD
41 items scale	**41-205**	**120**	**41-194.59**	**118.10**	**33.64**
7 items home life/work life subscale	7-35	20.40	7-31	20.34	5.92
9 items work design subscale	9-45	26.20	9-41	25.22	7.28
20 items work context subscale	20-100	58.33	20-100	58.81	18.62
5 items work world subscale	5-25	14.58	5-25	14.37	4.49

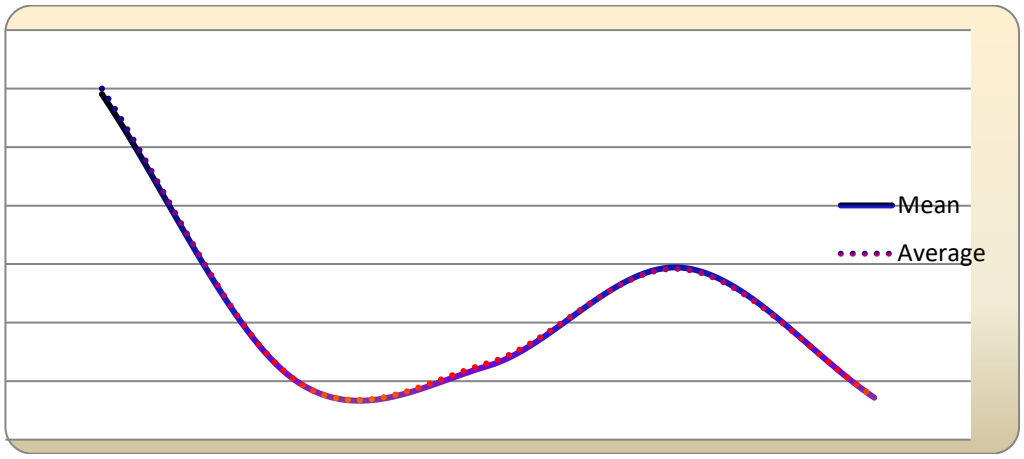

Figure 1 Curves of achieved average and average range

As shown in Table 5, the home life/work life sub-scale was analysed using descriptive analysis. Frequencies, percentages, means, and standard deviations were computed for the items and for the total mean. The overall was (M=2.91±0.86, moderate level). Item 36 achieved the highest mean (M=3.16±1.27, moderate), and item 12 achieved the lowest mean (M=2.42±1.13, moderate level). It was concluded that on average, nurses were moderately satisfied with their home life/work life balance.

Table 5 Descriptive analysis of home life/work life (n=231)

No	N/%	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean±SD
5	N	31	50	79	59	12	2.87±1.09
	%	13.4	21.6	34.2	25.5	5.2	
10	N	39	39	58	60	35	3.06±1.31
	%	16.9	16.9	25.1	26	15.2	
12	N	61	63	60	42	5	2.42±1.13
	%	26.4	27.3	26.0	18.2	2.2	
20 R	N	32	39	60	71	29	3.11±1.24
	%	13.9	16.9	26.0	30.7	12.6	
25	N	48	55	73	50	5	2.61±1.11
	%	20.8	23.8	31.6	21.6	2.2	
27	N	35	36	63	64	33	3.10±1.26
	%	15.2	15.6	27.3	27.7	14.3	
36	N	37	28	59	75	32	3.16±1.27
	%	16	12.1	25.5	32.5	13.9	
Mean±SD/Level							**2.91±0.86/Moderate**
R = reverse question							

As shown in Table 6, the work design sub-scale tool was analysed using descriptive analysis. The frequencies, percentages, means, and standard deviations were computed for the items and for the total mean. The overall was M=2.80±0.81, indicating a moderate level. Item (23) achieved the highest mean (M=3.08±1.16, moderate level), and item 1 achieved the lowest mean (M=2.13±1.19, low level). It can be concluded that the work design was a moderate level.

Table 6 Descriptive analysis of work design (n=231)

No	N/%	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean±SD
1	N	100	49	38	41	3	2.13±1.19
	%	43.3	21.2	16.5	17.7	1.3	
2	N	37	55	56	67	16	2.87±1.20

	%	16	23.8	24.2	29	6.9	
3	N	49	55	65	56	6	2.63±1.14
	%	21.2	23.8	28.1	24.2	2.6	
6	N	39	56	71	57	8	2.74±1.11
	%	16.9	24.2	30.7	24.7	3.5	
11	N	37	36	58	55	45	3.15±1.34
	%	16	15.6	25.1	23.8	19.5	
16	N	32	39	58	91	11	3.04±1.15
	%	13.9	16.9	25.1	39.4	4.8	
17	N	37	49	65	69	11	2.86±1.15
	%	16	21.2	28.1	29.9	4.8	
18	N	48	56	50	68	9	2.71±1.20
	%	20.8	24.2	21.6	29.4	3.9	
23	N	30	41	56	88	16	3.08±1.16
	%	13	17.7	24.2	38.1	6.9	
Mean±SD/Level							**2.80±0.81/Moderate**

As shown in Table 7, the work context sub-scale was analysed using descriptive analysis. The frequencies, percentages, means, and standard deviations were computed for the items and for the total mean. It consists of four dimensions: management and supervision, co-workers, development opportunities, and work environment. The overall score was M=2.94±0.93, moderate level. The co-workers subscale achieved the highest mean among the dimensions (M=3.05±1.02, moderate level), and management and supervision achieved the lowest mean (M=2.88±0.96, moderate). It can be concluded that the work context was a moderate level.

