

Factors affecting the quality of work-life of nurses: A correlational study

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Abstract

Background: Quality of work-life is an important factor in the recruitment and retention of the nursing workforce and their work productivity.

Aims: This study aimed to identify factors that affect the quality of work-life of nurses.

Methods: In this correlational study, 239 nurses employed in a tertiary teaching hospital in Iran completed the study questionnaires, including Quality of Work-life Questionnaire. The associations between potential independent variables and quality of work-life were examined using the multivariate regression analysis.

Results: Participants were mostly female (80.33%) and within the age range of 30-45 years (71.54%). Working in other hospitals, having a second job, and health information seeking behaviours were significant predictors of quality of work-life, explaining 28.68% of the total variance in quality of work-life of nurses.

Conclusion: Improving working standards may prevent nurses from working extra hours or in different occupations. This, along with facilitating the health-information seeking behaviours of nurses may help improve their quality of work-life by maintaining a better work- life balance and acquiring knowledge and skills that can help with effective management of work and life commitments.

Key Words: Health Information Seeking Behaviors; Nurses; Quality of Work Life

Introduction

A sustainable workforce is fundamental to achieving organizations' strategic directions (Anker et al., 2011). This is particularly important in health care systems due to the ongoing nursing shortage resulting from inadequate supply and poor retention (Vagharseyyedin et al., 2011). The quality of work-life (QWL) refers to broader job-related experiences, and is an important factor affecting individual and organizational outcomes (Daly et al., 2006). Nurses with higher QWL demonstrate greater work productivity (Nayeri et al., 2011), job satisfaction (Parveen et al., 2017), overall quality of life (Colichi et al., 2017), and lower rates of turnover (Hardjanti et al., 2017), or intention to leave (Perry et al., 2017). Factors that negatively affect the QWL of nurses include fewer work experience (Awosusi, 2010), job stress (Khaghanizadeh et al., 2008), and lack of opportunities for promotion and professional growth (Almalki et al., 2012).

As the largest group of health care providers, nurses play a significant role in delivering health care, and past research shows that the quality of care that nurses provide can be affected by their perceived QWL (Hardjanti et al., 2017). Drawing on evidence from international research, however, nurses often do not perceive a high QWL (Daly et al., 2006, Vagharseyyedin et al., 2011). Thus, a better understanding of this concept in health care settings is required to guide the design of interventions to improve nurses' work experiences, which in turn affect the realization of health care goals.

The concept of QWL was first introduced in the sociotechnical systems theory, which ascertains that individuals must constantly adapt themselves to ever-changing internal and external factors to be able to achieve desired outcomes, manage job-related stress, reduce overall time spent on a task, and experience higher job satisfaction and QWL (Brooks et al.,

2007). Nursing is a demanding profession, both physically and psychologically, which increases the risk of health issues, such as musculoskeletal pain and psychological distress among nurses (Han et al., 2015). Yet, nurses are expected to be well-informed about health and wellness, take preventive actions, and seek timely treatment when required. They are also seen as a role model and source of health information for the general public, particularly for patients admitted to hospital (Kannampallil et al., 2013).

Health-information seeking behaviors are important for nurses to maintain up to date with new advances in health and medical science and promote healthier lifestyles for themselves and others (Kannampallil et al., 2013). Health-information seeking behaviors refer to how an individual seeks information about diseases and health risks (Poortaghi et al., 2015). The results of a systematic review (Poortaghi et al., 2015) suggest that health information-seeking behaviors of nurses are associated with their health promotion and risk-reducing behaviors. These behaviors are influenced by multiple individual and environmental factors, such as gender, education, time, and access to resources (Poortaghi et al., 2015). Due to their background education, nurses are assumed to have high level of health information seeking behaviors (Williams and Crawford, 2016); however, evidence suggests that nurses' general health information is limited, especially those who work in specialty areas (Masters, 2015). This may negatively affect nurses' health and quality of life, including their perceived QWL. This study aimed to identify the predictors of QWL in nurses, particularly the impact of health information seeking behaviors on their QWL.

