Quality of Nursing Work-Life and its Relationship with Caring Behaviors, and Self-Concept from Nursing Staff's Perspective

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Abstract

Background: *Nursing staff are the largest group of professionals at the forefront of service delivery and are essential components of health systems. Improving the quality of the work-life balance of nursing staff is vital to increasing their productivity and efficacy. Additionally, nursing staff has the greatest potential to impact patient care; a good self-nursing concept will better the nurse's caring behavior.* **Aim of the study:** *The study aims to assess the quality of nursing work-life and its relationship with caring behaviors, and self-concept from nursing staff's perspective.* **Research question:** *What is the relationship between the quality of nursing work-life, caring behaviors, and self-concept from nursing staff's perspective?* **Research design** *A descriptive correlational design was used.* **Setting:** *This study was conducted at all inpatient units (n =11) at Shatby Hospital for Obs/GYN, which is affiliated to the Alexandria University at Alexandria Governorate.* **Subjects:** *The target population of study subjects was (n=210), who were willing to participate in the study and available at the time of data collection.* **Tools:** *To collect the necessary data for the study three tools: Quality Nursing Work-Life Scale, Caring Behaviors Inventory, and Nurse Self-Concept Questionnaire.* **Results:** *results showed that 82.86% of nurses stated the quality of their work life at a moderate level with a mean score of 3.25±1.06, 94.76% of nurses stated their caring behaviors at a high level with a mean score of 5.36±0.92, and 93.81% of nurses stated their self-concept at an acceptable level with mean score 6.93±1.14.* **Conclusion:** *the study concluded a positive statistical significance between the quality of nursing work life, caring behaviors, and nurses' self-concept levels and related dimensions except for work conditions (r=0.007) and staff relations (r = 0.025).* **Recommendations:** *healthcare managers and policymakers to implement successful plans and policies to improve QNWL. Organizations must examine factors affecting nurses' QWL and establish strategies to improve QNWL.*

Introduction

Nurses are one of the largest workforces in healthcare organizations, representing more than fifty percent of the workforce in many countries. In addition, the nurses have the professional capability, responsibility, and authority to carry using services and are greatly influenced by the quality of work life (QWL). Therefore, to increase the capacity of nurses in achieving the quality of nurses in achieving the quality of patient care, it is necessary to research the nurses' QWL. (WHO, 2016; Suaib, Syahrul, & Tahir, 2019). QNWL is described as a "strength as well as motivating and increasing employee productivity at work environment in the organization and a sustainable management approach directed for improving the quality of work". QNWL is considered one of the most critical elements in each healthcare facility because it has several impacts on nurses, nursing services, and organizations such as improving nursing care quality and caring behaviors,

increasing job satisfaction, increasing nurses' retention, decreasing work obstacles, and violence, increasing organizational productivity and effectiveness. (Akter et.al. 2018; Eren and Hisar, 2016).

Caring behaviors describe the attitudes and behaviors that demonstrate an interest in and respect for patients' psychological, social, and spiritual concerns and values". Caring behaviors include verbal and non-verbal behaviors, which include respect for the patients, effective communication, giving attention to the patients, assurance of humanistic presence, and a trustable relationship between the patient and nurse. (Létourneau et.al. 2017; Finkelman and Kenner 2010; Fortuno et.al. 2017; Bucco et.al. 2015; Lee et.al. 2018; Sinclair et.al. 2016).

Caring behaviors affect the patient's physical and psychological aspects. In addition, caring has a great influence on the development

of nurses' self-concept and professional identity. (A'la et.al. 2018; Ten et.al. 2014).

Nurses' self-concept is "the information and beliefs that they have regarding them, their values and behaviors and is an attitude that can promote the professional identity and create professionalism". It is affected by working conditions, professional experience, and personal characteristics of the nurses, therefore improving nursing knowledge and skills, promoting communication skills, self-confidence, and a sense of leadership are very important strategies for increasing nurses' self-concept. (Chang & Yeh, 2016; Sabanciogullari, & Dogan 2017).

Nurses with a high level of professional self-concept are more interested in their patients. Also, it increases efficiency, improves clinical performance, and increases the satisfaction of nurses. In addition, a positive professional self-concept improves nurses' empowerment and problem-solving and enhances the quality of nursing services. (Edward et al. 2017; Mosayebi et.al. 2018; Jahromi et.al. 2015).

