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Original Article

Assessment of Quality of Nurses' Work Life in Tertiary Care Hospitals of Peshawar, Khyber Pakhtunkhwa, Pakistan

Tariq Rahim[1*], Ayaz Ayub[2], Bakhtiar Ali Shah[2], Ejaz Ali Khan[3] and Nadia Sajid[4]

[1]Government College of Nursing, Kohat, Pakistan
[2]Khyber Medical University, Peshawar, Pakistan
[3]Pak International Nursing College, Peshawar, Pakistan
[4]Nova Institute of Modern Sciences, Islamabad, Pakistan

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Corresponding Author:
Tariq Rahim
Government College of Nursing, Kohat, Pakistan
tariqrahim888@yahoo.com

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ABSTRACT

Nurses have been considered the backbone of health care delivery system, but regretfully saying that very limited attention has been paid to the development of nursing throughout the world. **Objective:** To assess the Quality of Nurses Work Life (QNWL) in Tertiary Care Hospitals of Peshawar Pakistan. **Methods:** Descriptive cross-sectional approach was applied to assess the QNWL in Lady Reading Hospital and Hayatabad Medical Complex Peshawar. Sample consisted of 240 participants via selection of multistage random sampling technique. Brook QNWL questionnaire was adopted for data collection and then validated and pre-tested it. **Results:** The sample data consisted of 79.20% female 20.80% male participants, out of which 46.02% were married and 53.98% un-married. The sample consisted of 94.25% Charge Nurses, 4.42% Head Nurses and 1.33% Nursing Managers in the study. The mean score of QNWL in this study was 162.24 ± 21.16. Furthermore, 3.98% nurses reported Low QNWL, 92.48% Moderate QNWL and 3.54% High QNWL in the sample. There was found an association between employment type with home life and work load subscales of QNWL whereas, home life has also an association with gender, marital status and salaries. **Conclusions:** It was concluded from the study findings that majority (92.48%) nurses have moderate QNWL in selected hospitals. Nurses home life and work load subscale of QNWL is affected by some demographics. Therefore, the study findings suggest recommendations in home life and work load management for policy makers in order to enhance QNWL in Tertiary Care Hospitals of Peshawar Pakistan.

INTRODUCTION

Nurses have been considered the backbone of health care delivery system [1]. American Nurses Association in 2014 reported that there are three mostly repeated debate of nurses that are relating to manpower, overtime and workplace protection [2]. A decade before, nursing development has been evolved in health care system in many western countries due to role diffusion, stressed working environment, aging and low workforce [3, 4]. Therefore, QNWL is a key indicator for an organization to hold on brilliant staff to ensure standardized care [5]. Nurses were more prone to psychological and physical stress in contrast to other health profession due to longer period of work [6]. It has been reported that 63.25% nurses in China and 46% of Canadian new nurses feels mild to moderate level of employment related burnout [7]. According to a report, nearly 20% of nurses give resignation annually [8]. A survey in 11 countries has shown that 2-5 out of 10 nurses leave their job in a year or in five years [9]. Some of the mentioned factors like high work burden, low support, career development, poor governing, incentives and work safety has an impact on QNWL [10]. Furthermore, 50% of nurses were not satisfied from their

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employment because of poor QNWL due to scarcity and huge resignation, which is a global burning issue [11]. Additionally, employee work in rotation for continuity of care has negative impacts on health care personnel and is associated with various disorder [12]. QWL is an important component of human health and its concept has been rooted in multidimensional phenomenon [13]. A study by Morsy and Sabra in Egypt analyzed that nurses QNWL was not satisfactory due to demographic variables like gender, age, educational level and salary [14]. Another study by Borhani *et al.*, that in Iran that nurses were more productive when their QWL was conducive for their work and hence contributed to the good quality of health care delivery system [15]. A study by Sadat *et al.*, in Iran predicted that 56.70% nurses had good QWL, and 43.30% low QWL [16]. A study by Kelbiso *et al.*, in Ethiopia determined that 67% dissatisfaction in QWL and was greatly affected by different factors like educational level, working department, salary [10]. Similarly, a study in India analyzed that QWL of private hospital nurses was interconnected with the health of nurses, pleasure at work, work context and work environment [17]. A study by Lee *et al.*, in Thailand reported that 56.1% might leave their job, 2.5% resigned one year later and this resignation was due to having no self-respect, self-reliance and low QWL [18]. A study by Kowitlawkul *et al.*, in Singapore explored that support of family, friend and having soundness was very necessary for good QOL [19]. A study by Suleiman *et al.*, in Jordan concluded that the average score for QWL was 140.15 ± 28.34. A study by Esteban in Spain concluded that health care setting, marital status, working in shift and locality of the center had impact on Compassion satisfaction [20]. A study by Ibrahim Alzamel *et al.*, in Malaysia analyzed negative partial effect between QNWL and turnover intention due to organizational commitment [21].

