

Quality of Work Life and Quality of Nursing Care

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Abstract: The aim of this study is to examine the influence of quality of work life of nurses on their perceived service quality in Malaysian public hospitals. A total of 292 nurses working in the obstetrics and gynecology and pediatric departments in four public hospitals participated in this study. The confirmatory factor analysis was used to test for factorial validity of the constructs and the structural equation modeling was used to test the goodness of fit of the hypothesized model. The findings of the study supported the hypothesized idea that there is a significant relationship between quality of work life and nursing service quality. The results suggest that quality of work life is able to affect employee performance in terms of delivering quality service. The significant positive relationship between quality of work life and service quality suggests that employees with high quality of work life are able to deliver high quality of service. Therefore, this study concludes that the management of public healthcare organizations need to concentrate on employee quality of work life as that can enhance and facilitate the delivery of quality service to patients.

Key words: Quality of work life, service quality, nurse, deliver, management

INTRODUCTION

The importance of quality nursing care is unquestionable in that quality care is the right of all patients and responsibility of all nurses (Donabedian, 2005). It is also important to note that the performance of nursing staff is strongly associated with proper staffing and stability of the nursing workforce (Chen *et al.*, 2008). Nonetheless, nursing shortage has become a major problem in the health-care setting throughout the world. As a result, this problem has become a major symptom of high turnover rate in the health-care industry (Laschinger *et al.*, 2006). In addition, an issue of concern is that a growing number of research work have established a relationship between inadequate hospital nurse-staffing and increased risk of adverse patient outcomes which includes mortality. The implications of prolonged shortages include reduction in the quality of patient care, increasing operating and labor costs and decreasing efficiency and effectiveness of care provided (Buerhaus *et al.*, 2007). Nevertheless, hospitals with favorable nurse-to-patient ratios incur lower mortality and failure in rescue rates in relation to surgical patients and lower job dissatisfaction and burnout among nurses

(Aiken *et al.*, 2002; Rafferty *et al.*, 2007; Sheward *et al.*, 2005). Another pressing issue about prolonged nursing shortage is that it results in harmful impact on the quality of working life of those who remain in the staff-reduced health-care system (Gordon, 2005). In other words, the workload demands of the nurses are intensified and many are feeling pressured to work longer hours not be able to take leave as entitled (Schofield and Earnest, 2006). In justification, according to the International Council of Nurses, high work demand and poor working conditions are factors hindering recruitment; also several other studies cite these as factors influencing nurses' decision to leave the profession (Gordon, 2005; Kingma, 2006; Tremblay *et al.*, 2008).

The concept of internal marketing in the context of the health sector suggests the following. The best way to satisfy patients is by viewing employees as internal customers and by understanding and meeting employees' needs; wants; expectations and concerns, their level of satisfaction will increase. In turn, this will lead to better quality of care and higher patient satisfaction (O'Neill, 2005; Bitner, 1990; Testa *et al.*, 1998). Employees whose needs are not fulfilled by an organisation always demonstrate their dissatisfaction by performing below

their optimum ability. In justification, previous studies have found a significant and positive relationship between job satisfaction and service quality (Schneider and Bowen, 1993; Hartline and Ferrell, 1996; Snipes *et al.*, 2005). Previous research also suggests that most nurses work under very stressful conditions. As this involves stress, there is a need to analyze and understand how nurses are experiencing with their work load. Moreover, work-related stress has been associated with Quality of Work Life (QWL) and psychological well-being (Van Laar *et al.*, 2007). In support of this, the literature on QWL and job performance suggests that these two factors may be linked.

Specifically, one way to improve business performance is by improving the QWL for the employees (Lau and May, 1998; Lau, 2000). In justification, in health-care organizations, QWL factors have recently been recognized as significantly influencing the performance of staff members (Knox and Irving, 1997) and are considered as critical factors in achieving a higher level of quality of care delivery (Hsu and Kernohan, 2006). In support of this, several studies have suggested that improved working environments of nurses are associated with increased ratings of care quality and patient satisfaction (Rocheftor and Clarke, 2010; Pak *et al.*, 2008). On the contrary, an unstable working environment is linked with negative patients' outcomes that includes nursing tasks being delayed; patients' falls and medication errors in both medical and surgical departments (Aiken *et al.*, 2013).

In Malaysia, the shortage of nurses is critically happening in government hospitals (Manaf, 2005; Barnett *et al.*, 2010). The World Health Organization (WHO) recommends an ideal nurse-to-patient ratio of 1:200 while the Malaysian nurse-to-patient ratio was way above that with 1:599 in 2007. With WHO's benchmark, approximately, 174,000 nurses need to be trained by 2020 to meet the nurse-to-patient ratio of 1:200 (Barnett *et al.*, 2010). This justifies that there is prolonged shortage of nurses in Malaysia.