Aim of the study:

Assess the quality of nursing work-life and its relationship with caring behaviors, and self-concept from nursing staff's perspective.

Research question
1. What is the level of quality of nursing work-life as perceived by nursing staff?
2. What is the level of caring behaviors as perceived by nursing staff?
3. What is the level of self-concept as perceived by nursing staff?
4. What is the relationship between the quality of nursing work-life, caring behaviors, and self-concept from nursing staff's perspective?

Materials and Method
Materials
Research design
A descriptive correlational design was selected to fulfill this study.

Setting
This study was carried out at all inpatients at Shatby Hospital for OBS/GYN, which is affiliated to Alexandria University at Alexandria Governorate. It specializes in Obstetrics and Gynecology in the North Coast Region. It

included 11 units with a bed capacity of 252 beds and a wide range of qualified nursing staff and healthcare facilities in Obstetrics and Gynecology specialties

Subjects
The study incorporates all nursing staff (n=215) assigned to the previously mentioned hospital, a non-probability convenience sample sampling technique was used to recruit the study sample (n =210) who were willing to participate in the study and available at the time of data collection. Also, they must have occupied the position for at least one year to be familiar with the hospital system and they are responsible for direct or indirect activities for inpatient units and have no administrative responsibilities.

Tools:
Three tools were used to collect the necessary data for the study.

Tool (1): Quality Nursing Work-Life Questionnaire.

This questionnaire was adapted from the Turkish version of the quality nursing work-life scale that was developed by Sirin and Sokmen (2015). It was adopted by the current researcher and used to measure the perception of work-life quality among nursing staff. The questionnaire consists of 35 items including five dimensions namely the work environment (n=9 items), relation with managers (n=5 items), work conditions (n=10 items), job perception (n=7 items), and support services (n=4 items). Responses were measured through a 5-point Likert scale ranging from Strongly Disagree 1 to Strongly Agree 5 for each statement in the questionnaire. The overall score level ranges from (35 to 175). A high score indicates a high perception of nurses' quality of nursing work life. This tool was tested for reliability using Cronbach's alpha coefficient α= 0.93. p< 0.05. Sirin and Sokmen (2015

Tool (2): Caring Behaviors Inventory

It was developed and validated by Wu, Larrabee, and Putman (2006). It was adopted by the current researcher and measured attitudes and caring behaviors from a nursing staff's point of view. The inventory consists of 24 items divided into four subscales namely, knowledge and skills

(n=5), assurance of human presence (n=8), respectful deference of others (n=6), and positive connectedness (n=5). A 6-Likert scale was utilized for each statement in the questionnaire ranging from never = 1 to always = 6. The overall score level ranges from (24 to 144) with a higher total score indicating a higher caring behavior the caring behaviors inventory had a Cronbach's alpha of α = 0.83 p< 0.05 for its reliability (Wu, Larrabee, and Putman, 2006).

Tool (3): Nurse Self-Concept Questionnaire (NSCQ)

It was developed by Angel et al. (2012). It was adopted by the current researcher and assessed the nursing staff's perception of their professional self-concept. It consists of 14 items divided into four subscales namely, care (n=3 items), knowledge (n=4 items), staff relations (n=3 items), and leadership (n=4 items). The questionnaire statements were measured on an 8-point Likert scale and were utilized for each statement in the questionnaire ranging from 1(definitely false) to 8 (definitely true). Overall scores range from (14 to 112.) The score of participants that ranges from 14-56 was considered as low self-concept, and the score that exceeds 56 was considered as acceptable self-concept. The Cronbach's alpha of the reliability of this questionnaire was α = 0.94 p< 0.05. (Angel et al. 2011).

