

A Study of the Quality of Work Life Among Magnetic Resonance Imaging Technologists in National Guard Health Affairs Hospitals in KSA

Ghadah Almugren (✉ ghadah.almugren@gmail.com)

National Guard Health Affairs <https://orcid.org/0000-0002-7947-6102>

Haya Zedan

Saudi Electronic University

Research

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Abstract

Quality of Work Life (QWL) is a multi-dimensional discipline concerned with the quality of life at the workplace.

Objectives: This work aimed to assess the level of QWL of Magnetic Resonance Imaging Technologists (MRITs) at National Guard Health Affairs Hospitals (NGHA) in the Kingdom of Saudi Arabia and identify the correlation between QWL dimensions and Job and Career Satisfaction (JCS).

Methodology: This study used the 32-item WRQoL-2 tool, a questionnaire consisting of 6 subscales; Job and Career Satisfaction (JCS), Control at Work (CAW), Home-Work Interface (HWI), General Well-Being (GWB), Stress at Work (SAW) and Work Conditions (WCS).

Results: The study respondents were 57 MRITs working in NGHA hospitals across KSA with a 100% response rate. We found a high level of QWL among MRITs (66.2%, 3.31/5). The level of JCS was high (71.6%, 3.59/5) with a significant correlation between JCS and WCS, CAW, HWI, and GWB. There was an inverse relationship between SAW and JCS.

Conclusion: Further research in the field of QWL is needed to diagnose shortcomings affecting the quality of healthcare services in KSA.

Background

Quality of work-life is defined as "The desires of a staff with regard to working conditions, remuneration, and professional development, work-family role balance, safety and social interactions in the workplace and social relativity of work". QWL refers to the staff's satisfaction with working life; it is a subjective phenomenon influenced by personal feelings and perceptions^{1,2}. QWL is an interdisciplinary subject with roots in psychology, sociology and healthcare management. QWL is a combination of strategies and procedures associated with the workplace, that aim to support the staff's status by enhancing the work conditions. QWL has evolved since the 1960s. Initially, the concept was based on human perspectives of work aiming to create homogeneity between staff and their work environment. The idiom "Quality of Work Life" (QWL) was first introduced by Louis Davis in 1972¹. Most recently, Easton and Van Lar³ developed the WRQoL-2 method to assess Quality of Work Life that involved 6 subscales: Job and Career Satisfaction (JCS), Control at Work (CAW), Homework Interface (HWI), General Well-Being (GWB), Stress at Work (SAW) and Work Conditions (WCS).

General Wellbeing:

QWL is a broad concept that considers staff wellbeing and views their experiences of work and the work environment as essential to their success and the achievement of the organization's objectives. Behavioral scientists agree on eight essential categories for QWL: 1) safe and secure working conditions 2) adequate pay and compensation 3) developing staff skills 4) continued growth 5) social integration

with the work organization 6) work and total living space 7) constitutionalism in the work organization 8) social relevance to work-life¹. QWL is a construct that has been much analyzed and confirmed to increase staff professional growth, productivity, and achievement⁴. QWL has numerous dimensions; work-life balance, work environment, participative management, job satisfaction, reward and recognition, proper grievances handling, welfare facilities, and organizational commitment⁵.

Job and Career Satisfaction:

When studying QWL, we must differentiate between career satisfaction and job satisfaction. Job satisfaction is a subjective condition; happiness that arises from the responsibility; independence and strength of the work experience. Job satisfaction relates to achievement and maintenance of such success, whereas job dissatisfaction is a significant cause for large team turnover and defection⁶. There is an interconnection between job satisfaction and absenteeism, turnover rate, conscientiousness, and staff commitment⁷. A model of job satisfaction that contains four elements: job performance, company performance, role perceptions, and job-related factors⁸. There are four variables that may affect the perception of staff of quality of work-life: meaningfulness, pessimism regarding a change in the organization, job satisfaction, and self-confidence⁹. These four qualities of work-life variables were positively associated with staff perception of job satisfaction.

Career satisfaction is defined as the well-being of staff in the physical and external dimensions of the work, incorporating career progression and opportunities for the staff¹⁰. Staff that are able to maintain a satisfying life by reducing pressure and conflict and providing a social connection between staff and the work environment report a high level of QWL in this area.

Control at Work and Home-Work Interface

The conceptual framework of QWL can be viewed through four dimensions: work environment, work context, work life-home, and lifework design⁴. The work environment can be defined as the impact of societal changes on professional practice. The work context incorporates the setting of practicing work and the effect of the work environment on staff. The work-life/ home life dimension is the integration and compromise between home life and work life. The life-work design deals with the composition of the work and identifies the actual work being done. For instance, the availability of supplies, work tasks, security, education, staffing ratios, and individual success are parts of the quality of the work-life equation¹¹.

Work Conditions and Stress

Ensuring excellent work conditions and reducing stress is critical to improving productivity and job satisfaction, and reducing turnover, robust quality of work life is a necessity to attract new staff and encourage them to remain committed. Enhancing the quality of work-life may benefit team performance; reduce absenteeism, burnout, and lower staff turnover rates. It is also used to enhance work conditions to enable staff to become more active and vital within the organization. Therefore, procedures and policies

that create the experience^{12,7,9} of work should include more satisfying tasks for staff. Policies and procedures could consist of elements to promote independence, belongingness or loyalty, skill development, provide external rewards; and giving credit for achieved work. Human resources recruitment and staffing may be positively impacted by the staff's QWL. It is a means to provide attention to the needs and demands of staff with a view towards their needs at the job and their lives outside of work¹³. Quality of work-life can be utilized to bolster the strength of staff, reduce stress, enable them to meet performance requirements and improve experiences at work¹³. QWL is positively influenced by supportive visionary leadership, in setting effective management of resources and in raising collaboration levels between staff¹⁴.