Methodology

Study design

This correlational study surveyed 239 nurses employed at a tertiary referral teaching hospital in North West of Iran, from June to July 2017. The inclusion criteria included being a registered nurse and having a minimum of two years of clinical work experience. We believed that this time frame would provide participants with adequate opportunities to experience their work environment. The sample size of 109 participants was estimated using G*Power Analysis version 3.1 to achieve a power level of 0.80, with a significance level of 0.05. To determine the effect size, the correlation between the health information seeking behaviors and the QWL was calculated based on a pilot study on 30 nurses ($r= 0.30$). Overall, 350 nurses were screened for eligibility, 295 found eligible for the study, and invited to the research, of whom 240 participants completed the study questionnaires. One questionnaire was excluded from analysis due to incomplete data.

Measurements

Quality of work-life of nurses was measured using a tool developed by Sirgy et al. (Sirgy et al., 2001). Data on demographic and work-related information and health-information seeking behaviors of the participants were collected using researcher-developed questionnaires.

The Quality of Work- Life Questionnaire

The QWL questionnaire by Sirgy et al. (2001) was developed based on two theories of need satisfaction and spillover. It consists of 16 items and seven dimensions of health and safety (3 items), economic and family (3 items), social (2 items), self-esteem (2 items), self-actualization (2 items), knowledge (2 items), and aesthetic needs (2 items). Responses to each item range from one (completely disagree) to five (completely agree). Total scores vary

between 16 and 80, with higher scores reflecting better QWL. The completion of the questionnaire takes about five minutes (Sirgy et al., 2001). The psychometric properties of this questionnaire have been tested in diverse contexts, with Cronbach's alphas ranging from 0.78 in the original validation study (Sirgy et al., 2001) to 0.86 in a recent research in Iran (Parsa et al., 2014). The Persian version of the questionnaire is available, and the questionnaire has been validated cross-culturally on Iranian population, with the reported Cronbach's alpha of 0.85 (Abdollahzade et al., 2016).

Health information seeking behaviors

To measure health information-seeking behaviors, a questionnaire was developed by adopting questions from previously available questionnaires (Anker et al., 2011). The existing questionnaires have been developed for patient populations; they were deemed inappropriate to be used for nurses. The researchers, therefore, developed a new questionnaire to assess the health information-seeking behaviors of nurses which included 23 items, with responses to each item ranging from one (a little) to four (very much). The sum of item scores ranged from 23 to 92, with higher scores indicating better health information-seeking behaviors. The face and content validity of the questionnaire was established by seeking feedback from ten faculty members and ten clinical nurses, with the calculated content validity index/average of 0.91. The test-retest reliability of the questionnaire was assessed using Pearson correlations on 20 questionnaires completed two weeks apart, with an intra-class correlation of 0.88. The internal reliability of the questionnaire was good, with Cronbach's alpha coefficient of 0.89.

Other potential predictors were identified through literature review, and included age, work experience, shift type, working in other hospitals, having another job, English language

proficiency, commonly-used source of health information, illness during the previous year, and the number of shifts per month. Information on these variables was collected using a researcher-developed questionnaire.

Data collection/procedure

The hard copies of the questionnaires were distributed to participants at the beginning of each working shift and collected at the end of the shift to provide the participants with privacy and sufficient time to complete the questionnaires.

The study obtained ethical approval from the Cardiovascular Research Center, Tabriz University of Medical Sciences (Code: IR.TBZMED.REC.1395.1221). After coordinating with hospital officials, the researcher introduced herself to eligible participants, explained the study's objectives, and invited them to the study. Those who were interested in participation signed the consent form. This was an anonymous survey, and participants were asked not to write their names or any identifying information on the questionnaires.

Data analysis

Data analysis was performed using SPSS Inc., Chicago, IL, USA, version 13. Potential predictors were selected through univariate analysis, and variables with $p < 0.20$ entered to the multiple linear regression model (Ranganathan et al., 2017). The predictor variables included both continuous and categorical variables. The assumptions of linear regression analysis were examined, including linearity, normal distribution, independence of error, and multicollinearity of potential predictor variables. A p -value ≤ 0.05 (two-tailed) was used to denote statistical significance. Missing data were excluded from the analysis.