Table 7 Work Context (n=231)

Dimension	No	N/%	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean±SD
Management and supervision	**7**	N	32	42	59	78	20	3.06±1.19
		%	13.9	18.2	25.5	33.8	8.7	
	9	N	36	51	69	62	13	2.85±1.15
		%	15.6	22.1	29.9	26.8	5.6	
	22	N	34	41	63	81	12	2.98±1.15
		%	14.7	17.7	27.3	35.1	5.2	
	26	N	41	49	54	73	14	2.87±1.21
		%	17.7	21.2	23.4	31.6	6.1	
	33	N	38	40	73	60	20	2.93±1.20
		%	16.5	17.3	31.6	26	8.7	
	34	N	49	48	60	62	12	2.74±1.21
		%	21.2	20.8	26	26.8	5.2	
	40	N	54	49	43	69	16	2.76±1.29
		%	23.4	21.2	18.6	29.9	6.9	
	Mean±SD/Level							**2.88±0.96/ Moderate**
Co-workers	**13**	N	38	32	60	68	33	3.11±1.29
		%	16.5	13.9	26	29.4	14.3	
	15	N	43	35	67	73	13	2.90±1.20
		%	18.6	15.2	29	31.6	5.6	
	21	N	38	43	60	71	19	2.96±1.22

		%	16.5	18.6	26	30.7	8.2	
	28	N	37	37	60	68	29	3.06±1.26
		%	16	16	26	29.4	12.6	
	32	N	29	33	53	91	25	3.22±1.20
		%	12.6	14.3	22.9	39.4	10.8	
	Mean±SD/Level							**3.05±1.02/ Moderate**
Development opportunities	**14**	N	51	43	68	57	12	2.72±1.21
		%	22.1	18.6	29.4	24.7	5.2	
	30	N	28	36	44	69	54	3.37±1.32
		%	12.1	15.6	19	29.9	23.4	
	31	N	45	53	64	54	15	2.74±1.20
		%	19.5	22.9	27.7	23.4	6.5	
	Mean±SD/Level							**2.95±1.01/ Moderate**
Work environment	**8**	N	50	50	66	55	10	2.68±1.18
		%	21.6	21.6	28.6	23.8	4.3	
	19	N	38	42	60	66	25	2.99±1.25
		%	16.5	18.2	26	28.6	10.8	
	29	N	25	39	42	61	64	3.43±1.34
		%	10.8	16.9	18.2	26.4	27.7	
	35	N	60	33	69	61	8	2.67±1.22
		%	26	14.3	29.9	26.4	3.5	
	38	N	50	49	53	62	17	2.77±1.26
		%	21.6	21.2	22.9	26.8	7.4	
	Mean±SD/Level							**2.91±0.96/ Moderate**
Total mean, SD and the level of the Work Context								**2.94±0.93/ Moderate**

As shown in Table 8, the work world sub-scale was analysed using descriptive analysis. The frequencies, percentages, means, and standard deviations were computed for the items and for the total mean. The overall score was M=2.87±0.90, moderate level. Item 41 achieved the highest mean (M=3.09±1.26, moderate level), and item 1 achieved the lowest mean (M=2.64±1.22, moderate level). It can be concluded that the work world was a moderate level.
The overall mean of the nurses' QWL was moderate (M=2.88±0.88).

Table 8 Work World (n=231)

No	N/%	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean±SD
4	N	31	50	79	59	12	2.74±1.18
	%	13.4	21.6	34.2	25.5	5.2	
24	N	39	39	58	60	35	2.64±1.22
	%	16.9	16.9	25.1	26	15.2	
37	N	61	63	60	42	5	2.93±1.18
	%	26.4	27.3	26	18.2	2.2	
39	N	32	39	60	71	29	2.97±1.23
	%	13.9	16.9	26	30.7	12.6	
41	N	48	55	73	50	5	3.09±1.26
	%	20.8	23.8	31.6	21.6	2.2	

Mean±SD/Level	**2.87±0.90/Moderate**

4.3 Intentions to leave

As shown in Table 9, the intentions to leave scale was measured using a 5-point Likert scale from strongly agree=5 to strongly disagree=1. As shown in Table 8, the intentions to leave scale was analysed using descriptive analysis. The frequencies, percentages, means, and standard deviations were computed for the items and the total mean. The overall was M=2.85±0.81, moderate level. Item 5 achieved the highest mean (M=3.34±1.27, moderate level), and item 10 achieved the lowest mean (M=2.62±1.12, moderate level). It can be concluded that the nurses overall had moderate intentions to leave.

Table 9 Intentions to leave (n=231)

No	N/%	Strongly disagree	Disagree	Natural	Agree	Strongly agree	Mean±SD
1	N	48	31	61	75	16	2.91±1.25
	%	20.8	13.4	26.4	32.5	6.9	
2	N	35	50	58	71	17	2.94±1.19
	%	15.2	21.6	25.1	30.7	7.4	
3	N	35	44	58	83	11	2.96±1.16
	%	15.2	19	25.1	35.9	4.8	
4	N	50	53	64	56	8	2.65±1.17
	%	21.6	22.9	27.7	24.2	3.5	
5	N	30	30	42	90	39	3.34±1.27
	%	13	13	18.2	39	16.9	
6	N	58	48	63	52	10	2.60±1.21
	%	25.1	20.8	27.3	22.5	4.3	
7	N	43	46	74	59	9	2.76±1.14
	%	18.6	19.9	32	25.5	3.9	
8	N	36	56	77	52	10	2.76±1.10
	%	15.6	24.2	33.3	22.5	4.3	
9	N	41	26	68	75	21	3.04±1.23
	%	17.7	11.3	29.4	32.5	9.1	
10	N	49	51	75	50	6	2.62±1.12
	%	21.2	22.1	32.5	21.6	2.6	
11	N	48	38	65	71	9	2.81±1.19
	%	20.8	16.5	28.1	30.7	3.9	
12	N	42	51	63	59	16	2.81±1.20
	%	18.2	22.1	27.3	25.5	6.9	
Mean±SD							**2.85±0.81**

The intention to leave was measured using 12 items, and the evaluation was based on the total mean in order to obtain the theoretical results. The total score was obtained by calculating the sum of the all items in the scale and dividing by the number of the items in the scale. As shown in Table 10 and Figure 2, the participants achieved a range of scores from 12 to 60 (M=34.19±9.76), which was almost the same as the average (34.28). Based on the mean scores, the participants were dichotomised/classified into 'Stayers' and 'Leavers', and 152 (65.8%) intended to stay, while 79 (34.2%) intended to leave the hospital.