QWL for Healthcare Personnel

The factors pertaining to the broader healthcare environment affect healthcare service quality, so it is in the interests of healthcare administrators to provide the best quality work environment to their staff in order to achieve the organizations vision, mission and goals successfully¹⁴. There is a recent interest in healthcare organizations all over the world in regards of raising QWL levels to bolster the organizational performance and to result in satisfied patients¹². A high level of QWL is essential for healthcare organizations to attract and retain talented and qualified healthcare personnel. High levels of QWL ensure staff are more committed, engaged, satisfied and willing to offer their best efforts. QWL is essential to healthcare organizations who manage highly technical professionals, because the high performance is the core of the success of the organizations and the impacts the satisfaction and wellbeing of patients¹⁵. Many healthcare organizations are investigating issues of retention and recruitment via accomplishing a high quality of work-life aesthetic¹⁶. Another primary dimension is the quality of attention given to the patient, which relates significantly to the quality of work-life situation for technologists and other healthcare personnel. Job satisfaction has been linked to raising the quality of service at healthcare organizations. In the health-care setting, QWL is linked to leadership, work policies, and other aspects; each of which has a contemplative impact on how staff see their place in their organizations. QWL aims to promote and sustain the satisfaction of staff to increase productivity and to accomplish an organization's objectives¹³. There is a growing body of research evaluating the QWL for healthcare professionals; nevertheless, no studies have dealt with QWL for MRITs in KSA. Our search on Medline, CINAHL, Web of Science and PubMed yielded no results in this regard. Therefore, we chose to review published literature focused on nurses for the similarities in the work environment of nurses and MRITs, such as work conditions, pressure, and working hours. Powerful QWL can influence the commitment and contribution of the staff in healthcare organizations.

Quality of Nursing Work Life (QNWL)

A number of studies addressed QWL in the medical sector. One aimed to identify the relationship between QWL and turnover intention in nurses working in healthcare centers in KSA¹⁶. The study used Brooks' scale for Quality of Nursing Work Life (QNWL) as a tool; surveying 508 nurses in the Jizan region and

found dissatisfaction among the respondents regarding their QWL; 203 nurses expressed an intent to leave their jobs – a potential turnover rate of 40%. The average score on the Brooks' scale for respondents was (139.45/252), a low QWL score. The same scale (QNWL) was used to evaluate QWL and nursing turnover intention for 364 nurses working in King Fahad Medical City (KFMC) and King Faisal Specialist Hospital and Research Center (KFSH&RC)¹⁷. The results revealed a dissatisfaction in QWL among the nursing staff of both hospitals with a percentage of 54.7% and the turnover intention rate was very high 94%. Both studies reveal QWL dissatisfaction among nursing staff in KSA and high turnover intention rates. Another study aimed to measure the correlation between QWL and work engagement in KSA. The sample consisted of 207 nurses working in hospitals in the Eastern region of KSA and found a correlation between the three dimensions of job engagement: absorption, dedication and vigor¹⁸ (see Figure 1).

Place Figure 1 here please

Aims:

This study is concerned with the quality of work life for MRITs and how it affects the work environment in the healthcare organization. Identifying the level of QWL helps in determining whether the current circumstances are ideal for MRITs or if there are potential improvements that could be made in conditions where MRITs work.

MRITs

Magnetic Resonance Imaging Technologists (MRITs) are qualified healthcare staff managing radiology imaging equipment, which doctors require to diagnose and treat patients. We have used a similar methodology as previously used to study QWL in nursing staff. MRITs and nurses work equivalent working hours, have similar work conditions and deal with similar challenges and pressures in various aspects of their work responsibilities, with an intense workload, the necessity of interaction with different specializations and facing delays throughout practice, as well as performing non-work-related duties such as supporting family. Other challenges they face center around career progression, training, financial benefits, and flexible scheduling, all issues potentially impacting their quality of work-life.

Objectives:

The current study assessed the quality of work-life and identified the degree and correlation with JCS among MRITs working in NGHHA with a view to enhance the QWL and consequently raise the quality of healthcare services provided to patients, increasing patients' satisfaction and promoting the medical facilities in KSA.

Research Questions:

1. What is the level of QWL for MRITs?
2. What is the degree of JCS for MRITs?

3. Is there a correlation Between QWL and JCS for MRITs?

Methods And Methodology

Study Setting:

NGHA is a division of the Ministry of the National Guard, one of the largest medical organizations in the Kingdom of Saudi Arabia, distinguishable by its ubiquitous existence in across the Kingdom and their high-quality imaging departments, in six hospitals situated in the cities of Riyadh, Dammam, Jeddah, Al-Ahsa, and Al-Madinah Al-Munawarah.

Study Design

The study used a cross-sectional design conducted between September and December 2019. The study used the WRQoL-2 as the data collection method³. This scale has been used in different studies in the medical context to measure QWL for various professions working in healthcare.

An electronic questionnaire was derived from the WRQoL-2 with permission and sent to study respondents through the (WhatsApp) mobile application. The study sample consists of all the MRITs, male or female, Saudi or non-Saudi, and staff on the job training under the Saudi Career Development Program (SCDP) in all six hospital locations in NGHA network.

Data Collection Methods and Study Tool

WRQoL-2 Scale

WRQoL is a scale that was developed initially to collect data related to QWL in medical environments²⁰. The scale consisted of 24 items distributed to 6 subscales, then was raised to 32 items in 2018 to provide better psychometric properties³. The 6 subscales of WRQoL-2 are Job and Career Satisfaction (JCS), Control at Work (CAW), Home-Work Interface (HWI), General Well-Being (GWB), Stress at Work (SAW), Work Conditions (WCS). The 32 items are distributed to the six subscales as follows: items no. (1,3,8,11,18,20) to JCS, items no. (2,12,23,30) to CAW, items no. (5,6,14,25) to HWI, items no. (4,9,10,15,17,21,27,28) to GWB, items no. (7,19,24,29) to SAW and items (13, 16, 22, 26, 31) to WCS. Respondents used a five-point Likert scale (5= strongly disagree, 1= strongly agree).