Results

The study participants were mostly female (80.33%), married (79.08%), within the age range of 30-45 years (71.55%), and had a bachelor's degree in nursing (95.82%). About half (47.70%) had between 5 to 15 years of work experience; they worked an average 29.23 ± 6.29 shifts per month, and in rotating shifts (76.99%). It is noted that a typical morning or evening nursing shift in Iran takes 8 hours, and the night shift lasts 12 hours (Attarchi et al., 2014). Along with having a full time job in the participating hospital, 38.8% of participants worked also in another hospital, and 10.88% in a non-nursing job. Competency in English Language and the Internet searching skills were evaluated as 'moderate' by 52.30% and 70.71% of participants, respectively. For more than half of the participants (55.23%), the Internet was the commonly- used source of health information, and about half (48.95%) experienced an illness (acute or chronic) during the preceding year (48.95%). The main characteristics of the participants are depicted in Table 1.

The total scores for the QWL questionnaire ranged from 18-75, with a mean of 47.0 ± 8.93 . QWL scores, according to the demographic and work characteristics of the participants, are presented in Table 2. The results of the t-test analysis showed that QWL scores were significantly lower in nurses who also worked in another hospital ($p=0.03$), had a non-nursing job too ($p=0.00$), or experienced a chronic illness during the preceding year ($p=0.01$). The total scores for the health information-seeking behaviors questionnaire ranged from 36-86, with the mean of 59.57 ± 9.31 . These scores were significantly and positively correlated with QWL scores ($r= 0.21, p<0.00$). The number of shifts per month demonstrated a weak negative correlation with QWL scores ($r= -0.12, p<0.01$).

The results of the multiple linear regression analysis examining associations between the potential predictor variables and QWL scores are presented in Table 3. Ten potential variables were entered into the multiple linear regression analysis, of which health information-seeking behaviors ($p=0.00$), working in another hospital ($p=0.05$), and having a non-nursing job ($p=0.00$) were found to be the significant predictors of QWL. This model explained 28.68% of the total variance for QWL.

Discussion

The mean total scores of QWL in the current study was 47.0 ± 8.93 . Comparing and contrasting this finding with the available literature is challenging due to the heterogeneity of measures used in assessing the concept of QWL in nurses. In general, studies investigating QWL of nurses have yielded mixed results. While some nurses perceive their job as affirming and rewarding, work-related stressors such as communication breakdown with members of multidisciplinary teams, patients and families, work environment factors, such as heavy and uneven workloads and care-driven factors, such as demanding or disrespectful family members and unreasonable expectations of some patients negatively affect nurses' work experience (Giarelli et al., 2016). Studies that have assessed the QWL of Iranian nurses have also reported mixed results. A survey on 349 nurses employed at hospitals affiliated to Tehran University of Medical Sciences found that nurses, overall, experienced a poor QWL (Dargahi et al., 2007), while another similar study in Iran reported QWL of 61.4% of nurses at a moderate level. Dargahi et al.'s (2007) study also found that nurses who perceived their job as 'valuable' were more likely to experience higher QWL (Nayeri et al., 2011). This finding is supported by Sadat et al.'s (2017) study, which reported that 56.7% of Iranian intensive care unit nurses perceived a high QWL (Sadat et al., 2017).

Health information-seeking behaviors, working in another hospital, and having a non-nursing job were the significant predictors of QWL in the current study. These three variables together explained 28.68% of the total variance in QWL of nurses. The number of shifts per month and experiencing illness in the preceding year were also negatively associated with QWL scores. Although statistically significant, these associations were weak, and the effects of these factors on QWL of nurses disappeared in the regression analysis. Nurses who worked in another hospital or in a non-nursing job showed statistically significantly lower QWL.

These results indicate that factors that affect nurses' QWL are mostly institutional factors, and therefore, health care organizations and nursing managers may play an important role in improving the QWL of nurses. Having a second job in addition to working full time in the participating hospital may indicate that nurses experience financial constraints in Iran. Rafii et al. (2016) reported that the ratio of patient to nurse is high in Iran, and nurses are generally paid inadequately. Nurses also perceive that they are treated unfairly and disrespectfully by hospital managers (Rafii et al., 2016). In the current study, nurses reported working an average of 29 shifts per month. This finding indicates that the nurses missed most of their holidays and weekend. Given that nursing is a highly stressful job, an increased number of shifts per month can lead to nurses' worn-out and compromised patient safety (Kunaviktikul et al., 2015). Although having a second job would ease financial distress, increased working hours can reduce the QWL of nurses, as found in this study and other research (Hardjanti et al., 2017). Having a second job, particularly a non-nursing job is likely to add to the stress level of nurses and increase their workload resulting in reduced quality of work-life. Having a sufficient income along with a reasonable workload may positively influence job-related

experiences of nurses, leading to increased job satisfaction and reduced absenteeism (Parveen et al., 2017).