Table 10 The evaluation of intention to leave

Theoretical results		**Achieved results of the current study**			
Possible range	Mean	Actual Range	Mean±SD	Intention to stay (N/%)	Intention to leave (N/%)
12-60	34.28	12-60	34.19±9.76	152(65.8%)	79(34.2%)

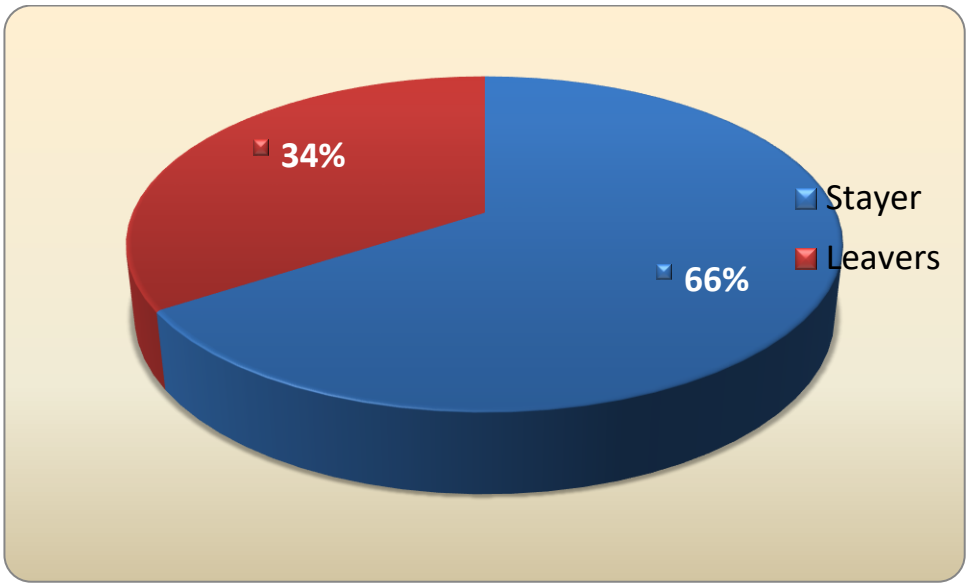

Figure 2 Numbers of stayers and leavers

4.4 The relationship between QWL and socio-demographic factors

As shown in Table 11, the associations between QWL and nurse manager demographic information were conducted using independent t-tests, one-way ANOVAs, and Pearson correlations.

There were no significant relationships between QWL and gender, marital status, age, residency, education level, position, hospital, department, number of children, or whether they were taking care of parents or partners ($p > 0.05$). However, there were significant relationships between QWL and other nurse manager socio-demographic factors as follows.

Shift change: There was a significant relationship between shift change and QWL ($t = 3.28$, $p < 0.05$) Managers who did not change shifts (M=3.06±0.61) had a higher QWL than those who did change shifts (M=2.71±0.95).

Shift change status: There was a significant relationship between shift change status and QWL ($t = 4.28$, $p < 0.05$). Managers who were required to change shifts (M=3.06±0.61) were higher in QWL than those who had the flexibility to change their shifts (M=2.62±0.96).

Shift compensation: There was a significant relationship between shift compensation and QWL ($t = 3.58$, $p < 0.05$). Managers who got shift compensation (M=3.00±0.73) were higher in QWL than who did not get shift compensation (M=2.59±0.96).

Compensation certificate: There was a significant relationship between compensation certificate and QWL ($t = 2.22$, $p < 0.05$). Managers who received compensation for certificates (M=3.00±0.78) were higher in QWL than those who did not get compensation certificate (M=2.76±0.84).

Compensation position: There was a significant relationship between compensation for position and QWL ($t = 3.57$, $p < 0.05$). Managers who received compensation for position (M=3.04±0.67) were higher in QWL than who did not get compensation for position (M=2.56±0.96).

Table 11 Association between QWL and demographic information (n=231)

Factor		M	SD	Statistics	*p*
Gender	Female	3.01	0.73	*t*=2.73*	0.01
	Male	2.72	0.89		
Marital status	Single	2.86	0.89	*F*=0.87	0.46