Validity and Reliability of the Study Tool:

We conducted statistical tests to establish the distribution of the sample, it was found to be normal. We also conducted validity and reliability testing. The whole scale items and correlations with their subscales were significant at ($p < 0.01$), denoting that all questionnaire items have internal consistency and inter-items consistency (see Table 1).

Place Table 1 here please

To check the reliability of the study tool, the Cronbach α coefficient of 0.9 was calculated for the WRQoL-2 six subscales (see Table 2). We concluded here that the study tool is reliable to measure the QWL at MRITs.

Place Table 2 here please

Statistical Analysis:

1. Frequencies and percentages were calculated to describe study sample demographics.
2. Mean was calculated to find high and low responses of the study respondents on each subscale.
3. Standard deviation was used to identify extent of deviation of responses for each subscale.
4. Pearson correlation coefficient was used to measure validity of the study tool.
5. Alpha-Cronbach coefficient was used to measure reliability of the study tool.
6. One-Sample T-test was used to determine whether the average score of some items is higher or lower than the average approval score, which is 3.

Ethical Considerations

IRB approval was sought from King Abdullah International Medical Research Center (KAIMRC) in NGHA. The study was conducted in full accordance with the protocol and current revision of the Declaration of Helsinki for Good Clinical Practice. Participation was obtained voluntarily through an approved consent form. The investigator assured privacy and confidentiality of respondents, including personal information. No data was used for any purpose other than what was stated. The current research was presented for approval with study number (SP19/462/R). Respondents were permitted to exit the study without any adverse effect. The researcher-maintained confidentiality and anonymity of data as no other parties were provided access to information.

Results

The sample size was (n=57) with a 100% response rate. MRI is a highly specialized field and therefore the number of respondents, related to the specialty and working within the study setting, is considerably small.

1- Gender:

Of the respondents to the study 53.6 %, n=30 were male and 47.4%, n=27 were female (see Table 3) (see Figure 2).

Place Table 3 and Figure 2 here please

2- Age:

84% of the study sample were in the age group 25-44 years (n=48), followed by the age group 45-59 years, n=6, 11% and only three respondents were under age 25 years 5% (see Figure 3).

Place Figure 3 here please

3- Years of Experience:

Of the respondents n=26 have 1-5 years of experience 45.6%, representing the largest group, followed by respondents who have 6-10 years of experience, n=14, 24%, followed by 11-20 years of experience, n=11, 19%. Only 2 respondents had more than 20 years of experience, 3.5% (see Figure 4).

Place Figure 4 here please

4- Hours of work:

70.2%, n=40 respondents work on a full-time basis with paid overtime, which denotes a shortage in the MRITs in NGHAs in hospitals. Seventeen respondents work full time with no overtime 29.8% (see Figure 5).

Place figure 5 here please

5- Disability Status:

56 respondents did not have any disabilities 98%, one respondent had a disability 1.8% (see Table 4).

Place Table 4 here please

6- Location of Work:

38 respondents work in NGHAs of Riyadh, 67%, representing the highest proportion, followed by 11%, n=6 in Jeddah and Madinah each, n=4 respondents in Dammam, 7% and n=3 respondents in Al-Ahsa 4% (see Figure 6).

Place Figure 6 here please

7- Dependents:

21 respondents did not have responsibilities for dependents 36.8%, n=13 respondents have responsibilities towards school-age children 22.8%, and n=8 respondents have babies and young children 14%. Four respondents 7% have elderly relatives or friend's dependent on them (see Figure 7).

Place Figure 7 here please

Frequencies and percentages for all sociodemographic data were calculated (See Table 5).

Place Table 5 here please

The Level of QWL for MRITs

Mean and standard deviation were calculated for the study responses. The One-Sample T-test was used to identify the degree of QWL for each subscale and identify the overall degree of QWL for MRITs (see Table 6).

Place Table 6 here

The study sample of MRIT's was found to have a high level of QWL. The overall mean for study responses was (3.31/5.00); four subscales were statistically significant at the level of ($p < 0.01$). The study responses were higher than the average approval level of (3), which confirms that QWL for MRITs was high (see Table 6) (see Figure 8).

Place Figure 8 here please

The highest scores among the six dimensions of WRQoL-2 were found for WCS, followed by GWB, SAW and lastly HWI. All four dimensions were high for MRITs, as the mean for them ranged between 3.28-3.60. The evaluation rate was between 65.6% to 70.2%. All were statistically significant at ($p < 0.05$).

The Level of JCS for MRITs

The One-Sample T-test was conducted for statements 1, 3, 8, 11, 18, 20 as corresponding to JCS on the WRQoL-2 Scale. The mean for the responses was (3.59/5), indicating a high level of JCS for the study sample. This was significantly correlated at ($p < 0.01$). (see Table 7).

Place Table 7 here please

Correlation Between QWL and JCS for MRITs

Using Pearson's Correlation Coefficient, we found a positive correlation between JCS and the other subscales of WRQoL-2 (GWB, HWI, CAW, WCS and SAW) (see Table 8). There was a statistically significant correlation between JCS and all subscales at the ($p < 0.01$) level. This means that when work conditions, well-being, control at work, etc. improve, there is an increase in job and career satisfaction. There was an inverse correlation between SAW and JCS as the significance level was a negative value at ($p < 0.01$) level (see Table 8). When "Stress at Work" increases, JCS decreases.

Place Table 8 here please

QWL and Gender. There were no statistically significant differences at the level of significance ($p < 0.05$) for the subscales HWI, CAW, WCS and SAW. The overall score of WRQoL-2 was not statically significant for gender. We found statistically significant differences for the subscales JCS, GWB according to gender variable ($p < 0.01$); in favor of male gender (see Table 9).

Place Table 9 here please

QWL and Age: Using the ANOVA test, we found a statistically significant difference between the overall level of WRQoL-2 and Age. The HWI, CAW and WCS subscales were statistically significant by age group at ($p < 0.01$). The JCS, GWB and SAW subscales did not return any significance (see Table 10).