The above situation will pose a threat to the long-term stability of the nurses' workforce eventually impacting the quality of service delivery by nurses in the hospitals. Specifically, uneven quality of care and long waiting times have been the common consequences of nurse shortage reported in the media. Moreover, the number of complaints are on the rise regarding the poor quality of services at the government hospitals. Majority of the complaints are related to the lack of interpersonal skills (such as being polite, friendly, caring and warm) between nurses and patients (Yusoff, 2002). Therefore, in

a situation where the industry is facing a shortage of trained nurses, it is important to ensure that the existing work force is able to deliver high-quality service. This goes to say that improving the quality of work environment may increase nurse service quality.

Literature review

Health care service quality: The health-care industry is a specific representative of the service industry that considers quality as having fundamental value in medical care. Managing quality in the health-care setting is a challenging task because of its complexity. One of the reasons is that we are dealing with human health; hence responsibility for their lives is critically important. It is claimed that the cost of poor quality is significantly higher within the healthcare sector (Natarajan, 2006). This is due to the complexity of health-care service quality and the sophisticated nature of the health-care industry. The complexity and sophistication are explained by the existence of various patients with their own perceptions of health-care service quality and patients' involvement in the curing process.

The latter has an influence on care-quality outcome (Natarajan, 2006). Specifically, the intangibility of the service offering and simultaneous production and consumption inseparable of service have made it difficult for the consumer to judge service quality in the health care sector. Furthermore, health-care services are considered as a 'credence' good, an offering that consumers will never be able to evaluate due to their lack of medical knowledge (Bloom and Reve, 1990). Therefore, patients will look for cues that are scented of treatment quality such as office aesthetics, staff appearance, relationship between patients and hospital staff and punctuality of appointment. These service-quality substitute indicators can be used by patients to assess service-provider effectiveness (Ramsaran-Fowdar, 2008). Furthermore, healthcare services have a unique position with other services due risky nature and the highly involving of services as well as the general lack of expertise possessed by customers (Taner and Antony, 2006). One distinguishing feature of customers of health care as compared to other services is that customers of health care enter the service interaction with the provider of care in a state of either physical or psychological discomfort or both (Duggirala *et al.*, 2008).

Quality of work life: Likewise in terms of quality of life research, there is neither a single agreed definition of QWL nor consensus of what constitutes a good job (Benham *et al.*, 2006). However, management scholars and

industrial psychologists agree in general that QWL is a construct that deals with the well-being of the employees; hence QWL is a much broader concept than job satisfaction (Efraty and Sirgy, 1990; Sirgy *et al.*, 2001). In health-care organizations, QWL factors have recently been recognized to significantly influence the performance of staff members. Ellis and Pompili used both the focus group and questionnaire method to examine QWL among nurses.

The findings showed that nurses consider factors such as home-work interface, training opportunities, work stress, working conditions and career development as important issues in relation to QWL. For instance, from a focus group discussion, Hsu and Kernohan (2006) identified 56 nurses' quality of working-life categories that fit into six dimensions: socio-economic relevance; demography; organizational aspects; work aspects; human relation aspects and self-actualization. The focus group discussion showed that QWL for nurses refers to keeping a good balance between work and personal life. In other words, their free time should not be affected by their work. Overall QWL for nurses is a complex entity influenced by and interacting with many aspects of work and personal life. Vagharseyyedin *et al.* (2011) conducted a systematic review of the literature to determine the definition and predictors of the nurses' QWL.

The researchers examined 23 studies that examined the nursing QWL. As a result of the examination, six themes were identified as major predictors of the nurses' QWL. These include leadership and management style/decision making latitude, work shifts, salary and fringe benefits, relationship with colleagues, demographic characteristics and workload/job strain. In terms of QWL definition, this review of literature found that many researchers consider QWL as a 'subjective phenomenon' that is influenced by personal feelings and perceptions. In a later study, Vagharseyyedin *et al.* (2011) carried out a qualitative study to describe the experiences of Iranian nurses concerning their QWL.

A purposive sampling involving 14 nurses was done for two university hospitals. The data were collected using unstructured interviews and analyzed by using qualitative content analysis. The findings indicated that the respondents determined their QWL by assessing the favorability of their working conditions, the level of fulfillment of their personal needs and the impact of the working conditions on their private life and social life. Additionally, three perspectives have been attached to the QWL: the personal perspective, sociocultural perspective and organizational-professional perspective.

