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QUALITY OF LIFE AMONG NURSES IN PRIMARY HEALTHCARE CLINICS IN THE HEALTH DISTRICT OF PETALING, SELANGOR

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ABSTRACT

Background: Quality of life (QOL) can influence the productivity of organization employees. In healthcare, commitment towards patient care depends greatly on the QOL of nurses. This study aims to determine QOL among nurses and its associated factors.

Materials and Methods: A total of 322 nurses in the government healthcare clinics under the health district of Petaling participated in this cross-sectional study. The validated Malay version of WHOQOL-BREF questionnaire was used. Scores of the QOL domains were analyzed with SPSS 20.0 using descriptive statistics, t-test and ANOVA.

Result: All 322 respondents were females, with majority being Malays (87.6%) and under 40 years old (85.4%). More than half have worked for less than 10 years. Majority (86.0%) are attached to their current clinic for less than 10 years. About 1 in 10 reported to have chronic diseases. The highest and lowest mean score of domains were social relationship (Mean=71.3) and environmental (Mean= 63.7) respectively. Nurses who are older, non-Chinese, having more children, with longer working experience, and being in supervisory positions reported a better QOL. Significant association were observed between higher QOL for psychological (p=0.044) and environmental (p=0.015) domains with service years in current clinic, whereas presence of chronic diseases recorded a significant association with lower QOL in the physical (p=0.045) and overall (p=0.035) QOL domains.

Conclusion: This study provides vital impetus for policy makers in terms of optimizing work placement and prevention of chronic disease among staff to improve QOL of nurses. This will safeguard patient care and enhance organization performance.

Keywords: Nurse, healthcare staff, quality of life, primary healthcare clinic

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1.0 Introduction

It is widely acknowledged that nurses have a hectic workload and often struggle to maintain a good quality of life (QOL) for their personal and professional lives. They often face various problems at workplace such as shortage of staff, long working hours, high patient burden besides needing to meet other continuous requirements in professional education and workplace management. These issues may impact on the quality of service, and in turn compromise the quality of patient care. As a result, it is important to assess the QOL of nurses.

The World Health Organization (WHO) defines QOL as 'an individual's perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns', involving physical, psychological, independence level, social relationships, environment and spiritual pattern domains (World Health Organization Quality of Life Assessment, 1996). Many instruments have been constructed to measure the QOL of different populations. The commonly used instruments are generic in nature and evaluate several aspects of the impact caused by a health condition, such as functional capacity, pain and general health, for example, Medical Outcomes Studies 36-item Short- Form (MOS SF-36), EuroQol (EQ-5D) and WHOQOL-100.

The WHOQOL-100 questionnaire is one of the most widely used assessment instruments for cross-cultural comparisons of QOL. It has been translated in many languages (World Health Organization, 1998). Following its wide popularity, a condensed version of WHO QOL-BREF questionnaire was developed in the interest of time and brevity. It correlated at 0.89 or above with relevant domain scores of the WHOQOL-100. WHOQOL-BREF domain scores also had good validity (discriminant and content) and reliability (internal consistency and test-retest) (Skevington, Lotfy, & O'Connell, 2004).

QOL can influence the productivity of employees in any organizations. In healthcare, commitment towards patient care depends greatly on the QOL of staff. Healthcare staff provides higher quality services for patients when they are in good health and have good QOL themselves. There has been an increasing trend of complaints aimed at the government health facilities for poor quality of services, such as unfriendly treatment by medical staff and errors in diagnoses and treatment that caused unnecessary harm.

Nurses make up the biggest proportion of staff at most healthcare facilities. Studies on nurses' job satisfaction and intention to leave among nurses in Malaysia has been researched upon (Atefi, Abdullah, & Wong, 2016). However, studies about nurses' QOL is under researched locally. Commitment towards patient care by nurses at the primary gatekeeping level of government primary health clinics depends greatly on the QOL of nurses. Literature on QOL of nurses in primary health clinics are scarce. The health district of Petaling (PKD Petaling) has the highest density of population among all the districts in the state of Selangor. Therefore, the workload and patient burden is also considered to be one of the heaviest. Before intervention strategies can be implemented to improve the working condition of the nurses, a baseline level of their QOL would be crucial. This study aims to evaluate QOL among nurses in various government health clinics in PKD Petaling and to determine the factors associated with the QOL of nurses.