Place Table 10 here please

To identify differences between age groups for the HWI, CAW, WCS subscales, Scheffé's post hoc test was conducted (see Table 11). There was a significant difference among the study respondents in regard to HWI, CAW, WCS in the 45-59 years group. This indicates a correlation between QWL and older age.

Place Table 11 here please

Discussion

We assessed the level of QWL and identified the JCS and differences for gender and age in the six subscales of the WRQoL-2 for MRITs at NGHAs hospitals.

WRQoL-2 has been used by studies conducted in China, Taiwan, Turkey, Iran, Uganda, and the UK. These studies were conducted to identify problems and factors that affect QWL, to be able to put forward remedies and solutions to enhance the working conditions, the working environment, the job-life interference, as places whose staff have high levels of QWL contribute more to productivity and excellence at the workplace.

Place Table 12 here please

In comparison to the findings of these international studies, our study shows that job and career satisfaction in MRITs at NGHAs hospitals is highest (3.59), followed by the study on nurses in Taiwan (3.75)²³, followed by the study on nurses in Uganda (3.53)²⁴. In relation to CAW, three studies scored (3.39), and the current study came second, scoring (3.15/5). This indicates a similarity between all the studies that used WRQoL-2 tool for the CAW dimension. In our study the HWI dimension score was (3.28/5), whereas it was (3.52) in Zhao et al.²⁵, Edwards et al.²⁶ and (2/5) in Mazloumi et al.²⁷. For the GWB dimension, the current study scored (3.51), which is the highest among the nine studies (see Table 12). This is an indicator that the well-being of medical staff in KSA is considerably higher than healthcare personnel in other developing countries. The overall results of the current study show that the MRITs working in NGHAs hospitals have a high degree of JCS; the study respondents are satisfied with their jobs.

The current study differed slightly from a previous study on nursing staff in Al-Madinah region hospitals in KSA²⁸. This could be because the study on Al-Madinah region hospitals focused on a single region,

whereas the current study was conducted across KSA. The mean for the work-life-home dimension in the study on Al-Madinah region was (3.37) whereas in the current study the mean HWI is (3.28).

In our study, female respondents scored low levels of General Well-Being (3.31/5), comparable with results of other studies that found low levels of General Well-Being for females (3.23/5)²⁹ and the overall WRQoL scores were similar for females in both studies (3.19) in the current study, and (3.22)²⁹. This reaffirms our assumption that the work environment of MRITs is similar to that of surgical residents, and that they face similar issues with their QWL.

Respondents of the male gender were found to have higher mean scores than females in terms of job satisfaction and in total WRQoL contradicting a previous study that found moderate QWL among nurses³⁰. The SAW dimension was found to be unrelated to gender, as male and female respondents had proportionate stress at work.

In our study, we found that age and gender were significantly correlated with QWL. Respondents in the age group (45-59) had higher levels of WRQoL in the HWI dimension. This is similar to findings of previous studies; that older age had a positive effect on QNWL, work context and the work environment^{17, 28}. This may be due to the ability of older and more senior staff with years of work experience to adapt their home and work lives and create a balance and feel satisfied with their roles, their ability to overcome hardships, achieve job promotions and ask for better pay.

The results from our study contradict a study from 2012, which found QWL dissatisfaction¹⁶, which may also be related to the study being conducted in a single region in the south of the Kingdom, where there is a shortage of medical workforce resulting in increased workplace stress.

There were studies that measured QWL among other professions in the Kingdom, such as a study conducted on Yanbu industrial city staff, found that respondents had a high level of job satisfaction. It identified factors that affect the level of job satisfaction, such as wages and remuneration, workgroup factors, and decision-making factors³¹.

Summary And Conclusions:

The current study is the first study that is conducted on MRITs in Kingdom of Saudi Arabia. We aimed to determine the level of QWL and degree of job and career satisfaction for MRITs working in NGHHA. The study showed a high level of QWL and significant correlations between QWL and specific subscales. Older age and years of work experience contributed significantly to higher QWL scores. These findings are similar to previous research findings on nursing staff and can potentially be adapted to evaluate QWL for other types of healthcare professionals or medical technicians in KSA. Identifying shortcomings will help healthcare administrators bridge the gaps in this field and find means to build and sustain the QWL for healthcare professionals for the potential enhancements to quality of healthcare and patient satisfaction.

Abbreviations

CAW	Control at Work
GWB	General Well-Being
HWI	Home-Work Interface
IRB	International Review Board
JCS	Job and Career Satisfaction
KAIMRC	King Abdullah International Medical Research Center
KFMC	King Fahad Medical City
KFSH&RC	King Faisal Specialist Hospital and Research Center
KSA	Kingdom of Saudi Arabia
K-S Test	Kolmogorov–Smirnov Test
MRI	Magnetic Resonance Imaging
MRITs	Magnetic Resonance Imaging Technologists
NGHA	National Guard Health Affairs hospitals
QNWL	Quality of Nursing Work Life
QWL	Quality of Work Life
SAW	Stress at Work
SCDP	Saudi Career Development Program
WCS	Working Conditions
WRQoL	Work-Related Quality of Life

Declarations

Ethics Approval and Consent to Participate: The authors of this study declare that they have obtained the required ethical approvals for this body of work, and requested consent to participate from the online survey respondents to click if they agree to participate or decline (written consent) at the outset before commencing the survey. **Consent for Publication:** Consent for publication was not required from the survey respondents for this study. **Availability of Data and Materials:** The study data and materials are available through the journals data repository as supplementary material. **Competing Interests:** The authors declare they have no competing interests in this work. **Funding:** There was no funding required or obtained for this work. **Author Contributions:** The first author conceived of the study, sought the ethical approvals from the hospital, developed the data collection instrument with permissions, collected and

analyzed the data and wrote the manuscript. The second author supervised the conduct of the work, reviewed all components of the project, edited and advised on conceptualization, data collection and analysis, and co-edited the manuscript for submission. **Acknowledgements:** The authors acknowledge the support of the National Guard Health Affairs in enabling the research project.