	Married	2.92	0.77		
	Divorced	2.56	1.13		
	Widowed	2.74	0.69		
Age	20-29	2.79	0.80	*F*=2.18	0.09
	30-39	2.92	0.81		
	40-49	2.97	0.89		
	50+	2.17	0.57		
Residency	Makkah	2.83	0.86	*F*=0.21	0.81
	Jeddah	2.92	0.81		
	Taif	2.89	0.81		
Education level	Diploma	2.93	0.82	*F*=0.79	0.50
	Bachelor	2.83	0.83		
	Master	2.83	0.79		
	PhD	3.21	0.76		
Position	In charge nurse	2.86	0.86	*F*=0.23	0.79
	Head nurse	2.92	0.74		
	Nursing supervisor	2.96	0.73		
Hospital	King Faisal Medical complex	2.82	0.78	*F*=2.03	0.08
	King Fahad Hospital	2.86	0.84		
	Alnoor Hospital	2.77	0.93		
	King Abdulaziz Hospital specialist	3.22	0.56		
	King Abduallah Medical complex	3.15	0.64		
Department	Medical and surgical department	2.87	0.92	*F*=1.15	0.33
	Intensive care unit	2.81	0.81		
	Emergency room	2.84	0.69		
	Nursing administration	3.22	0.54		
	Long-term care unit	2.64	0.85		
	Outpatient department	2.78	1.03		
	Maternity department	2.61	1.36		
	Paediatric department	2.78	0.64		
	Isolation department	3.34	0.15		
	Oncology department	3.59	0.43		
Taking care of parents or spouse	No	2.94	0.85	*t*=0.96	0.34
	Yes	2.84	0.80		
Shift change	No	3.06	0.61	*t*=3.28*	<0.00
	Yes	2.71	0.95		
Shift change status	Required	3.07	0.64	*t*=4.28*	<0.00
	Optional	2.62	0.96		
Shift compensation	No	3.00	0.73	*t*=3.58*	<0.00
	Yes	2.59	0.96		
Compensation certificate	No	3.00	0.78	*t*=2.22*	<0.03
	Yes	2.76	0.84		
Position certificate	No	3.04	0.67	*t*=3.57*	<0.00
	Yes	2.65	0.96		
Total children		2.28	2.76	*r*=0.09	0.15
***Significant at 0.05 level**					

The relationship between intention to leave and socio-demographic factors

As shown in Table 12, the associations between intentions to leave and nurse manager demographic information were conducted using an independent t-test, one-way ANOVA, and Pearson correlation. The results showed that there were six significant relationships with factors, described as follows.

There were no significant relationships found between intent to leave marital status, age, residency, education level, position, hospital, department, and whether they were taking care of their parents or spouse ($p > 0.05$). There were significant relationships between intention to leave and other socio-demographic factors as follows.

Gender: There was a significant relationship between gender and intention to leave ($t = 3.09$, $p < 0.05$), female nurse managers (M=3.00±0.76) were higher in intentions to leave than their male counterparts (M=2.71±0.95).

Shift change: There was a significant relationship between shift change and intention to leave ($t = 4.40$, $p < 0.05$). Managers who did not change shifts (M=3.08±0.66) were higher in intention to leave than those who did (M=2.63±0.89).

Shift change status: There was a significant relationship between shift change status and intention to leave ($t = 5.16$, $p < 0.05$). Managers who were required to change shifts (M=3.07±0.64) were higher in intention to leave than those who had the flexibility to change shifts (M=2.54±0.93).

Shift compensation: There was a significant relationship between shift compensation and intention to leave ($t = 4.68$, $p < 0.05$). Managers who did not get shift compensation (M=3.01±0.72) were higher in intention to leave than who did not get shift compensation (M=2.48±0.88).

Compensation certificate: There was a significant relationship between compensation certificate and intention to leave ($t = 2.20$, $p < 0.05$). Managers who received compensation for certificates (M=2.97±0.74) were higher in intention to leave than who did not (M=2.73±0.86).

Compensation position: There was a significant relationship between compensation for position and intention to leave ($t = 3.50$, $p < 0.05$). Managers who got compensated for their position (M=3.00±0.67) were higher in intention to leave than who did not get compensation for their position (M=2.63±0.95).

Number of children: There was a significant relationship between the number of children and intention to leave ($r = 3.50$, $p < 0.05$). Managers who had more children were higher in intention to leave than who had fewer children.

Table 12 Association between intentions to leave and demographic information (n=231)

Factor		M	SD	Statistics	*p*
Gender	Female	3.00	0.76	*t*=3.09*	<0.00
	Male	2.67	0.84		
MS	Single	2.94	0.89	*F*=1.54	0.20
	Married	2.86	0.74		
	Divorced	2.46	1.12		
	Widow	2.55	1.07		
Age	20-29	2.70	0.86	*F*=1.17	0.32
	30-39	2.91	0.78		

	40-49	2.83	0.86		
	50+	2.52	0.96		
Residency	Makkah	2.70	0.88	*F*=1.64	0.20
	Jeddah	2.93	0.81		
	Taif	2.89	0.77		
Education level	Diploma	2.81	0.77	*F*=1.20	0.31
	Bachelor	2.87	0.82		
	Master	2.77	0.79		
	PhD	3.29	1.10		
Position	In charge nurse	2.84	0.86	*F*=2.12	0.79
	Head nurse	2.91	0.72		
	Nursing supervisor	2.78	0.67		
Hospital	King Faisal Medical complex	2.95	0.77	*F*=2.12	0.08
	King Fahad Hospital	2.88	0.84		
	Alnoor Hospital	2.61	0.92		
	King Abdulaziz Hospital specialist	3.05	0.74		
	King Abduallah Medical complex	3.06	0.50		
Department	Medical and surgical department	2.76	0.87	*F*=1.00	0.44
	Intensive care unit	2.86	0.85		
	Emergency room	2.89	0.75		
	Nursing administration	3.06	0.54		
	Long-term care unit	2.71	0.90		
	Outpatient department	2.93	0.87		
	Maternity department	2.22	1.04		
	Paediatric department	2.85	0.93		
	Isolation department	3.21	0.41		
	Oncology department	3.54	0.29		
Taking care of parents or spouse	No	2.88	0.82	*t*=0.28	0.60
	Yes	2.83	0.81		
Shift Change	No	3.08	0.66	*t*=4.40*	<0.00
	Yes	2.63	0.89		
Shift change status	Required	3.07	0.64	*t*=5.16*	<0.00
	Optional	2.54	0.93		
Shift compensation	No	3.01	0.72	*t*=4.68*	<0.00
	Yes	2.48	0.88		
Compensation certificate	No	2.97	0.74	*t*=2.20*	0.02
	Yes	2.73	0.86		
Position certificate	No	3.00	0.67	*t*=3.50*	<0.00
	Yes	2.63	0.95		
Number of children		2.28	2.76	*r*=0.75*	<0.00
***Significant at 0.05 level**					

Testing the relationship between QWL and ATS for Saudi nurse managers

The lower the nurse's quality of working life in the Makkah region, the greater their intentions to leave their role. The correlation was used to test the direction and strength of the relationship between QWL and intention to leave. As shown in Table 13, there were strong positive correlations between the total QWL and the intention to leave. Scores ranged between ($r = 0.748$, $p < 0.05$) and

($r = 0.677$, $p < 0.05$). The results confirmed that the more quality of working life, the more intentions nurse managers had to leave.