Method:

Approval for conducting the research plan was obtained from the Ethical Research Committee at the Faculty of Nursing, Alexandria University before the start of the study. The Dean of the Faculty of Nursing at Alexandria University granted official authority to gather the required data, and an official letter was sent to the administrative authorities of the study hospitals after explaining the purpose of the study. Back-to-back translation of the study tools into Arabic was done and tested by five experts interested in the field of study for its content validity and necessary modifications were made. The reliability of the questionnaires was used to test the internal consistency of the items using Cronbach Alpha. A pilot study was carried out on 10 % of study subjects (n= 26) who weren't included in the study subjects; to check and ensure the clarity, applicability, and feasibility of the tools and, identify obstacles and problems

that may be encountered during data collection. No modification was done. Data collection for this study was conducted by the researcher through self-administered questionnaires. It was hand-delivered to the study subjects at break time in their work settings. Data was collected by the researcher during the period from the 15th of Jule to the 15th of October 2022.

Ethical considerations:

Written informed consent from the study subjects was obtained after providing an appropriate explanation about the aim of the study. The study participants were guaranteed the right to refuse participation in the research as well as the freedom to leave the study at any moment. The subjects' anonymity was guaranteed. Data from the research participants was kept private.

Statistical Analysis

After data were collected and coded, they were transferred into a specially designed format for the SPSS program with version (25). Frequency analysis and cross-tabulation were carried out. Statistical measures included descriptive measures (arithmetic mean, standard deviation, minimum, and maximum) and Statistical analysis tests, which included: the t-test, One-way ANOVA (F-ratio test), and Correlation coefficient for analysis of quantitative variables. The level of significance used was $P \leq .05$.

Results

Table 1 denotes that, concerning age, about one-third of nursing staff (31%), were from 36 to 45 years old, and they had had a Bachelor of Science degree (52.4%). Also, they work in the neonatal intensive care unit, 14.8%, and have clinical, department, and hospital experience ranging from 16 to 30 years 47.6%, 63.8%, and 47.1% were working less than 12 hours per day (75.2%).

Table 2 shows that more than three quaternate of nursing staff (82.86%) perceived a moderate level of total quality of nursing work-life with a mean score of (3.25±1.06). Concerning the underlying sub-dimensions, it was found that they perceived moderate to high levels of total quality of nursing work-life.

Table 3 clarified that most of nurses (94.76%) perceived high level of total caring behavior with high mean score (5.36±0.92). as well as its four sub-dimensions; Assurance of human presence (94.76%), Respectful deference of others (94.76%), Knowledge and skills (93.81%), Positive connectedness (90.95%) with high mean score 5.46±0.89, 5.38mo±0.90, 5.44±0.90, 5.10±1.03 respectively.

Table 4 clarified that the majority of nurses (93.81%) perceived an acceptable level of total self-concept. as well as its four sub-dimensions; care (94.76%), Staff relation (92.86%), Knowledge (91.43%), Leadership (76.19%) respectively.

Table 5 presents that there was a positive statistical significance between the total quality of nursing work-life, caring behavior, and nurses' self-concept r =0.206 p<0.01, r = 0.419 p<0.01 respectively.

Discussion

As the nursing profession grows increasingly complex and multidimensional, healthcare organizations need to provide a healthy work environment to attract and keep skilled nurses who will help them fulfill their organization's vision and goal. As a result, healthcare organizations must uphold and run favorable conditions that fall under the heading of "quality of nursing work life"(Kanten, Kanten, Ozer, &Bulbul.2018).

QNWL is linked to the structured working framework, which facilitates the social integration of nurses both within and outside of the workplace (Permarupan, Mamun, Hayat, Saufi, & Samy, 2021). According to the QNWL principles, investing in nurses is the most crucial factor in strategic management; in other words, meeting the demands of the nursing staff would enhance the organization's long-term performance (Aminizadeh et al., 2022).

Concerning the distribution of the study subjects according to their socio-demographic characteristics (Table 1). The results of the present study showed, concerning age, about one-third of nursing staff (31%), were from 36 to 45 years old, and they had had a Bachelor of Science degree (52.4%). Also, they work in the neonatal intensive care unit, 14.8%, and have

clinical, department, and hospital experience ranging from 16 to 30 years 47.6%, 63.8%, and 47.1% were working less than 12 hours per day (75.2%).

The present study revealed that nurses perceived a moderate mean percent score of total QNWL (table 2). In the same direction, the result of this study supported the findings of Agusto, Leo, and Septianita (2024), who reported that the QNWL in the hospital and Puskemas was, on average, in the sufficient/moderate/moderate category and that interventions were necessary to raise this.