METHODS

Descriptive cross-sectional study was conducted in tertiary care hospitals of Peshawar. The OpenEpi software for sample calculation was used. Using 95% confidence interval, 5% margin of error, 25% hypothesized prevalence and a population of 1400 registered nursing staffs working at the mentioned above tertiary care hospitals. The calculated sample size was 240 register nurses working in these tertiary care hospitals. The study was completed in a one-year period starting from June 2020 to May 2021. Approval was obtained from Khyber Medical University Advance studies and Research Board, and from medical director of each hospital. Written informed consent was administered to the participants prior to data collection. The primary data were collected through structured questionnaire from 240 nurses through multistage random sampling technique in Lady Reading Hospital and Hayatabad Medical Complex Peshawar Khyber Pakhtunkhwa. Those nurses whose experience was less than 3 months or not willing to participate and or working at higher management level excluded in the study.

RESULTS

SPSS Version-22.0 was used for analysis of the data. In descriptive statistics, mean and standard deviation was calculated for continuous variables and frequency and percentage calculated for categorical variables. The inferential statistics include the use of t-test and one-way ANOVA between dependent variable (QNWL) and independent variables (Selected demographics). All the result was considered statistically significant when the p-value < 0.05 at 95% confidence interval. The mean age of the participants was 31.80 ± 3.49 years. There were 53.98% married and 46.02% un-married participants in the study. Furthermore, 64.16% participants have general nursing diploma education, followed by 29.20% Bachelor of Subject in Nursing, 2.21% Master of Subject in Nursing and 4.42% have highest education other than nursing. Figure 1 described that 79.20% female and 20.80% male participated in the current study.

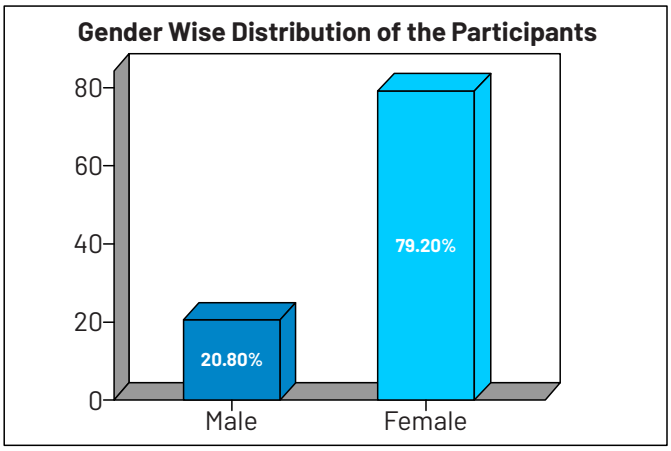

Figure 1: Gender of the Participants

Furthermore, the study consisted of 49.12% civil servants (Permanent), and 50.88% Medical Teaching Institution job (Contractual) employees participated. It was analyzed that 84.51% participants were responsible for the care of their elderly parents'/family members and 15.49% responded that they were not responsible for it. Moreover, 94.25% participants responded that their duty were in shift rotation and 5.75% not rotated in shift. Similarly, 18.58% nurses participated from Medical Surgical wards, followed by 18.14% from Critical Care Units, 15.93% from Emergency department, 13.28% from Pediatrics wards, and 8.41% from Obstetric /Gynae department and the remaining 25.66% staffs from rest of the departments. The above graph showed that 94.25% were Charge Nurses, 4.42% Head Nurses and 1.33% Nursing Manager participated in the

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study. Study findings revealed that 85.84% participants responded that there was mandatory shift rotation and 14.16% rotation in shift on voluntary basis. There was no incentive for shift rotation. It was analyzed that 34.07% participants have salary below 50,000 PKR, 46.90% salary in between 51,000-70,000 PKR, and 19.03% salary above 70,000 PKR. The mean score of QNWL was 162.24 ± 21.16. In this graph, 3.98% participants responded that they have low QNWL, 92.48% moderate QNWL, and 3.54% high QNWL as shown in the Figure 2. In this stage, the t-test and one-way ANOVA was applied for an association between the score of quality of nurses' work life its sub scales score and selected demographics.