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Tables

Table 1 The Internal Consistency for the Whole Scale Items

Items	Consistency with WRQoL Scale	Consistency with Subscale
GWB		
4. I feel well at the moment	0.644**	0.736**
9. Recently, I have been feeling unhappy and depressed	0.542**	0.710**
10. I am satisfied with my life	0.545**	0.775**
15. In most ways, my life is close to ideal	0.602**	0.652**
17. Generally, things work out well for me	0.568**	0.660**
21. Recently, I have been feeling reasonably happy all things considered	0.675**	0.826**
27. am proud to tell others that I am part of this organisation	0.670**	0.823**
28. I would recommend this organisation as a good one to work for	0.630**	0.819**
HWI		
5. My employer provides adequate facilities and flexibility for me to fit work in around my family life	0.822**	0.829**
6. My current working hours/patterns suit my personal circumstances	0.573**	0.794**
14. My line manager actively promotes flexible hours/patterns	0.769**	0.834**
25. I am able to achieve a healthy balance between my work and home	0.769**	0.834**
CAW		
2- I feel able to voice opinions and influence changes in my area of work	0.589**	0.785**
12. I am involved in decisions that affect me in my own area of work	0.660**	0.832**
23. I am involved in decisions that directly affect members of the public	0.399**	0.773**
30. I have sufficient opportunities to question managers about change	0.341**	0.783**
WCS		
13. My employer provides me with what I need to do my job effectively	0.733**	0.833**
16. I work in a safe environment	0.723**	0.851**

Items	Consistency with WRQoL Scale	Consistency with Subscale
22. The working conditions are satisfactory	0.737**	0.832**
26- The organisation communicates well with its employees	0.735**	0.831**
31. I am happy with the physical environment where I usually work	0.732**	0.835**
SAW		
7. I often feel under pressure at work*	0.595**	0.924**
19. I often feel excessive levels of stress at work*	0.520**	0.914**
24. I have unachievable deadlines	0.520**	0.914**
29. I am pressured to work long hours	0.582**	0.915**

** significant at 0.01 * reversed items

Table 2 Reliability of the Study Tool

Scale/ Subscale	Cronbach's Alpha	N of Items
Total Reliability Score for WRQoL Scale	0.900	22
JCS	0.778	6
GWB	0.755	5
HWI	0.745	3
CAW	0.745	3
WCS	0.711	3
SAW	0.815	2

Table 3 Distribution of the Study Respondents According to " Gender Variable."

Gender	Frequency	Percent
Male	30	53.6
Female	27	47.4
Total	57	100.0

Table 4 Distribution of Study Respondents According to "Disability Variable."

Having Disability	Frequency	Percent
Yes	1	1.8
No	56	98.2
Total	57	100.0

Table 5 Frequencies and Percentages for Sociodemographic Data

	Frequency	Percent
Gender		
Male	30	43.6
Female	27	47.4
Total	57	100.0
Age		
Under 25	3	5.3
25 to 44	48	84.2
45 to 59	6	10.5
Total	57	100.0
Experience		
Less than 1	4	7.0
1 to 5	26	45.6
6 to 10	14	24.6
11 to 20	11	19.3
More than 20	2	3.5
Total	57	100.0
Hours of Work		
Full time	40	70.2
Full time and paid overtime	17	29.8
Total	57	100.0
Having a Disability		
Yes	1	1.8
No	56	98.2
Total	57	100.0
Location of Work		
Riyadh	38	66.7
Jeddah	6	10.5
Al Ahsa	3	5.3

	Frequency	Percent
Dammam	4	7.0
Al Madinah	6	10.5
Total	57	100.0
Dependency		
Babies / young children (under school age)	8	14.0
Babies / young children (under school age), School-age children	2	3.5
Babies / young children (under school age), School-age children, Disabled relatives, Elderly relative	4	7.0
Elderly relatives / friends	1	1.8
No	21	36.8
Other	4	7.0
School-age children	13	22.8
School-age children, Elderly relatives/friends	2	3.5
School-age children, Other	2	3.5
Babies / young children (under school age)	8	14.0
Total	57	100.0

Table 6 QWL for Each Subscale

One-Sample Statistics			Test value = 3		Sig. (2-tailed)	Rate	Evaluation	Ordinal
Subscale	n	mean	Std. Deviation	t				
WCS	57	3.60	0.71475	6.301	0.000**	71.9	High	1
GWB	57	3.51	0.60328	6.404	0.000**	70.2	High	2
SAW	57	3.42	0.92480	3.437	0.001**	68.4	High	3
HWI	57	3.28	0.92965	2.280	0.026*	65.6	High	4
CAW	57	3.15	0.79437	1.390	0.170	62.9	Moderate	5
					Not sig.			
Total Score	57	3.31	0.58907	3.994	0.000	66.2	High	

Test Value = 3

** significant at 0.01

* sig. at 0.05

Table 7 T-test for JCS Statements

One-Sample Statistics						(%)	Rating	Ordinal
Statement	n	mean	Std. Deviation	t	P value			
1. I have a clear set of goals and aims to enable me to do my job	57	4.12	0.908	9.339	0.00**	82.4	High	1
3. I have the opportunity to use my abilities at work	57	4	0.707	10.677	0.00**	80	High	2
11. I am encouraged to develop new skills	57	3.51	1.104	3.48	0.001**	70.2	High	3
20. I am satisfied with the training I receive in order to perform my present job	57	3.42	1.085	2.931	0.005**	68.4	High	4
18. I am satisfied with the career opportunities available for me here	57	3.4	1.1	2.77	0.008**	68	High	5
8. When I have done a good job, it is acknowledged by my line manager	57	3.04	1.017	0.26	0.795	60.8	Moderate	6
Overall value of Job and Career Satisfaction	57	3.59	0.687	6.399	0.00**	71.6	High	