MATERIALS AND METHODS

The population of this study consists of registered nurses working at obstetrics and gynecology and pediatric departments in state-level public hospitals. Referring to the Krejcie and Morgan for appropriate sample-size table (Sekaran, 1992), a sample size of 357 was considered large enough. Specifically for Structural Equation Modelling (SEM), Hoelter in Hoe (2008) proposed a 'critical sample size' of 200. In other words as a rule of thumb, any number that is above 200 is assumed to provide sufficient statistical power for data analysis.

The selection of respondents in this study was done using two sampling techniques, namely area sampling and random sampling. In using area sampling technique, peninsular Malaysia was divided into four different regions: Northern, Southern, Western and Eastern. Meanwhile, in using random sampling technique, one hospital was selected from each region and four state level hospitals were selected. The selected hospitals were located in Melaka, Pulau Pinang, Johor and Pahang. A total 200 questionnaires were distributed to each selected hospital. A total of 584 questionnaires were returned, representing a 73% response rate. In the second step, a sampling frame was created by using the returned questionnaires.

By using the random sampling technique, the sample of this study was extracted by employing the "random sample of cases" procedure from the Statistical Package for Social Science (SPSS) Software. For this purpose, a total of 316 nurses were selected for the study and after data-cleaning procedure, a total of 292 respondents made up the final sample for subsequent data analysis. A survey instrument developed by Brooks *et al.* (2007) was used in this study to measure Nurses' Quality of Work Life (NQWL). The NQWL consists of 42 items which measure four dimensions of NQWL: "work life-home life", work design, work context and work world. The 22 items of modified version of SERVQUAL developed by Lee and Yom (2007) were used in this study to measure nursing SQ in the public hospital. Lee and Yom (2007) have modified the survey instrument to make it suitable to involve inpatient nursing services. The instrument was chosen due to the fact that the dimensions of SERVQUAL are the most frequently used variables in measuring SQ in the health care sector as reported in past studies.

RESULTS AND DISCUSSION

The findings of this study shows that a majority of the respondents were female (99%). This is not strange as

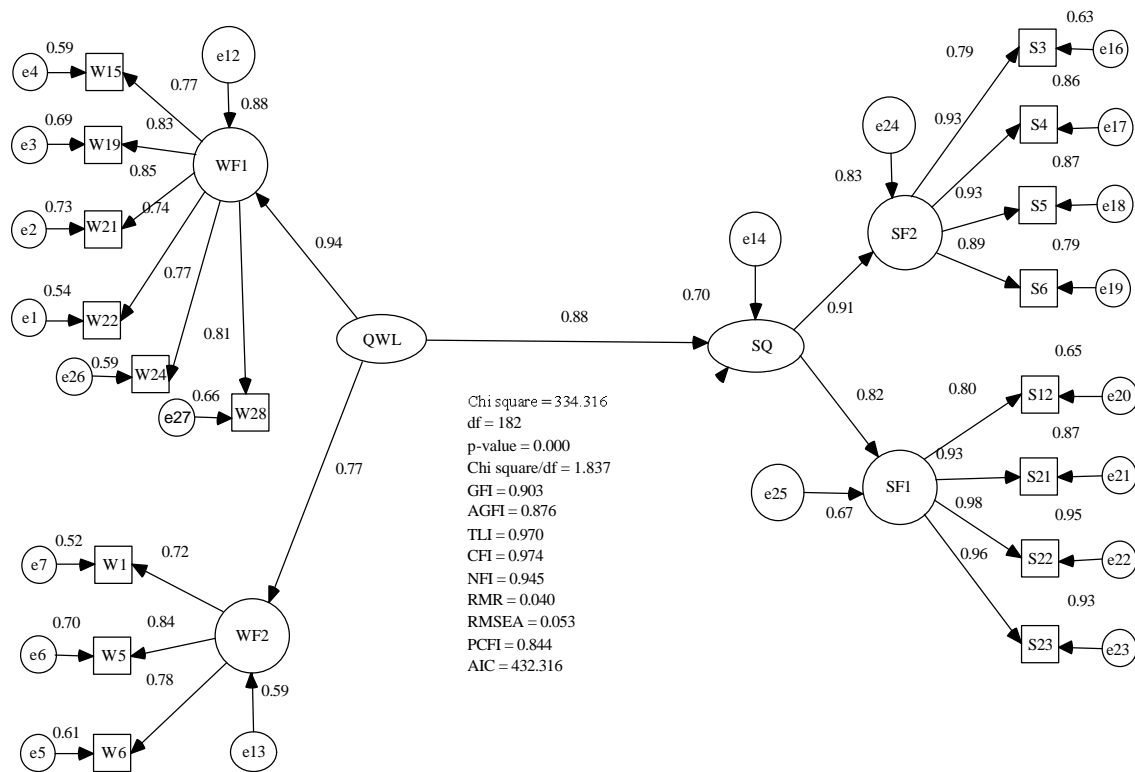


Fig. 1: Structural model of Quality of Work Life (QWL) and Service Quality (SQ)