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2.0 Materials and Methods

This is a cross sectional study conducted in PKD Petaling from August 1st 2017 to December 31st 2017. Petaling covers an area of 2.6 million population. It is the district with the highest density and population growth among all the districts in the state of Selangor. It encompasses 3 city councils (Subang Jaya, Petaling Jaya dan Shah Alam). There are 10 health clinics (Klinik Kesihatan), 3 rural health clinics (Klinik Desa) and 12 community clinics (Klinik 1 Malaysia) under PKD Petaling. Petaling also borders with other districts; namely Gombak, Sepang, Klang, Kuala Lumpur and Putrajaya. Therefore, it is an area with constant population mobility and thus high patient load at the clinics.

This study employed universal sampling method. All 322 registered nurses in PKD Petaling who have worked in current workplace for more than 3 months were included. Those on long term sick leave/ study leave or maternity leave were excluded. Self-administered questionnaire was distributed to all the nurses with study purpose and detailed instructions stated clearly on the front page. All participants were informed that their responses would remain confidential.

In this study, the validated Malay version of WHOQOL-BREF questionnaire was used (Hasanah, Naing, & Rahman, 2003). The WHOQOL-BREF is the abbreviated version of the WHOQOL-100 developed by the World Health Organization. It is able to recognize individual perception and can assess QOL in different groups and situations, regardless of education level. It can assess individual's perceptions of QOL in the context of their culture, value systems, personal goals, standards and concerns within short application time.

The WHOQOL-BREF questionnaire consists of 26 items, 2 of which were items on overall QOL, and the remaining 24 items being categorized into 4 domains, namely:

i. Physical (physical pain and discomfort, medication/treatment dependence, energy and fatigue, mobility, sleep and rest, daily life activities and ability to work)-7 items
ii. Psychological (positive and negative feelings, spirituality/ personal beliefs, learning/ memory/ concentration, acceptance of body images and looks and self-esteem)-6 items
iii. Social (personal relationship, sexual activity and assistance/ social support)-3 items
iv.Environmental (physical safety, physical environment, financial resources, new information/ skills, leisure, home environment, health care and transportation)-8 items

All these questions are formulated for responses based on a 5-point Likert scales, including intensity ("not at all" to "extremely"), ability ("not at all" to "completely"), frequency ("never" to "always"), and evaluation ("very dissatisfied" to "very satisfied"; "very poor" to "very good"). Raw domain scores were transformed to a 4-20 score according to guidelines (World Health Organization Division of Mental Health, 1996). The mean score of items within each domain is used to calculate the domain score. In the last step, the scores were transformed linearly into a scale of 0-100 and expressed in mean score, with higher means suggesting a better perception of QOL (Power, Harper, & Bullinger, 1999).

The dependent variables were the QOL scores in the 4 domains of the WHOQOL-BREF questionnaire. Independent variables in the study are categorical variables. They included sociodemographic characteristics, work-related information and self-reported health conditions.

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The data collected were entered into a computer using SPSS version 21 for data cleaning and analysis. Descriptive analyses were performed to explore the distribution pattern of each variable and of outliers. The frequencies, percentages, ranges, means and standard deviations (SD) of each variable were also calculated.

Transformed sores was used for statistical analyses in 4 domains. The scores of the different QOL domains were computed and the score means of the domains were compared with paired t-test. To determine any association between baseline characteristics and QOL, independent t-test was performed. Variables that showed $p<0.25$ in the univariate analysis were inserted into the multiple linear regression model to identify the predictors of high score of QOL in each domain. The level of statistical significance was set at $p<0.05$ for all analyses.