**significant at 0.01

Table 8 Correlation Between QWL and JCS

Subscales	GWB	HWI	CAW	WCS	*SAW	An overall score of QWL	
JSC	Pearson Correlation	.824**	.646**	.545**	.614**	-.339**	.802**
Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.010	0.000	
n	57	57	57	57	57	57	

**significant at 0.01 level (2-tailed).

Table 9 WRQoL Subscales According to Gender Variable

Subscales	Gender	N	mean	Std. Deviation	t	df	Sig. (2-tailed)
JCS	Male	30	3.85	0.684	3.386	55	0.001**
	Female	27	3.28	0.564			
GWB	Male	30	3.69	0.643	2.438	55	0.018**
	Female	27	3.31	0.496			
HWI	Male	30	3.43	0.999	1.315	55	0.194
	Female	27	3.11	0.832			
CAW	Male	30	3.14	0.900	-0.017	55	0.986
	Female	27	3.15	0.675			
WCS	Male	30	3.68	0.814	0.904	55	0.370
	Female	27	3.51	0.587			
SAW	Male	30	3.38	0.980	-0.322	55	0.749
	Female	27	3.46	0.876			
Overall WRQoL Score	Male	30	3.42	0.641	1.474	55	0.146
	Female	27	3.19	0.511			

** Significant at 0.01

Table 10 Significant Difference of WRQoL-2 on Basis of Age Variable

Subscale	Dif. Source	Sum of Squares	df	Mean Square	F	Sig.
JCS	Between Groups	2.401	2	1.200	2.702	0.076
	Within Groups	23.995	54	0.444		
	Total	26.396	56	-		
GWB	Between Groups	2.057	2	1.029	3.031	0.057
	Within Groups	18.324	54	0.339		
	Total	20.381	56	-		
HWI	Between Groups	7.141	2	3.570	4.673	0.013**
	Within Groups	41.257	54	0.764		
	Total	48.398	56	-		
CAW	Between Groups	5.784	2	2.892	5.284	0.008**
	Within Groups	29.553	54	0.547		
	Total	35.337	56	-		
WCS	Between Groups	5.608	2	2.804	6.584	0.003**
	Within Groups	23.000	54	0.426		
	Total	28.608	56	-		
SAW	Between Groups	4.436	2	2.218	2.756	0.072
	Within Groups	43.458	54	0.805		
	Total	47.895	56	-		
Overall WRQoL-2 Score	Between Groups	2.996	2	1.498	4.922	0.011**
	Within Groups	16.436	54	0.304		
	Total	19.432	56	-		

** Significant at 0.01

Table 11 Scheffe post ad hoc Test for three Subscales

Subscale	Age	n	mean	Under 25	25 to 44	45 to 59
HWI	Under 25	3	2.78	-		
	25 to 44	48	3.19		-	
	45 to 59	6	4.28	*		-
CAW	Under 25	3	1.89	-		
	25 to 44	48	3.17		-	
	45 to 59	6	3.56	**		-
WCS	Under 25	3	2.56	-		
	25 to 44	48	3.58		-	
	45 to 59	6	4.22	**		-
Overall WRQoL-2 Score	Under 25	3	2.84	-		
	25 to 44	48	3.26		-	
	45 to 59	6	3.92	**		-

** Significant at 0.01

Table 12 Comparison of WRQoL Scale Across Different Studies

Study	JCS	CAW	HWI	GWB	SAW	WCS
Current Study (MRITs) in KSA	3.59	3.15	3.28	3.51	3.42	3.6
Zhao et al. (2013) (Nurses in China)	3.48	3.39	3.52	3.44	3.62	3.62
Edwards et al. (2019), (Higher Education Staff)	3.43	3.39	3.52	3.44	3.62	3.62
Easton et al. (2013), (Police in the UK) ²¹	3.09	2.98	2.77	3.12	2.6	2.81
Mazloui et al. (2014) (Train drivers in Iran)	3.21	3.04	2	3.62	4.29	1.37
Kahyaoglu Sut & Mestogullari (2016), (Nurses without PMS Turkey) ²²	3.3	3.4	3.1	3.3	2.8	2.9
Kahyaglu Sut & Mestogullari (2016), (Nurses with PMS Turkey)	3	2.9	2.6	2.7	2.5	2.4
Opollo et al. (2014), (Ugandan Nurses)	3.53	-	2.46	-	-	-
Dai et al. (2016) (Nurses in Taiwan)	3.57	3.39	3.42	3.25	3.46	3.33