nursing is commonly a female-dominated profession. Specifically, a majority of the respondents were Malays (91%); followed by Indians (4.4%) and Chinese (4.1%). Most of them were married (71%) and in the age bracket of 25 and 34 years old (57%). In terms of academic, most of them had Diploma in Nursing (78%). Next, almost 60% of the respondents had served the government hospitals for <10 years and only 6.5% of them had worked for a period of 21-25 years. In terms of job position, 76% had worked as 'Jururawat' while 16.3% were "Jururawat Masyarakat". In terms of number of children, approximately, 90% of the respondents indicated that they had children aged below 12 years old, ranging from 1-4 years old.

The Exploratory Factor Analysis (EFA) was conducted on the data set. The aim of the EFA analysis is to reduce the number of items in the questionnaire to a reasonable number while still retaining the scale reliability and underlying factor structure. The result of Bartlett's test of sphericity was significant and the values of KMO measure of sampling adequacy were 0.92 and 0.93 for QWL and SQ, respectively. QWL components loaded into two underlying factors named as communication and opportunities for career growth and work-family life balance. SQ components also loaded into two factors named as empathy and reliability. The result of reliability

test produced an alpha value of 0.91 for QWL and 0.95 for SQ. To validate the underlying factor construct identified from EFA, a Confirmatory Factor Analysis (CFA) was conducted as suggested by Costello and Osborne (2005). The CFA determines the overall fitness of the measurement model of the research before further analysis of the structural model can be conducted. Several multiple of goodness-of-fit indices were used to assess the goodness of fit of the measurement model. The results of CFA for QWL and SQ are presented in Table 1. As RMSEA of SQ was more than the acceptable threshold of ≤ 0.08 as suggested by Hair *et al.* (2010) and as all goodness of fit indices for SQ measurement model achieved the acceptable threshold, it can be suggested that the proposed model achieved the satisfactory fit. Furthermore, Byrne (2010) recommended RMSEA values between 0.08 and 0.10 to represent a mediocre fit.

Research model: Figure 1 illustrates the structural model of QWL and SQ. Some goodness-of-fit indices were used to assess the goodness of fit of the structural model. Table 2 summarizes the results of this analysis and the suggested values as suggested by Hair *et al.* (2010). Based on the results obtained, it is evident that the hypothesized model fitted the data collected adequately well so that, further analysis can be done. The path

Table 1: Goodness-of-fit indices for QWL and SQ

Goodness-of-fit indices	Acceptable threshold level	(QWL)	(SQ)
χ^2	Low χ^2 relative to degree of freedom with an insignificant ($p>0.05$)	53.343	65.541
χ^2/df	$\leq 3 \leq 5$	2.052	3.450
RMSEA	≤ 0.08	0.060	0.091
GFI	≥ 0.90	0.963	0.950
RMR	≤ 0.08	0.033	0.028
NFI	≥ 0.90	0.967	0.977
CFI	≥ 0.90	0.982	0.983
TLI	≥ 0.90	0.976	0.975
AGFI	≥ 0.80	0.935	0.905

Table 2: Goodness-of-fit indices for structural model

Goodness-of-fit indices	Acceptable threshold level	Model
χ^2	Low χ^2 relative to degree of freedom with an insignificant ($p>0.05$)	334.316
χ^2/df	≤ 3	1.837
RMSEA	≤ 0.08	0.053
GFI	≥ 0.90	0.903
RMR	≤ 0.08	0.040
NFI	≥ 0.90	0.945
CFI	≥ 0.90	0.974
TLI	≥ 0.90	0.970
AGFI	≥ 0.80	0.876

Table 3: Regression weights

Construct	Path	Construct	Est.	SE	CR	p-value
SQ	<---	QWL	0.823	0.122	6.750	***

Table 4: Standardised regression weights

Construct	Path	Construct	Est.
SQ	<---	QWL	0.877

coefficients of the model are illustrated in Table 3. Path coefficients were positive and had a significant ($p<0.05$). Table 4 indicates the standardized regression weights (β) that illustrate the measures of strength and magnitude of the association between the variables examined in this study. The results indicated that there were positive significant relationships between QWL and SQ. Hence, the findings of this study are QWL has a significant and positive relationship with nursing SQ ($\beta = 0.877$, $p = 0.000<0.001$). Therefore, it can be concluded that QWL has a positive effect on nursing service. This means that for every increase in nurses' QWL, there is also a corresponding increase in nursing SQ.