As emphasized by Thomassen et al. (2017), organizations must value and be committed to their workforce to promote job satisfaction and QWL of their employees as well as accomplishing organizational goals (Thomassen et al., 2017). Supportive work environments are needed to promote and retain the valuable nursing workforce. For example, there should be clear rules about minimum pay rates, maximum shifts per month, and nursing staff rostering (Schalk et al., 2010).

We also found that nurses' health information-seeking behaviors were a significant factor, positively affecting their QWL. Health information-seeking behaviors are considered a key strategy to cope with physical and mental health challenges (Chasiotis et al., 2020). For nurses, a high level of health information-seeking behaviors may help them gain information about their personal health issues as well as making safer and effective clinical decisions for their patients (Clarke et al., 2013). The findings of this study and other research (Hider et al., 2009) suggest that the health information-seeking behaviors of nurses should improve. We found that the Internet was the commonly used source of health information for more than half of the nurses. A study by Hider et al. (2009) failed to find a statistically significant difference between doctors and nurses in locating evidence, and both nurses and doctors searched health information from the Internet primarily for the purpose of patient care and professional development. However, nurses were less likely to consult search engines at least weekly (82.8% vs. 38.8%) or use library resources (62.9% vs. 16.5%) compared to medical and dental staff. Barriers to health information-seeking behaviors include personal, geographical, organizational, and economic factors as well as time limitation and training

(Poortaghi et al., 2015). Factors such as age, sex, income, computer literacy and access, workload, work experience, and workplace affect health information seeking behaviors of health professionals (Poortaghi et al., 2015).

As a statistically significantly predictor of quality of work-life, health information-seeking behaviors of nurses need greater attention. Future research should address barriers to health information-seeking behaviors of nurses. In developed countries, nursing curriculums and standards of practice for nurses emphasize on evidence-based practice. Accordingly, nursing students learn about database search techniques to locate health information and use them in their clinical decision makings (Leung et al., 2016, Sin and Bliquez, 2017). The importance of health information-seeking behaviors skills of health professionals on the quality of patient care is well known, and health care organizations should work on the identified barriers to empower nurses to make safe and effective decisions in their workplace, a skill that should hopefully reduce work-related stress of nurses and contribute to their quality of work life. Yet, whether or not interventions that target health information-seeking behaviors of nurses can improve their perceived QWL needs further research.

Strengths and limitations

This study was conducted in a single hospital, but it was a large tertiary hospital, and nurses were randomly selected for the study. These approaches can reduce selection bias and increase the generalizability of the findings. The study may not have identified and included all potential factors that affect the QWL of nurses, such as perceived stress or opportunities for career development. Future research should focus on identifying and testing a more comprehensive list of potential independent variables to better understand factors that influence nurses' QWL.

Conclusion

As an important factor affecting job satisfaction and nurse retention, nurses' QWL deserves further attention. Working in another hospital, having a non-nursing job, and low levels of health information seeking behaviors were found to be statistically significant predictors of low QWL among nurses in this study. Improving work standards for nurses, such as an adequate wage and reducing the maximum weekly work hours may prevent nurses from working extra hours or in different jobs. Also, promoting the health information-seeking behaviors of nurses may help improve their quality of work-life by maintaining a better work-life balance and acquiring knowledge and skills that can help them effectively manage work and life commitments.

Key Points

- The nurses in this study reported, on average, a moderate level of QWL.
- Health information-seeking behaviors, working in another hospital, and having a non-nursing job were the statistically significant predictors of nurses' QWL.
- Health care organizations and nursing managers can play a role in improving the QWL of nurses through improving the working standards for nurses.
- Nurses should be encouraged and supported to enhance their health information-seeking behaviors to help them effectively manage their work and life commitments.

Ethical Permissions:

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