Figures

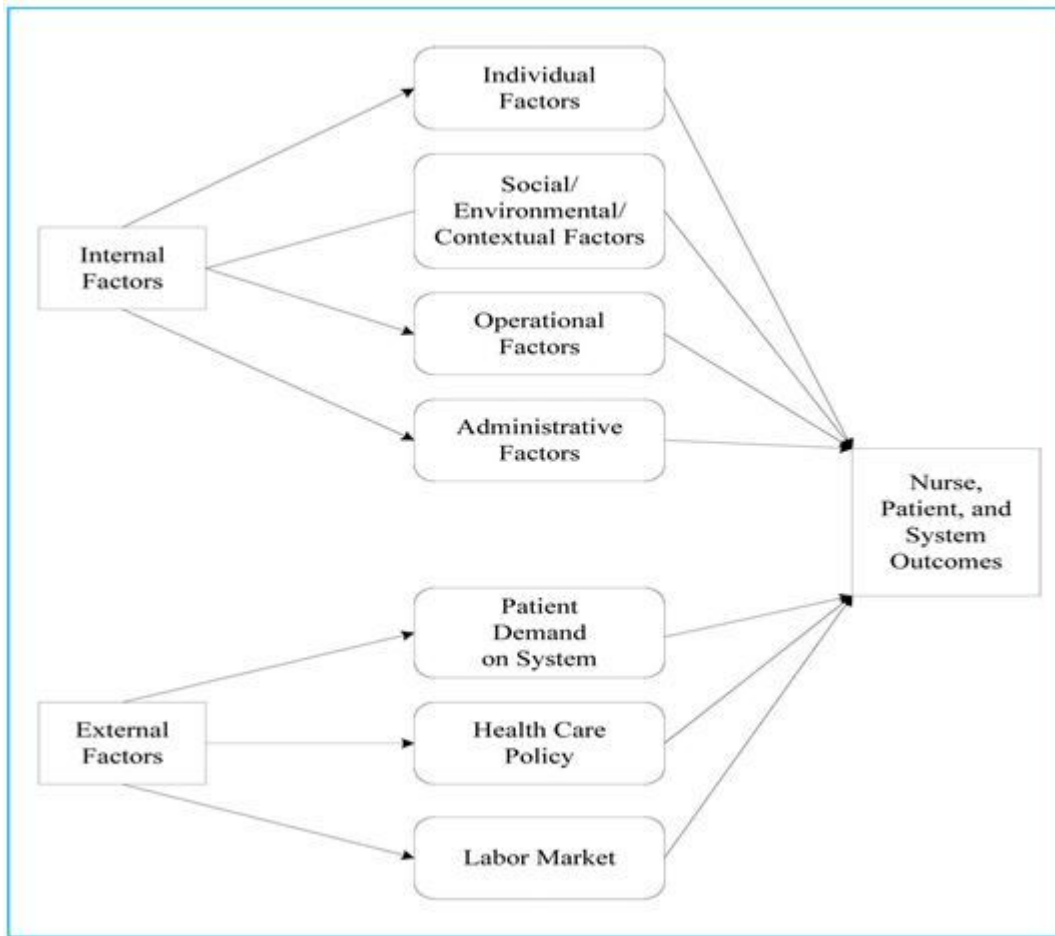


Figure 1

Factors Influencing Quality of Nursing Work Life (O'Brien-Pallas & Baumann ,1992)19

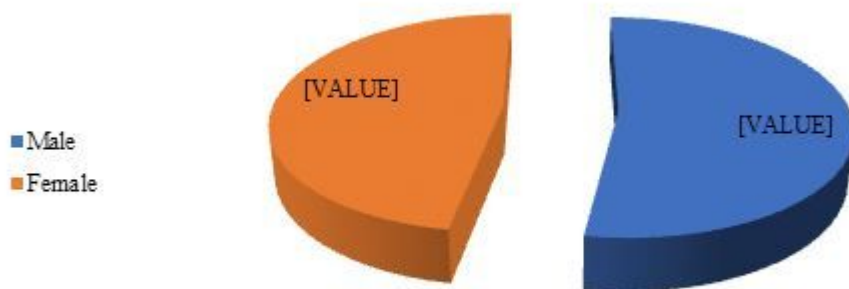


Figure 2

Distribution of Study Sample According to "Gender Variable."

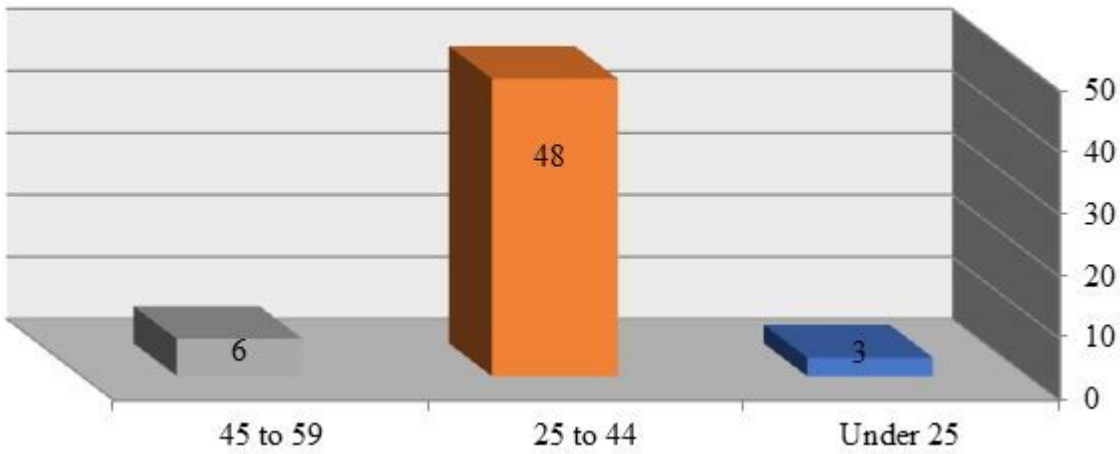


Figure 3

Distribution of Study Respondents According to "Age Variable."