Relationship between Quality of Work Life (QWL) and Service Quality (SQ): The significant positive relationships between QWL and SQ suggest that nurses with high QWL would deliver high quality of service. In other words, paying attention to employee QWL would result in their delivering quality service. The finding of this study indicates that nurses who achieve high on QWL are those who perceive that their work environment provides career advancement opportunities, adequate supervision and recognition by their supervisor for their achievement. In addition, they are also identified as able

to communicate well with their supervisor and other health-care employees. Furthermore, they are able to participate in decision making process with their supervisors. Subsequently, nurses who are happy with their QWL will be able to balance work needs with family needs.

For example, they do not have problems in arranging day care when their children are sick and they also are able to organize day care for their elderly parents. In addition, the findings of the study indicate that nurses who are able to deliver high nursing SQ are providing empathy services such as respect patients' feeling, listen to patients' complaints, able to induce emotional comfort and will help patients willingly whenever help is needed. Additionally, they are also portrayed as providing reliable services such as giving precise and skillful nursing services, providing nursing services in well-equipped facilities and transferring good feeling to the patient because of appearance.

These results are consistent with past studies (Lau and May, 1998; Lau, 2000; Beh and Rose, 2007; Jofreh *et al.*, 2012; Shaffril *et al.*, 2010) in that QWL has a significant and positive effect on employee performance. In addition, research in healthcare sector also suggests that QWL has a significant and positive effect on employee performance that is delivering health-care services in health-care organizations (Nayeri *et al.*, 2011; Rastegari *et al.*, 2011; Brooks *et al.*, 2007). The result of this study implies that nurses with higher QWL will deliver high nursing SQ. This view is also consistent with the findings by Knox and Irving (1997), Hsu and Kernohan (2006). These researchers suggested that QWL significantly influences the performance of employees and is a critical factor in achieving a higher level of quality for care delivery.

Nurses with high QWL feel that they are able to communicate well with their supervisors and other staff in the work place. They are also able to participate in decision making with their supervisors and are recognized for their accomplishments. In addition, they also perceive that their work place provides them with career advancement opportunities. Furthermore, nurses who perceive they have high QWL are those who will balance work with family needs. Next, nurses with high QWL are assumed to be delivering high quality service. For example, they are able to provide empathy services such as respect patients' feelings; able to induce emotional comfort; listen to patients' complaints and willingly help patients. They are also able to provide reliable services such as providing skillful and precise nursing services and providing nursing service in well-equipped facilities.

CONCLUSION

This results of this study shows several practical implications for the management of hospitals. First, the results of this study are able to provide some guidelines for the hospital management in formulating strategies that will improve their nurses' QWL such as addressing their needs for, "communication and opportunities for career growth" and "work-family life balance".

The need for "communication and opportunities for career growth" can be implemented by providing a favorable work environment that allows nurses to participate in decision making, free flow of vertical and horizontal communication, opportunities for career advancement and creating feelings of "work family" belonging among staff.

The data from this study revealed that a majority of the respondents were married (71%). Married nurses have greater family responsibilities than unmarried nurses. Therefore married nurses are expected to consider attaining work-family life balance as very important.

Tausig and Fenwick (2001) suggested that "voluntary alternate scheduling" is able to lessen work family life time imbalance. Therefore, the hospital management perhaps can consider executing "voluntary alternate scheduling", whereby nurses have some control over the hours or days worked instead of involuntary arrangement where nurses have no choice as to the time or days worked.

Next, the hospital management should treat nurses as "valuable assets" to the organization and permit them to participate in managing their work and making decisions. Programs that balance nurses' work with family needs are assumed to improve the work life of nurses.

This can result in they delivering high quality service. As applied to employees in other government agencies, work-family life balance among nurses can be enhanced by the availability of on-site childcare. Second, the results imply important messages to hospital managers and nurses that is be helpful; induce emotional comfort; listen to patients; be reliable; provide skillful and precise services and most of all, respect patients' feelings.

This finding indicates that hospital managers and nurses need to focus their attention on the functional aspects of nursing service quality that is 'how it is done'. Therefore, we suggest that to enhance nursing service quality in Malaysia, managers and nurses of Malaysian hospitals need to concentrate more on the functional aspects, embedding in them the empathy and reliability dimensions.

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