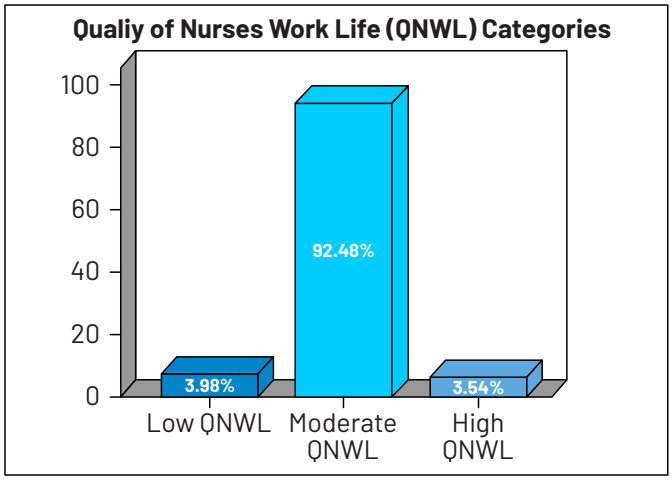

Figure 2: QNWL Categories

T-test was applied in the Table 1 for an association between QNWL total score, score of its subscales and demographics variables. It was analyzed that there not an association found between QNWL total score and gender of the participants, however, a statistically significant (p-value < 0.002) association was found between QNWL subscale of home life dimension and gender. Similarly, the QNWL subscale of home life dimension was statistically significant (p-value < 0.000) with respect to marital status as shown in the above table-1. In the next step, employment status was putted for an association with QNWL total score as well as its sub scales. There was not an association found between QNWL total score, however, an association found between QNWL sub scale of home life dimension (p-value < 0.001) and work load dimension with respect to an employment status as described in the above table-01. Finally, there was not found an association between QNWL total score and its sub scales with respect to shift rotation.

Table 1: t-test for an association between quality of nurses' work life, its subscales and demographic variables

Variable	N (%)	Home Life	Work Design	Work Context	Work Load	Total Score
Gender						
Male	47(20.79)	29.57±5.03	38.42±6.74	78.89±10.68	17.72±3.41	164.61±22.88
Female	179(79.20)	27.19±4.53	38.25±6.30	77.81±10.22	18.36±3.28	164.62±20.71
T	-	3.126	.166	.621	-1.151	.813
p	-	.002*	.868	.536	.254	.419
Marital Status						
Un-Married	104(46.01)	28.94±4.86	38.13±6.05	77.89±10.51	17.79±3.21	162.76±21.21
Married	122(53.98)	26.62±4.35	38.41±6.67	78.16±10.16	18.59±3.36	161.80±21.19
T	-	3.74	-.332	-.195	-1.81	.341
p	-	.000*	.740	.845	.070	.733
Employment Types						
Permanent	111(49.11)	26.65±4.59	38.13±6.47	77.47±10.69	19.09±3.13	161.36±21.80
Contractual	115(50.88)	28.68±4.66	38.43±6.32	78.58±9.92	17.40±3.28	163.10±20.59
T	-	-3.29	-.352	-.805	3.95	-.618
p	-	.001*	.725	.421	.000*	.537
Shift Rotation						
Voluntary	32(14.15)	26.78±4.00	37.81±6.44	80.18±9.77	17.34±2.96	162.12±19.09
Mandatory	194(85.84)	27.84±4.83	38.36±6.38	77.68±10.37	18.37±3.35	162.26±21.53
T	-	-1.174	-.451	1.27	-1.63	-.035
p	-	.224	.654	.204	.103	.972
***p<0.05 Significance Level and at 95% Confidence Interval**						

The above table 2 was plotted for an association between QNWL total score, score of its subscales and demographic variables. One-way ANOVA was used between dependent variable i.e. QNWL and independent variables i.e. selected demographics. Sequentially, in the first phase and second phase, an educational level and current nursing position were putted for an association with QNWL total score and its subscales score. There was neither QNWL total score nor its subscales score correlated with an educational level and current nursing position respectively as described in the above table 2. Finally, current salary status was putted for an association between QNWL total score and its subscales score. There was an association (p-value < 0.000) found between only home life dimension and current salary status as shown in the above table-02.