Also, the present study revealed that, the highest mean percent score of QNWL was related to relation with managers. This result could be explained in light of the availability of good communication with their manager/supervisor nurse, adequate supervision/inspection, and feedback about performance by the manager/supervisor. As regards the job perception dimension, the finding from the present study showed that, the majority of nurses perceived that they have job perception. This finding aligns with the research conducted by Gurdogan and Uslusoy (2019), where it was reported that nurses exhibited the highest average score in the job perception sub-dimension of QNWL. Also, the support services dimension, the finding from the present study illustrated that, the majority of nurses perceived the support services. This result is consistent with the results of Somantri, & Yudianto (2018) which demonstrated that the aspect of support service that has a value above the midpoint indicates that this aspect of the nurse feeling fulfilled and successful in receiving support from the other teams/officers at Pangandaran health center.

On the other hand, the work conditions dimension, the finding from the present study stated that the work conditions dimension was the lowest mean score of QNWL dimensions. This is relatively in line with the findings of Khani, Jaafparour (, and Derya (2008). However, these results differ from Asadi, Niknami, Jafari, Sibuea, ulastiana, and Fitriana (2009) reported that hospital conditions may influence nurses' QWL in different hospitals.

The present study illustrated that nurses perceived a high mean present score of total caring behaviors (Table 3). This finding is similar to a study by Mousa, Sleem & EL-Wkeel (2024) which found that nurses' compassionate behavior was improved by offering patients exceptional physical care, dedicating more time to them, and ensuring their mental and physical comfort. This enabled patients to foster a strong connection with their spiritual beliefs, leading to feelings of contentment, purpose in life, and overall well-being. Patients reported feeling a sense of security which in turn boosted their positivity.

The results of the current study contradicted with a study by Ashagere, Yeheyis, Addisu, et al (2023) also indicated poor levels of nurses' caring behavior. In this study, a greater number of nurses focused on the technical aspects of care rather than the psychosocial aspects of their practice.

Also, the present study revealed that, the highest mean percent score of caring behaviors was related to assurance of human presence. This result goes with the result of Inocian., Cruz., Alshehry., Alshamlani., Ignacio., & Tumala, (2021). It was observed that clinical nurses demonstrated the highest level of caring behaviors in terms of ensuring human presence.

On the other hand, the present study revealed that the lowest mean percent score of caring behaviors was related to positive connectedness. This result was consistent with Ibrahim., Allawy's (2024) findings, which indicated that connectedness had the lowest mean score. This outcome was in line with previous research conducted by Aupia., Lee., Liu., Wu., & Mills (2018) and Fenizia., Navarini., Scollo., Gambera., & Ciccozzi (2020), who found that the domain of nurses' knowledge and skills received the highest score.

However, nurses rated positive connectedness as the lowest domain in nursing caring behavior. This outcome could be attributed to limited interaction time between nurses and patients. Furthermore, nurses may believe that involving the patient in their care does not impact the care or treatment plan and a lack of communication methods such as telecommunication.

However, the findings of the present study illustrated that there was statistical significant difference between caring behaviors and its dimensions as perceived by the nursing staff. Ahmed, Saifan, Dias, Subu1, Masadeh, and AbuRuz (2022) also found significant differences in the levels of caring behaviors among the two groups of nurses, except for the knowledge and skill subscale.

The present study revealed that nurses perceived acceptable level of self-concept (table 4). The findings align with Alghtany, Madhuvu, Fooladi, and Crawford (2024) who reported that nursing students possess a positive professional self-concept, indicating their confidence in their future roles as nurses. Additionally, the results of this study are consistent with a study by Arif, Sasmita, and Anggraini (2020) which found that the majority of nurses perceived their professional self-concept positively.

Additionally, it can be seen the present study revealed that the highest mean percent score of nurses' self-concept was related to care (table 4). This finding aligns with a study conducted by Edwin,&Vimala (2018), which found that nurses employed in specific government hospitals exhibited higher levels of self-concept in the areas of care, staff relations, communication, and knowledge.

Also, the results of this study were consistent with a study by Cowin, Craven, Johnson, & Marsh (2006) which emphasized that the core value of a nurse is care, signifying a commitment to duty, compassion, empathy, and a holistic approach.