3.0 Result

3.1 Sociodemographic Characteristics of Respondents

Demographic data and professional characteristics are outlined in Table 3.1. All 322 respondents were female nurses. Approximately 4 out of 5 (87.6%) were Malays and under 40 years old (85.4%). Majority of the nurses are married and have children. In terms of education level, 68.9% hold at least a diploma or degree. Out of the total respondents, 27 or 8.4% are nursing sisters or matrons in supervisory position. Slightly less than half (44.4%) of the nurses have worked for more than 10 years in MOH, however majority of them (86.0%) have been at their current post for less than 10 years. About 1 in 10 reported to have chronic diseases, with diabetes and hypertension being listed as the commonest chronic diseases.

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Table 3.1. Distribution of sociodemographic characteristics

	N	%
AGE		
21-40	275	85.4
41-60	47	14.6
RACE		
Malay	282	87.6
Chinese	4	1.2
Indian	14	4.3
Others	22	6.8
MARITAL STATUS		
Single/Divorced/Widowed	68	21.1
Married	254	78.9
NUMBER OF CHILDREN		
0	97	30.1
1 to 3	187	58.1
4 and above	38	11.8
MONTHLY INCOME		
<RM 2000	20	6.2
>RM 2000	302	93.8
WORKPLACE		
PKD	8	2.5
KK	265	82.3
KD/K1M	49	15.2
EDUCATION LEVEL		
Certificate	100	31.1
Diploma/ Degree	222	68.9
POSITION		
Matron/Sister	27	8.4
SN/JM	295	91.6
WORKING EXPERIENCE IN KKM		
<10 years	179	55.6
10 years and above	43	44.4
WORKING EXPERIENCE IN CURRENT POST		
<10 years	277	86.0
10 years and above	45	14.0
CHRONIC DISEASE		
No	283	87.9
Yes	39	12.1

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3.2 Scores of QOL Domains

Figure 3.1 shows the mean score of each QOL domain according to WHOQOL-BREF. The overall QOL scores for the 322 respondents was 72.0. Among the 4 main domains, social relationship domain had the highest mean score (Mean=71.3) while the lowest mean score was from the environmental domain (Mean= 63.7). Lowest mean score for environmental domain indicated low satisfaction among respondents with safety, financial resources, living and transport arrangement.

As for each individual question, the highest mean was obtained by the question on *to what extent do you feel your life to be meaningful (3.97)* and *how satisfied are you with your personal relationship (3.92);* the lowest mean score was related to the questions *How often do you have negative feelings such as blue mood, despair, anxiety, depression (2.39)* and *How much do you need any medical treatment to function in your daily life (2.3).*

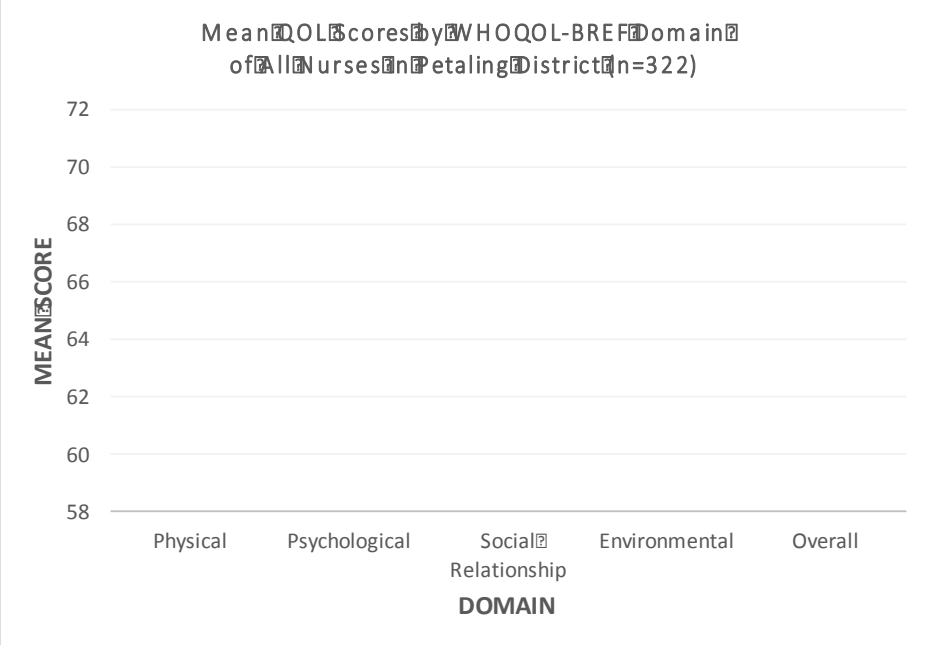

Figure 3.1. Mean QOL scores by domains among all respondents.