Table 2: One-way ANOVA between quality of nurses' work life, its sub scales and demographic variables

Variable	N (%)	Home Life	Work Design	Work Context	Work Load	Total Score
Educational Level						
Diploma in Nursing	145(64.15)	27.80±4.49	38.55±6.20	78.15±9.93	18.38±3.35	162.89± 20.47
Bachelor Degree in Nursing	66(29.20)	27.25±5.48	37.28±7.01	77.25±11.99	17.77±3.22	159.57± 24.41
Master Degree in Nursing	05(2.21)	27.60±2.40	39.20±3.76	79.60±3.28	18.40±4.82	164.80± 7.72
Others	10(4.42)	29.00±3.71	40.60±5.16	80.70±4.21	18.90±2.64	169.20±6.77
F	-	.462	1.095	.390	.664	.777
p	-	.709	.352	.760	.575	.508
Current Position						
Charge Nurse	213(94.24)	27.79±4.81	38.36±6.53	77.72±10.49	18.22±3.39	162.10±2.176
Head Nurse	10(04.42)	26.60±2.59	37.20±3.04	83.50±3.83	18.501.58	165.80±5.00
Nursing Manager	03(01.32)	23.66±1.52	36.66±3.51	82.33±3.21	17.66±1.52	160.33±3.05
F	-	1.41	.254	1.77	.076	.157
p	-	.246	.776	.172	.927	.855
Current Salary Range						
Below 50,000 PKR	77(34.07)	29.10±4.50	38.48±6.67	79.03±10.65	17.90±3.80	164.53± 22.16

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51,000-70,000 PKR	106(46.90)	27.57±4.62	38.61±6.22	77.84±9.92	18.53±2.96	162.57± 20.25
Above 70,000 PKR	43(19.02)	25.44±4.56	37.13±6.26	76.72±10.66	18.04±3.19	157.34± 21.23
F	-	8.902	.867	.731	.883	1.62
p	-	.000*	.422	.483	.415	.200
***p<0.05 Significance Level and at 95% Confidence Interval**						

DISCUSSIONS

In the current study, the mean score of total QNWL was 162.24 ± 21.16. The current study used Brooks Quality of Nurses Work Life Survey (BQNWL) tool for data collection. Similar findings were reported by a study conducted by Suleiman *et al.*, in Jordan having mean score of total QNWL was 140.15 ± 28.34 while using BQNWLS [22]. Similar to the current study result, a study had total mean score of QNWL was 146.56±37.02 and was considered moderate level of QNWL [23]. A study by Macairan *et al.*, findings showed that the quality of nurse's work life in public school of Philippine was high [24]. Furthermore, it was high due to constitutionalism at work, opportunities at work, social integration at work and working condition. A study by Sirisub *et al.*, also concluded that there was overall moderate level of quality of work life among Thai nurses [25]. Furthermore, quality of work life was observed good in work environment, collaborative communication and nurse perception. The result of the Karaaslan and Aslan study was similar to the current study as there was observed moderate level of QNWL among Turkish Prisoner nurses [26]. Kelbiso *et al.*, study result was similar in total score of QNWL as it was moderate level and was strongly affected by educational status, working environment, working unit and monthly income [27]. The quality of work life subscales in current study showed that it was greatly affected in home life subscale by gender (p-value= 0.003), marital status (p-value= 0.0001), and employment status (p-value= 0.005). Similar result was also derived from the study conducted by Anon [7] on Chinese nurses and their quality of work life was greatly affected by gender, marital status, number of children, educational level, monthly income, shift work, professional title, patient to nurse ratio and finally working experience. In connection to this, a study by Lee *et al.*, showed that QWL was predicted more by intention to leave profession, intention to leave organization than intention to leave the unit [8]. Furthermore, a study by Morsy and Sabra also reported that QNWL was not satisfactory in 66.7% of the participants and there was found statistical significance between QNWL and selected demographics such as age, marital status, educational qualification, and income. Moreover, there was observed high mean score for work context subscale of QNWL. Furthermore, the result of current study was similar to Morsy and Sabra as there was highest mean score for work context sub scale of QNWL [14]. A study by Thakre *et al.*, analyzed the dimensions of quality of QNWL [28]. There was observed least mean score for work world dimension followed by work context, work home life/ work life and final for work world dimension. However, this result was contradictory to the current study as there was observed least mean score for work load followed by work design, work home life/ work life and then finally for work design.

CONCLUSIONS

It was concluded from the current study findings that 3.98% had low level of QNWL, 92.48% nurses had moderate level of QNWL and only 3.54% had high level of QNWL. Furthermore, the QNWL was greatly affected by age, income and employment status. Hence, the ultimate goal of it would be to improve the standard of care provided to the patients.

Authors Contribution

Conceptualization: TR, NS
Methodology: AA, BAS
Formal Analysis: EAK
Writing-review and editing: TR, AA, BAS, EAK, NS

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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