Juanamasta, Aungsuroch, Preechawong, Gunawan (2023) also mentioned that nurses display a high level of integrity and trustworthiness, prompting the question of whether this aspect of their self-concept is influenced by their interactions with patients, clients, and colleagues in healthcare settings.

On the other hand, the present study revealed that the lowest mean percent score of nurses' self-concept was related to leadership (table 4). The same result was supported by Edwin,&Vimala (2018), Parandavar, Rahmanian, & Badiyepeymaie Jahromi (2015).

Furthermore, the results of the current study contrasted with those reported by Abdou, Alshomrani, Alsomli, &Alsulami, (2019), who found that undergraduate nursing students had the highest mean scores in knowledge and leadership dimensions, with the lowest mean score identified for care.

The present study showed that there was a statistically significant weak positive correlation between overall quality of nursing work life and overall nurses' self-concept & its related dimensions where (P=0.003, r=0.206**) respectively. Also, there was a high statistically significant weak positive correlation between overall nurses' self-concept and their caring behaviors & its related dimensions where (P= 0.000, r= 0.419**) respectively (Table 5). This is relatively in line with the findings of the study conducted by Hamim, Suwandi. & Yusuf (2015), which concluded that the caring behaviors of nurses are significantly influenced by their self-concept. The findings indicated that a low sense of self-worth is linked to a lack of compassionate behaviors in nurses Hamim, Suwandi. & Yusuf (2015).

Conclusion

The finding of the current study concluded that a statistically significant positive correlation was detected between the quality of nursing work-life, caring behavior, and nurses' self-concept among the nursing staff and its related dimensions except for work condition dimension and staff relations

Recommendations

The following recommendations are suggested based on the results of the current study findings:

1. Establish an environment that is encouraging, sociable, and healthy; foster open communication by holding regular staff meetings; encourage the sharing of viewpoints in decision-making and problem-solving; and treat them with respect.

2. Promote working conditions through an equitable distribution of the nursing staff, sufficient time to perform their work, and, providing them with adequate materials and equipment.

3. Expand specific nurse caring behaviors through role modeling to promote the nursing care of patients.

Table (1) The distribution of the study subjects according to their socio-demographic characteristics

Socio-demographic characteristics	No. (N= 210)	Percent %
Sex		
▪ Male	0	0.0
▪ Female	210	100.0
Age		
▪ ≤ 25 years	24	11.4
▪ 26-35 years	64	30.5
▪ 36-45 years	65	31.0
▪ > 45 years	57	27.1
Education qual.		
▪ Secondary technical nursing school diploma	43	20.5
▪ Technical institution of health	57	27.1
▪ Bachelor of science degree	110	52.4
Hospital Department		
General units		
Economic	24	11.4
Section 1	9	4.3
Section 2	10	4.8
Section 3	16	7.6
Section 4	16	7.6
Section 5	20	9.5
Section 6	16	7.6
Special units		
Neonatal Intensive Care	34	16.2
Eclampsia	13	6.2
Delivery	31	14.8
Intensive Care	21	10.0
Clinical experience		
▪ ≤ 15 years	80	38.1
▪ 16-30 years	100	47.6
▪ > 30 years	30	14.3
Dep. Experience		
▪ ≤ 15 years	134	63.8
▪ 16-30 years	66	31.4
▪ > 30 years	10	4.8
Hospital Experience		
▪ ≤ 15 years	86	41.0
▪ 16-30 years	99	47.1
▪ > 30 years	25	11.9
ay Working Hours		
▪ <12 a day	158	75.2
▪ 12 hours or more	52	24.8

Table (2) Mean and standard deviation of quality of nursing work-life levels among nursing staff and its related dimensions

Quality of nursing work-life dimensions	Nursing staff (N= 210)			
	Levels	Frequency	Percent	Mean ± SD.
Work environment	Low	44	20.95%	3.06±1.10
	Moderate	126	60.00%	
	High	40	19.05%	
Relation with manager	Low	10	4.76%	3.61±0.96
	Moderate	105	50.00%	
	High	95	45.24%	
Work condition	Low	16	7.62%	2.91±1.183
	Moderate	182	86.67%	
	High	12	5.71%	
Job perception	Low	10	4.76%	3.55±0.98
	Moderate	93	44.29%	
	High	107	50.95%	
Support services	Low	8	3.81%	3.55±0.93
	Moderate	92	43.81%	
	High	110	52.38%	
Total quality of nursing work-life	Low	3	1.43%	3.25±1.06
	Moderate	174	82.86%	
	High	33	15.71%	