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3.3 Association between sociodemographic characteristics and QOL scores

Initial comparison showed that nurses who are older, non-Chinese, having more children reported higher QOL scores for all domains. Those who have longer working experience and are in supervisory positions also had higher QOL scores.

However, on Chi square testing, significant association were only observed for longer working experience in current post with higher QOL in the psychological (p=0.044) and environmental (p=0.015) domains. Figure 3.2 shows the comparison of the mean scores between those with <10 years or 10 years and above working experience in current post. Senior staff recorded mean scores of 75.1% for psychological domain, compared to 69.0% of junior staff. Junior staff who has worked for less than 10 years also reported significantly lower mean QOL score for environmental domain.

Similarly, significant association was detected between the presence of chronic diseases with lower QOL in the physical (p=0.045) and overall (p=0.035) domains (Figure 3). Nurses with chronic illness scored only 60.3% on the physical domain, as compared to 66.8% for those without chronic illness. Overall QOL score was also significantly lower at 65.2% for nurses with chronic illness (Figure 3.3).

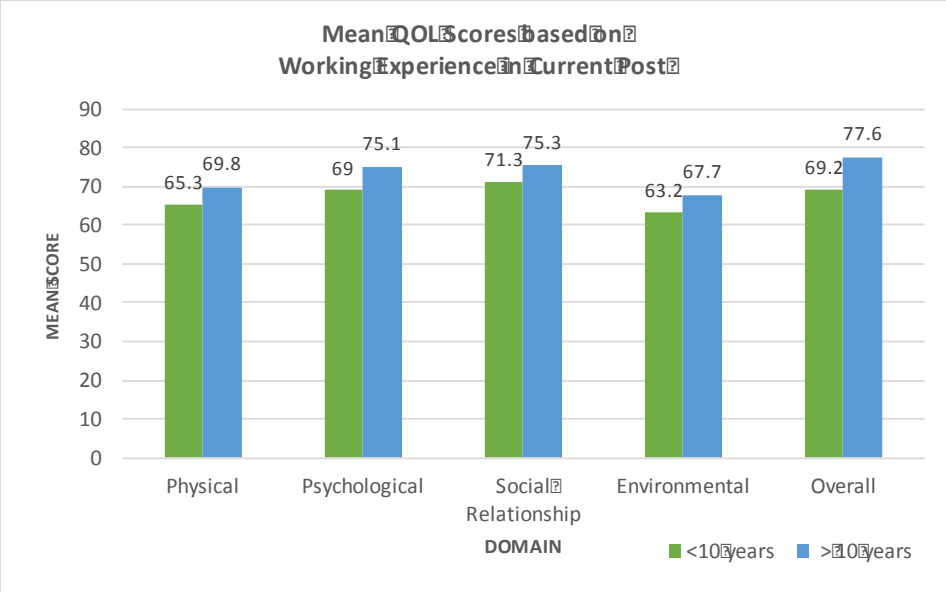

Figure 3.2. Mean QOL Scores Based on Working Experience in Current Post

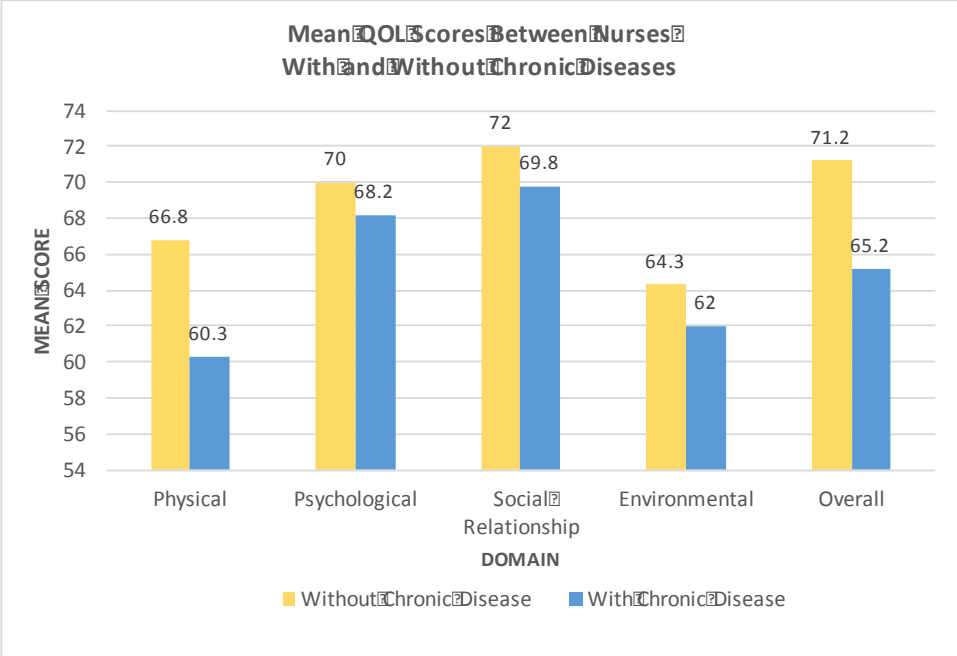

Figure 3.3. Mean QOL Scores between Nurses with and Without Chronic Diseases

3.4 Predictors of High QOL scores

Multiple linear regression was conducted to determine predictors of high mean QOL scores for each domain (Table 3.2). Variables that showed $p<0.25$ in the univariate analysis were inserted into the multiple linear regression model. The results show that longer service year in Ministry of Health did not lead to any difference in terms of QOL, however, longer working period in current post led to increased QOL in the domain of psychological, environmental and overall QOL. Patients with chronic diseases recorded negative regression weights for the mean QOL of physical domain and overall QOL.