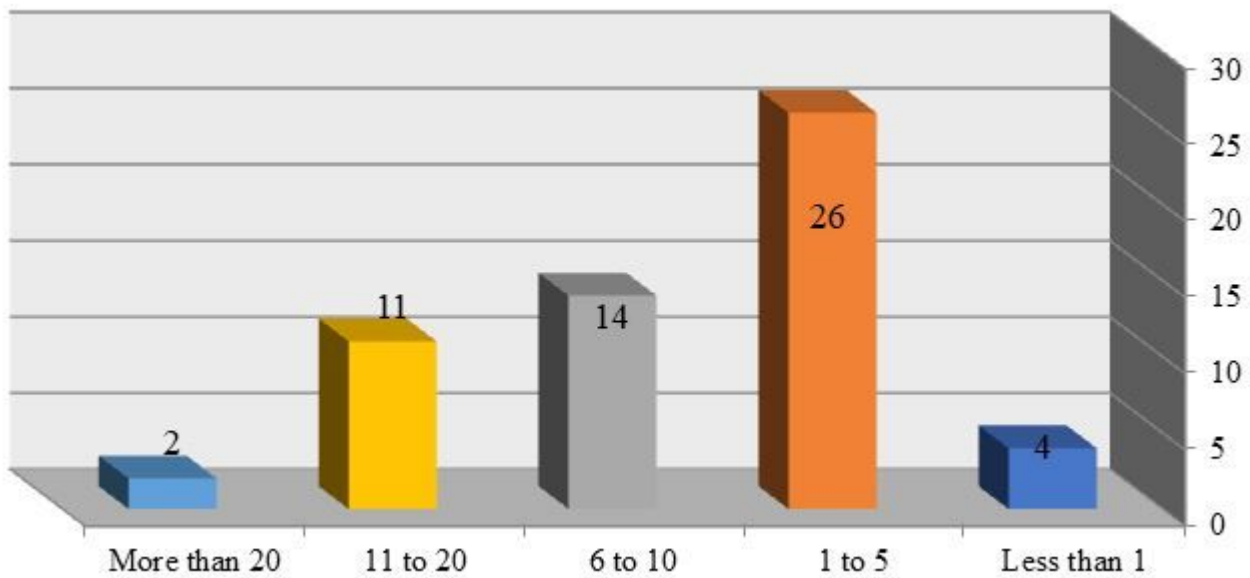


Figure 4

Distribution of Study Respondents According to "Years-of-Experience Variable."



Figure 5

Distribution of Study Respondents According to "Work-Hours Variable."

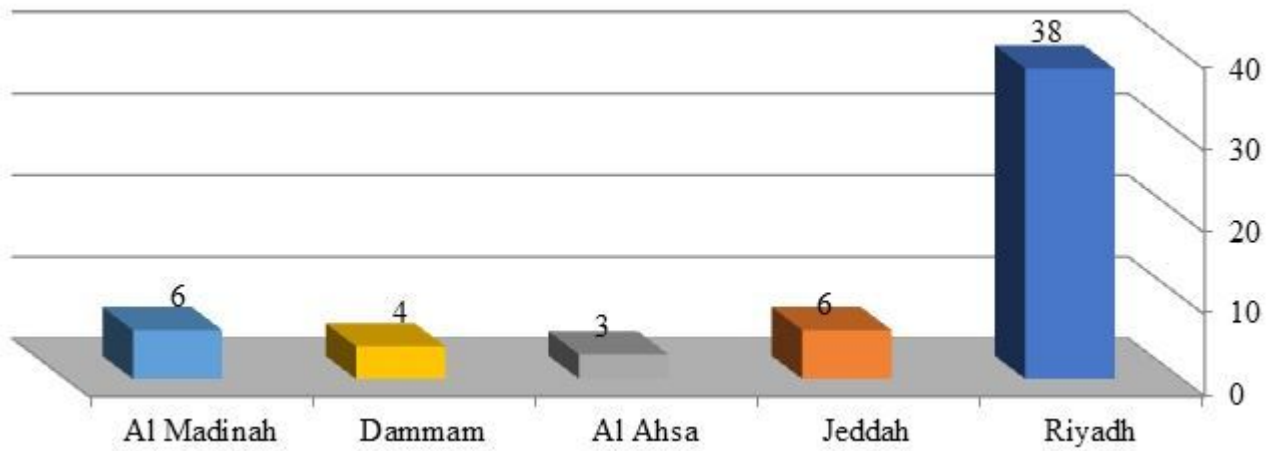


Figure 6

Distribution of Study Respondents According to "Location of Work Variable."

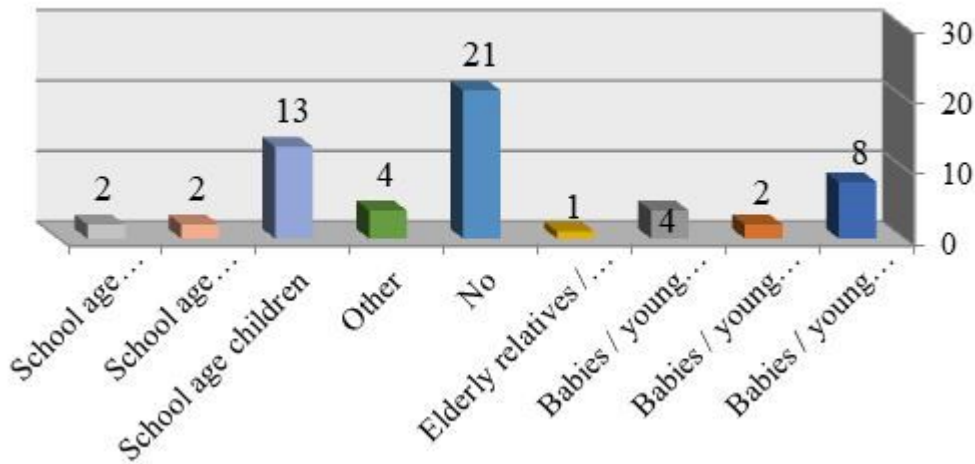


Figure 7

Distribution of Study Respondents According to "Dependents Variable."

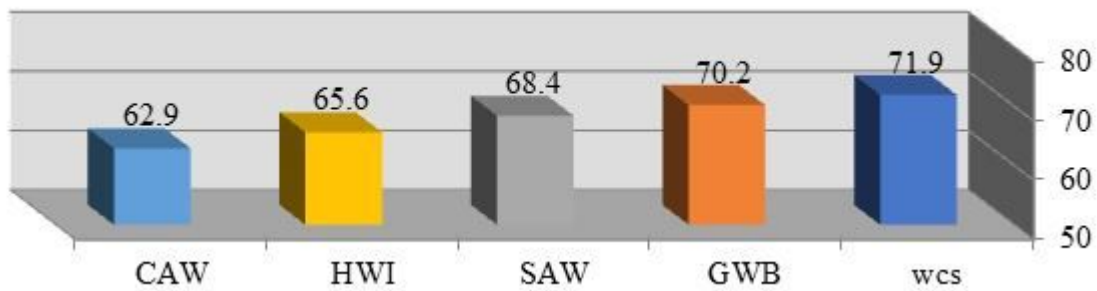


Figure 8

Values of WRQoL Subscales