Table 13 Correlation between the QWL and the intention to leave (n=231)

Variables	Home life/work life	Work design	Work context	Work world	Quality of working life	Intentions to leave
Home life/work life	1					
Work design	0.850*	1				
Work context	0.853*	0.884*	1			
Work world	0.849*	0.816*	0.853*	1		
Quality of working life	***0.941****	***0.939****	***0.954****	***0.935****	1	
Intentions to leave	**0.743***	**0.696***	**0.677***	**0.708***	**0.748***	1
***. Correlation is significant at the 0.05 level (2-tailed).**						

Chapter 5: Discussion, Conclusions, and Recommendations

5.1 Discussion

The findings of the study revealed that Saudi nurse managers have a moderate QWL (118.10±33.64). This is consistent with a previous study in Saudi Arabia by Alharbi et al. (2019), which found that nurses had a moderate level of quality of life. In addition, Hashemi et al. (2014) reported in Iran that their nurse managers had a score of 93.4±19.4 in their QWL, which suggests that they led a relatively good life in their profession (Hashemi et al., 2014). Similarly, Eren and Hisar (2016) also found that nurses had medium levels of QWL and organisational commitment. Moradi et al. (2014) reported that the overall QWL score of their participants was 84.36±21.64. Their score is quite a bit lower compared to the present study; however, it is still in the moderate range. Based on the previous studies mentioned, it can be noted that nurse managers were pleased with their situation in their profession.

The results of this study are inconsistent with other studies that found nurses assessed their level of QWL as low. For example, the study in Egypt by Morsy and Sabra (2015) found that about two-thirds of participants were dissatisfied with their quality of working life. In addition, Nayak (2016) found that healthcare employees had a low degree of QWL. Another study by Faraji et al. (2017) in Iran found similar scores with Iranian nurses in terms of their QWL and plans to leave their profession. Results showed that 61% of the nurses indicated low levels of working life quality.

In Saudi Arabia, most previous studies found that nurses were not satisfied with their QWL, which disagreed with the results of the present study. For example, the study done by Almalki et al. (2012) reported that participants were dissatisfied with their working life. Similarly, Kaddourah et al. (2018) found that more than half of the nurses participating in their study were dissatisfied with their working life and even more (94%) had the intention to leave.

Nurse managers in this study founded moderately satisfied with their home/work life balance (20.34±5.92). Most participants agreed that they could balance their work and home responsibilities and that they had enough time allotted for family leave. This is in line with the findings of Kim and Windsor (2015) who found that nurse managers received a regulated support system from the hospitals they were working for, establishing work life balance through flexible schedules that were convenient for them. The nurse managers who were able to simultaneously manage their responsibilities at home and in their profession might have higher skills in resilience. Nurse managers perceived resilience as the process of how they separated work and life and their capacity to be flexible in any situation. In addition, family support develops resiliency among nurse managers, which then affects their ability to balance work and life (Kim & Windsor, 2015). From these findings, this seems to suggest that nurse managers in this study were resilient and that they received enough support from their families.

Another dimension in QWL is the work design, which the nurse managers in this study perceived as moderate (25.22±7.28). Work design concerns how nurse managers can construct work tasks in order to boost the performance of healthcare professionals in their institution (Mohamed & Morsy,

2016). This is crucial to consider since reconstructing every aspect in the healthcare team greatly impacts people's tasks. With this study indicating a moderate score for work design, it is indicated that nurse managers had established a good structure suitable for all healthcare workers. In fact, the majority of the nurse managers in this study claimed that within their work, they were given sufficient time to carry out their tasks. Most of them agreed that they had enough staff nurses and that they were satisfied with their work. Previous studies revealed that if nurse managers are satisfied with their work, it enhances their performance (Al-Makhaita et al., 2014). However, some participants also noted that they had intense workloads and that they usually did non-nursing tasks. This makes sense since the responsibility of nurse managers is based more on supervision and coordination of the staff nurses, and nursing tasks are mostly conducted by staff nurses. All of these findings contributed to the perception of nurse managers that their work design was moderate.

The dimension of the work context was also reported to be moderate (58.81±18.62) in this study. The majority of nurse managers agreed that they were able to interact well with their colleagues, they were able to participate in the process of making clinical decisions, feedback was evident, and the senior managers respected and appreciated their work. Open communication and harmonious relationships in the healthcare team are signs of a healthy working environment. Their collaboration increases awareness between healthcare professionals, which promotes smooth interactions. Good communication was reported to improve employees' morale, boost teamwork, and encourage clarity within the healthcare team, which then helps to prevent errors (O'Daniel & Rosenstein, 2008). This suggests that the nurse managers in the present study had established a good rapport and relationship to the other working professionals in the hospital.