Table 3.2. Predictors in the Linear Regression Analysis for Mean Scores of QOL

QOL Domains	Variables	B	SE	Beta	t	p-value
Domain 1 Physical	With Chronic Disease	-5.667	2.685	-0.123	-2.111	0.036
Domain 2 Psychological	>10 years in Current Post	5.335	2.261	0.137	2.359	0.019
Domain 3 Social	Workplace	4.269	2.114	0.125	2.02	0.044
Domain 4 Environmental	>10 years in Current Post	6.401	2.367	0.155	2.705	0.007
Domain 5 Overall	Chronic Disease	-6.876	2.649	-0.158	-2.595	0.01
	> 10 years in Current Post	5.624	2.649	0.129	2.123	0.035

4.0 Discussion

The QOL of healthcare staff depends on many factors and that in turn can affect their job competency, and ultimately quality of patient care. Nurses are the greatest providers of healthcare services (King & Hinds, 2011). Over the last decade, nurse shortage has been a critical problem in many parts of the world. This led to longer working hours and heavier workload, and subsequently a lower QOL (Capodaglio & Di Liddo, 2007). Malaysia is not spared of the same problem. Shortage of nurses can compromise the target goals set for healthcare provision. The objective of this study was to evaluate the QOL of primary healthcare clinic nurses in PKD Petaling and to establish a baseline data to facilitate any intervention strategies from the policy makers for the betterment of healthcare staff.

We found that nurses in Petaling have moderate QOL based on WHOQOL-BREF. They achieved highest scores on the domain of social relationship. This demonstrates a high satisfaction towards interpersonal communication, social support and sexual satisfaction in their daily lives. A study on hospital nurses in India also found social domain to have the highest QOL score, indicating a relatively strong social support from their friends and family (Jathanna & D´SQªSilva, 2014). Majority of the respondents in our study are married and positive spousal support may be one of the contributing factors towards high QOL score in terms of social relationship.