Low Mean score = 1 > 2.33
Moderate Mean score = 2.33 > 3.66
High Mean score = 3.66 ≥

Table (3) Mean and standard deviation of caring behavior levels among nursing staff and its related dimensions

Caring behavior dimensions	Nursing staff (N=210)			
	Levels	Frequency	Percent	Mean ± SD.
Knowledge and skills	Low	2	0.95%	5.44±0.90
	Moderate	11	5.24%	
	High	197	93.81%	
Assurance of human presence	Low	1	0.48%	5.46±0.89
	Moderate	10	4.76%	
	High	199	94.76%	
Respectful deference of others	Low	1	0.48%	5.38±0.90
	Moderate	10	4.76%	
	High	199	94.76%	
Positive connectedness	Low	1	0.48%	5.10±1.03
	Moderate	18	8.57%	
	High	191	90.95%	
Total Caring behavior	Low	1	0.48%	5.36±0.92
	Moderate	10	4.76%	
	High	199	94.76%	

Low Mean score = 1 > 2.33 Moderate
Mean score = 2.33 > 3.66 High Mean
score = 3.66 ≥ 5

Table (4) Mean and standard deviation of nurses' self-concept levels among nursing staff and its related dimensions

Nurses' self-concept dimensions	Nursing staff (N=210)			
	Levels	Frequency	Percent	Mean ± SD.
Care	Unacceptable	11	5.24%	6.77±1.17
	Acceptable	199	94.76%	
Knowledge	Unacceptable	18	8.57%	7.24±0.66
	Acceptable	192	91.43%	
Staff relation	Unacceptable	15	7.14%	7.32±1.02
	Acceptable	195	92.86%	
Leadership	Unacceptable	50	23.81%	6.57±1.39
	Acceptable	160	76.19%	
Total nurses' self-concept	Unacceptable	13	6.19%	6.93±1.14
	Acceptable	197	93.81%	

Table (5) Correlation coefficient of quality of nursing work-life, caring behavior, and nurses' self-concept levels among the nursing staff and its related dimensions.

Nurses' self-concept dimensions		Quality of nursing work-life dimensions						Caring behavior dimensions				
		Work environment	Relation with manager	Work condition	Job perception	Support services	Total quality of nursing work-life	Knowledge & skills	Assurance of human presence	Respectful deference of others	Positive Connectedness	Total caring behavior
Knowledge	r	0.069	0.248**	0.054	0.238**	0.146*	0.175*	0.488**	0.301**	0.367**	0.333**	0.423**
	P	0.317	0.000	0.440	0.001	0.034	0.011	0.000	0.000	0.000	0.000	0.000
Care	r	0.174*	0.254**	0.112	0.224**	0.252**	0.200**	0.488**	0.451**	0.464**	0.404**	0.532**
	P	0.012	0.000	0.105	0.001	0.000	0.004	0.000	0.000	0.000	0.000	0.000
Staff relation	r	0.059	0.042	0.043	0.011	0.218**	0.025	0.341**	0.292**	0.107	0.200**	0.268**
	P	0.397	0.548	0.537	0.879	0.002	0.721	0.000	0.000	0.123	0.004	0.000
Leadership	r	0.209**	0.144*	0.131	0.263**	0.065	0.225**	0.247**	0.169*	0.315**	0.235**	0.280**
	P	0.002	0.038	0.059	0.000	0.346	0.001	0.000	0.014	0.000	0.001	0.000
Total nurses self-concept	r	0.140*	0.207**	0.007	0.308**	0.193**	0.206**	0.409**	0.307**	0.400**	0.331**	0.419**
	P	0.042	0.003	0.924	0.000	0.005	0.003	0.000	0.000	0.000	0.000	0.000

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

* Correlation is significant at the 0.05 level (2-tailed).

Pearson correlation test

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