Work world as another dimension of QWL was reported to be moderate (14.37±4.49). The majority of the nurse managers agreed that their current job was enough to meet their needs in the current conditions of the market, and they claimed that they would not be able to find a job with the same compensation. This suggests that the participants in the study were well compensated. If an employee receives the expected compensation in exchange for their service, they are likely to be satisfied with their job (Parsons & Stonestreet, 2003). This satisfaction in compensation seems to contribute to the dimension of work world, resulting in a moderate score overall. From the findings of the present study, all dimensions of QWL that were reported by nurse managers were moderate, thus leading to an overall result of moderate quality of working life in their profession. The majority (66%) of the nurse managers in the present study wanted to remain in their current job, while 34% anticipated leaving.

Moreover, the present study did not reveal any significant differences in QWL by socio-demographic factors such as gender, marital status, age, residency, education level, position, hospital, department, whether they were taking care of parents or a spouse, or number of children ($p > 0.05$). The results of the present study suggest that QWL did not differ across these factors. These findings are aligned with results reported in a previous study, where gender was not found to be a significant factor in QWL. Furthermore, Suleiman et al. (2019) reported that the working in the hospital does not significantly relate with QWL. One explanation for this could be that regardless of their differences in socio-demographic factors mentioned, all were currently working in the same position; therefore, their working life was not different from others in the study.

The results were in contrast with the study of Ahmad (2017), which suggested that education level has a significant impact on QWL. Socio-demographic factors like age, gender, and income were observed to be related to the level of QWL in a study by Wright (2002), and Morsy and Sabra (2015) reported age and marital status as significantly related to QWL. Nevertheless, the nurse managers in this study viewed their quality of work life based on how they did as a worker in their institution. Their demographic factors did not seem to define and determine their overall quality of work life. Although the findings of the present study revealed that some socio-demographic factors were not significantly related to the quality of working life, it revealed that shift change, shift change status, compensation, compensation certificate, and compensation position of the nurse managers were observed to be significantly related in their quality of working life. This means that nurse managers who did not undergo changes in their shifts, and those who got shift compensation,

their compensation certificate, and compensation position have displayed a higher mean score of QWL.

The study also revealed that there was no significant relationship between the intent to leave and marital status, residence, gender, education, position, hospital, department, and whether they were taking care of their parents or spouse. However, there were significant relationships observed between intentions to leave and gender, shift change, shift status, shift compensation, compensation certificate, position certificate, and number of children. In the present study, female nurse managers more frequently reported intent to leave compared to male nurse managers. This is in agreement with the findings of Almalki et al. (2012), since male respondents in their study had higher job satisfaction compared to their female counterparts.

Our study was in line with Yamaguchi et al. (2016), who reported that family variables affected nurses' decision to leave their current job. Nurse managers who had more children who needed parental care were observed as more likely to leave. Compensation also related to leaving intentions, and if they were not being compensated well, they would be more likely to quit and find other work that met their salary expectations. Even though compensation is not the primary factor for motivating employees, behavioural theorist Abraham Maslow suggests that the basic needs of an individual must be satisfied first in order to move forward to higher needs. In this case, the nurse managers need money to satisfy their basic needs, such as food and shelter; therefore, compensation predicted whether they were likely to stay in their job or not.

The shift changes variable was also related to intention to leave. This is probably because when a requested shift change was not followed, the work performance seems to decrease (Galatsch et al. 2013). The majority of the nurse managers who did not get shift compensation, compensation certificate, and compensation position reported higher intentions to leave. This affected some nurse managers' performance, thus demotivating them in their current jobs.

The study also revealed that the relationship of the QWL with intention to leave was statistically significant, as seen in Table 13. This is in agreement with Elshahat et al. (2019) and Almalki et al. (2012). Moreover, only the dimensions work life and work world predicted the intention to leave, as evident by the data in Table 14. These findings can be attributed to physical and psychological wellbeing and their present work environment dictating their intention to leave. Put simply, if the nurse managers' quality of life is not good, then they are more likely to leave their jobs.

5.2 Conclusion

The goal of this study was to assess the quality of work life and turnover intentions of Saudi nurse managers. Findings from the study revealed that nurse managers were moderately satisfied with their QWL. Additionally, the results revealed factors that affected QWL and intent to leave, which need to be considered for planned modification. Since all dimensions in QWL were scored as moderate, further reinforcements in terms of improving communication, increasing compensation, improving work environment, and establishing flexible schedules should be enough to help nurse managers improve their QWL, thereby reducing their intentions to leave.

This study demonstrated that the nurse managers in Saudi Arabia were moderately satisfied in their QWL. If other factors are explored aside from socio-demographic factors, deeper understanding can be achieved that might help nurse managers provide consistent and excellent care. The findings of this study showed a one-of-a-kind theoretical basis that elucidates past knowledge and literature on the variables that influence healthcare workers' intentions to leave their work institutions in Saudi Arabia.

5.3 Recommendations for the study

The following are recommendations based on the findings and conclusions of the study.

1. Focus more on the improvement of working life among nurses to increase retention rates and decrease costs in recruitment of new nurse managers, who are lacking the necessary skills to meet patients' nursing care.

2. Increase compensation and provide the right benefits for nurse managers to increase job satisfaction and decrease turnover.
3. Improve work/life balance by providing the appropriate benefits and incentives to employees and improving the retention rate.
4. Improve the workplace environment by creating team-building exercises with other departments intended to increase camaraderie and develop ties between colleagues.
5. Provide additional benefits to employees assigned to night shifts in order to encourage them to work harder and to increase morale.
6. Develop more training and seminars to increase knowledge and keep healthcare workers up to date.

It is highly recommended that managers oversee the welfare of employees, considering their accomplishments and recognising their contributions in the deliverance of quality and standard care. It may also be helpful to implement an awards and punishment system for the achievements of each staff member.