Most of the other studies reported the physical domain as having the lowest QOL scores (Andrades Barrientos & Valenzuela Suazo, 2007). This could be attributed to the fact that nurses play multiple roles of being woman, mother, wife and daughter simultaneously. These can lead to fatigue, lack of sleep and compromise the physical QOL. However, in our study, physical domain had the second lowest mean QOL score, after environmental domain. This was similar to studies conducted in Iran (Aalaa, Sanjari, Tootee, Mirzabeigi, & Salemi, 2012) (Fallahee, Karimloo, Rahgoy, & Fattah, 2007). Environmental domain assesses issues like security, transport, home and finance. The district of Petaling, being an urban area located in the Klang Valley and in close proximity to the capital city of Kuala Lumpur, has a high cost of living in terms of housing, commute and daily expenditure. This is especially relatable for junior staff who just joined the workforce. One of the feasible improvement strategies by the policy makers is to provide more housing support, for example, increasing the availability of living quarters for the staff in the clinic compound. This will significantly reduce the cost of housing and commute.

While nurses in supervisory positions (nursing sisters or matrons) scored higher mean score of QOL in all domains, no significant association was found on further analysis. However, other research showed significantly higher QOL scores among nurse directors or head nurses (Fallahee et al., 2007). Apart from that, a significant predictor of QOL score in our study was the working placement in the same position. Better QOL was detected among nurses with longer experience in same workplace. Staff transfer policy should take into account of this finding. Rapid turnover of staff may be detrimental to individual QOL and may also disturb the continuity of workplace policy and complicates the implementation of any long-term program. As a result, unnecessary relocation of nurses or healthcare staff in general should be kept to a minimum to ensure good QOL and optimum satisfaction towards work.

Another pertinent issue detected in our study was that the presence of underlying chronic disease has a major impact on QOL of nurses. Among the chronic diseases reported by the

respondents are diabetes and hypertension. In view of this, more attention need to be given to prevention and management of non-communicable diseases among staff. KOSPEN Plus has been initiated in all healthcare facilities in Ministry of Health Malaysia since early 2017. This initiative involves health screening on all staffs in the healthcare facilities. Those who are obese with body mass index of 30 and above will be enlisted in a series of health interventions such as regular physical exercise and counselling on healthy diet. Positive reinforcement is applied in which the participant with the highest margin of weight reduction will be rewarded. This is indeed a step in the right direction in order to improve the physical health and ultimately the general health and overall QOL of healthcare staff.

This is the first study that explores the QOL of nurses in the primary healthcare clinic setting in Malaysia. It provided the information from a different perspective as many of the previous studies in the literature focused on nurses who work in the hospital setting that practice shift work. Furthermore, our study strength lies in the use of an internationally well-known measurement, thus making it possible to interpret our findings with other international studies.

Although the findings of our study are confined to the district of Petaling and may fall short of representing the overall QOL of nurses in Malaysia, it provided an insight to the baseline QOL level and more importantly, an impetus for further research in the field. In the future, it would be beneficial to establish a QOL database for nurses in Malaysia for enable a more representative cohort to be studied for nationwide actions. Expanding the study to include other healthcare providers such as doctors, pharmacists and also other healthcare facilities would make the results more comprehensive for policy changes.

5.0 Conclusion and recommendation

Our study showed that nurses at the primary healthcare clinics in the district of Petaling have a moderate level of QOL. It also pinpoints important factors that impacts on the QOL among the nurses. This study provides vital impetus for policy makers to prioritize improvement measures for QOL of nurses in order to ensure their work commitment. This will safeguard patient care and subsequently enhance the overall performance of Ministry of Health.

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Declaration
Authors declare that no competing interest in this study.

Authors contribution

Both authors conceived the overall study. Lee K.Y. designed the study and coordinated the study implementation and data collection. Lee K.Y. drafted the manuscript. Both authors read and approved the final manuscript.

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