Healthcare organisations should enhance retention rates by keeping track of achievements and professional development of each member and providing them with an opportunity to gain adequate skills by means of training, seminars, and advanced education. Appropriate salaries should also be provided with benefits and incentives to generate motivation and increase morale among staff.

5.4 Limitations of the study and recommendations for future research

There are some limitations in this study. First, it was conducted in the Makkah region, so it cannot be generalised to other regions of Saudi Arabia. It is recommended that future researchers repeat this study and include all regions of Saudi Arabia. In addition, this study used quantitative data, which may limit the perception of experiences of nurse managers. To remedy this, it is recommended that future researchers examine this topic using a qualitative method in Saudi Arabia. Since the study focused on nurse managers only, it cannot be generalised to the entire nursing profession. Finally, the use of convenience sampling may lead to bias in the sample, since it cannot represent the entire population being studied. These limitations contribute to the generalisability of the conclusions drawn from the sample to the whole population being studied.

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Appendix A

Brooks' Quality of Nursing Work Life Survey

This survey contains data about nursing work life. Please tick how much you do not agree or agree with each statement using the scale below. If you are unsure of your answer to a particular item, think about it for a minute and then answer. Please tick the answer by placing a circle around one number. There are no correct or false answers.

	Strongly Disagree					**Strongly Agree**
1. I receive an adequate amount of assistance from unlicensed support staff (the dietary aides, housekeeping, patient care technicians, and nursing assistants).	1	2	3	4	5	6
2. I am satisfied with my job.	1	2	3	4	5	6
3. My workload is too heavy.	1	2	3	4	5	6
4. In general, the community has an accurate picture of nurses.	1	2	3	4	5	6
5. I am able to balance the work with the needs of my family.	1	2	3	4	5	6
6. I have the independence to make patient care decisions.	1	2	3	4	5	6
7. I am able to communicate well with my nurse manager/supervisor.	1	2	3	4	5	6
8. I have enough supplies and equipment for patient care.	1	2	3	4	5	6
9. My nurse manager / supervisor provides adequate supervision.	1	2	3	4	5	6
10. It is important for the hospital to provide employees with on-site childcare services.	1	2	3	4	5	6
11. I do many non-nursing tasks.	1	2	3	4	5	6
12. I have energy after work.	1	2	3	4	5	6
13. Friendships with my co-workers are important to me.	1	2	3	4	5	6
14. My work provides career progress opportunities.	1	2	3	4	5	6
15. There is teamwork in my work.	1	2	3	4	5	6
16. I face many interruptions in my daily work routine.	1	2	3	4	5	6
17. I have enough time to do my job well.	1	2	3	4	5	6
18. There are enough RNs in my work.	1	2	3	4	5	6

19. I feel a sense of belonging to my place of work.	1	2	3	4	5	6
20. Shifts schedules negatively affect my life.	1	2	3	4	5	6
21. I am able to communicate with other therapists (physical, respiratory, etc.).	1	2	3	4	5	6
22. I receive comments on my performance from my nurse manager / supervisor.	1	2	3	4	5	6
23. I am able to provide good patient care.	1	2	3	4	5	6
24. My salary is suitable for my job given the current job market conditions.	1	2	3	4	5	6
25. My establishment's policy for family leave time is sufficient.	1	2	3	4	5	6
26. I am able to participate in decisions made by my nurse manager / supervisor.	1	2	3	4	5	6
27. It is important for the hospital to provide on-site day care to employees for elderly parents.	1	2	3	4	5	6
28. I feel respected by doctors in my work.	1	2	3	4	5	6
29. It is important to have a special rest area for the nursing staff.	1	2	3	4	5	6
30. It is important for me to have nursing degree programs available in my hospital.	1	2	3	4	5	6
31. I receive support to attend services and continuing education programs.	1	2	3	4	5	6
32. I communicate well with the doctors in my work.	1	2	3	4	5	6
33. My achievements have been appreciated by my nursing director / supervisor.	1	2	3	4	5	6
34. Nursing policies and procedures facilitate my work.	1	2	3	4	5	6

	Strongly Disagree				**Strongly Agree**	
35. The security department provides a save environment.	1	2	3	4	5	6
36. It is important for the hospital to provide staff with on-site care services for the sick child.	1	2	3	4	5	6
37. I would be able to find my same job in another establishment with about the same salary and benefits.	1	2	3	4	5	6
38. I feel safe from personal harm (physical, emotional, or verbal) at work.	1	2	3	4	5	6
39. I think my job is safe.	1	2	3	4	5	6
40. Senior management respects nursing	1	2	3	4	5	6
41. My work affects the lives of patients / families.	1	2	3	4	5	6
42. I receive quality assistance from unlicensed support personnel (the dietary aides, housekeeping, patient care technicians, and nursing assistants).	1	2	3	4	5	6

Demographic Information

Please choose only one answer for each question unless otherwise stated.

1. What is the highest certificate or degree you obtained in nursing?

Diploma
Associate degree
Bachelor of Science in Nursing
Master’s degree
Ph.D.
Other (specify) _____

2. Are you:

Male or Female

3. In which year were you born? _____

4. What is your marital status?

Married (First marriage)
Married (Not first marriage)
Widowed
Divorced
Separated
Never Married

5. Choose the number of dependent children you have living at home in the following age group.

0 - 2 Years	0	1	2	3	4 or More
3 - 4 Years	0	1	2	3	4 or More
5 Years	0	1	2	3	4 or More
6 - 12 Years	0	1	2	3	4 or More
13 - 18 Years	0	1	2	3	4 or More
More than 18 Years	0	1	2	3	4 or More

- Are you responsible for the care of your (and/or) your spouse/partner's elderly parents?

No
Yes

If yes, describe the type of care you provide. _____

_____

_____

- What is your ethnic background?

African-american
American Indian or Alaskan Native
Asian
Mexican-American
From the Pacific Islands
Puerto Rican
Another Hispanic
White non-Hispanic

- Other (specify)
- For your current principal nursing position, do you work:

Full-Time (Work an entire calendar year on a full-time basis.) Part-Time (Work an entire calendar year on a part-time basis.)

- Do you changing shifts?

No
Yes

- Is changing shifts

Voluntary or Mandatory?

- Do you receive additional compensation for changing shifts?

No
Yes

- Identify the type of unit where you currently work in your PRINCIPAL

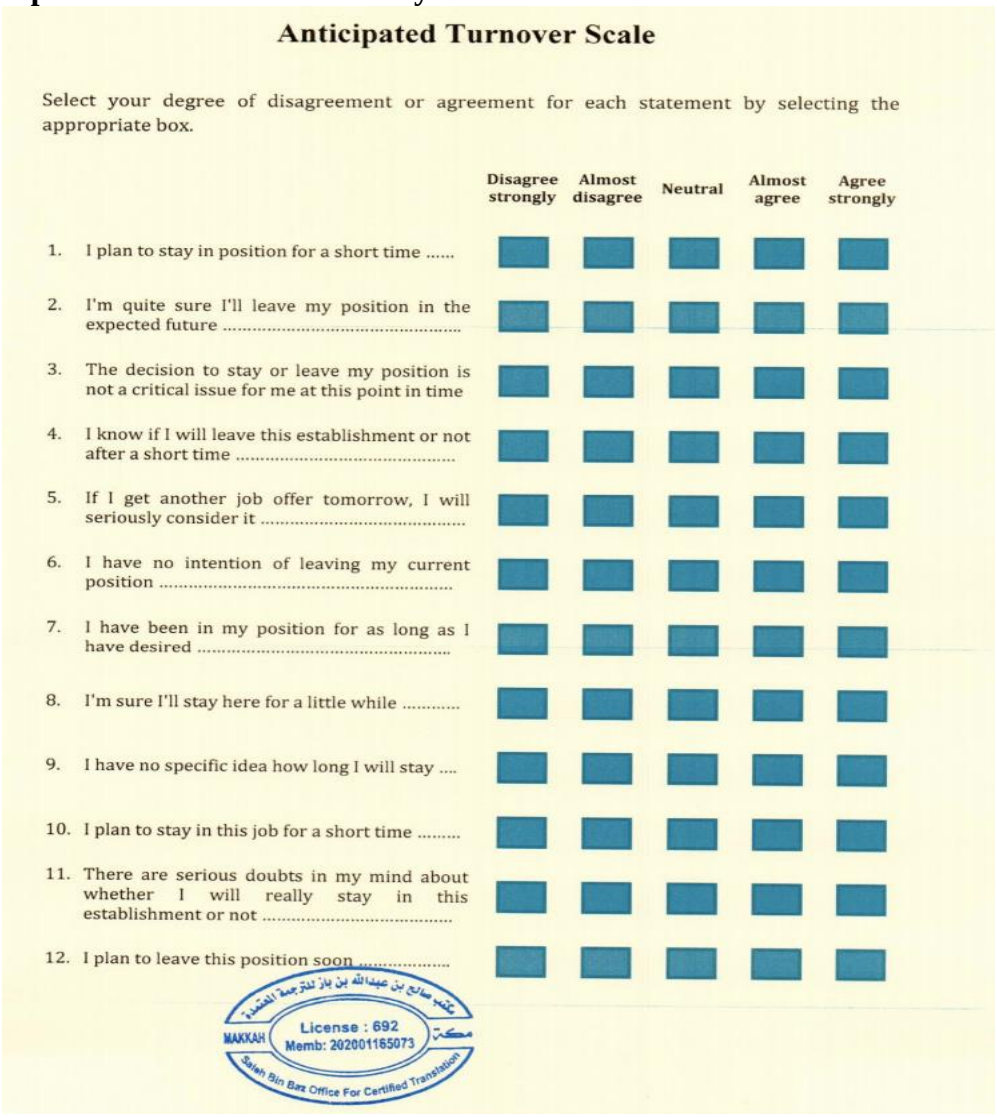
nursing position.

7. 12. Identify the type of unit where you currently work in your PRINCIPAL nursing position.
Critical Care
Emergency Room
Geriatrics
Home Care
Long-term Care
Neonatal Intensive Care
Medical-Surgical
Obstetrics
Oncology / Hematology
Operating Room / Recovery Room

Orthopedics
Outpatient Clinic / Surgery
Pediatrics
Psychiatry
Rehabilitation
Sub-Acute Care
Telemetry
Other (specify)
6. Do you have a qualification in your specialty area?
No
Yes
If yes, what is your specialty qualification? _____

7. Do you receive additional compensation for the certificate?

Appendix B
(ATS) Anticipated Turnover Scale Survey



Anticipated Turnover Scale

Select your degree of disagreement or agreement for each statement by selecting the appropriate box.

	Disagree strongly	Almost disagree	Neutral	Almost agree	Agree strongly
1. I plan to stay in position for a short time					
2. I'm quite sure I'll leave my position in the expected future					
3. The decision to stay or leave my position is not a critical issue for me at this point in time					
4. I know if I will leave this establishment or not after a short time					
5. If I get another job offer tomorrow, I will seriously consider it					
6. I have no intention of leaving my current position					
7. I have been in my position for as long as I have desired					
8. I'm sure I'll stay here for a little while					
9. I have no specific idea how long I will stay					
10. I plan to stay in this job for a short time					
11. There are serious doubts in my mind about whether I will really stay in this establishment or not					
12. I plan to leave this position soon					