ORIGINAL ARTICLE

Evaluation of Socioeconomic Determinants of Quality of Life among Healthcare Providers

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Abstract

Background: In literature, fewer studies are evident that quality of life (QoL) among healthcare providers (HCPs) is a paramount concern, especially to have optimum and best patient care. If the QoL of the HCPs is not up to the satisfactory level, it will have a direct effect on QoL of their patients. **Objective:** This study aimed to determine socioeconomic determinants of QoL among HCPs in Malaysia. **Materials and Methods:** A cross-sectional study was conducted using among HCPs using World Health Organization QoL-BREF using a convenience sampling method. The socioeconomic determinants of QoL among HCPs were determined using descriptive and inferential statistics. Data were entered and analyzed using Statistical Package for the Social Sciences ver. 24.0. **Results:** Out of total (n = 310) studied HCPs, more females (n = 188, 60.6%), than males (n = 122, 39.4%) participated in this study. According to the study findings, in the psychological domain, marital status, in social domain marital status and job nature, and in environmental domain experience were observed as pure socioeconomic determinants that showed statistically significant values ($P < 0.05$). **Conclusion:** In Malaysia, overall, the HCPs had better QoL and had good access to excellent healthcare services, self-confidence, and social life.

Key words: Determinants, Healthcare providers, Malaysia, Quality of life, Socioeconomic, World Health Organization Quality of Life-BREF

INTRODUCTION

Healthcare providers (HCPs) not only provide treatment plans but also offer professional healthcare advice and pharmaceutical care to their patients.[1-3] HCPs' decreased quality of life (QoL) could affect their self-health and professional performance in fulfilling the healthcare needs and provision of the required healthcare facilities to the general public.[4-7] QoL is a multi-dimensional phenomenon that measures the general well-being of individuals and societies.[8] Several studies conducted in different parts of the world determined that decreased QoL among HCPs has a greater impact on their personal health state and their personal lives irrespective of their professional practice and responsibilities.[9-15] Moreover, decreased QoL may also have a substantial effect on the overall health state of HCPs irrespective of their professional training and responsibilities.[9-11]

Fewer studies in the past have explored relationships between the various socioeconomic determinants, that is, age, gender, education, monthly income, experience, and up-to-date knowledge of HCPs and QoL among different HCPs.[10-15] Eventually, the decreased QoL among HCPs can also lead to decreased work capacity, the unnecessary burden of work, negative feelings, low professional outcomes, and

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unwanted conflicts with peers.[9,13] In other words, these sociodemographic and socioeconomic changes, demanding professional responsibilities, and diversity and advancements in treatment outcomes can affect QoL of HCPs.[13-16] Although numerous studies are evident in literature that had explored QoL among acute and chronic disease patients using various generic and specific QoL measuring tools, there is a demanding scarcity in the literature regarding the exploration of QoL among HCPs using both general and specific QoL measuring tools.

The World Health Organization QoL (WHOQOL)-BREF is a brief version of the WHO QoL 100 (WHOQOL-100) and consists of physical, psychological, social, and environmental domains. All of the four domains are comprised of 24 multiple questions. In addition to these 24 questions, it also has two stand-alone questions to assess QoL and health satisfaction. Like the majority of QoL tools, the WHOQOL-BREF also measures different health states relating to the physical, psychological, social relationships, and environmental characteristics of the study populations.[14-16] To date, socioeconomic determinants of QoL among HCPs in Malaysia has not been explored using the WHOQOL-BREF. This study was specially designed to fill this scarcity and the need for published literature about the effect of socioeconomic determinants on overall QoL among HCPs in Malaysia.

MATERIALS AND METHODS

Study design, sampling technique, and data collection

A cross-sectional study was performed among HCPs in Malaysia using a convenience sampling technique. The study was performed for 5 months (April-August 2018) using the WHOQOL-BREF and the QoL was assessed. The WHOQOL-BREF has already been used to determine QoL among several populations in numerous countries across the globe. Socioeconomic determinants affecting QoL such as gender, age, marital status, educational level, income, and continuous professional development (CPDs) or continuous medical education (CMEs) among HCPs were explored.

Inclusion and exclusion criteria

HCPs aged >18 years and signed written consent were included in the study. For exclusion criteria, those aged below 18 years, pregnant female HCPs, or those who refused to sign the consent forms were excluded from the study.

Ethical approval

The study protocol was approved by the research and ethics committee of the concerned hospitals; however, participation in this study was voluntary. All aspects of the study protocol were strictly confidential.

Statistical analysis

Data were entered and analyzed using Statistical Package for the Social Sciences version 24.0. Descriptive and inferential statistics were used to determine socioeconomic determinants of QoL among HCPs. Percentages and frequencies were used for the categorical variables, while means and standard deviations were calculated for the continuous variables. Independent samples *t*-test was performed to calculate the means of the four domains of the WHOQOL-BREF. Univariate and bivariate analysis was performed using Chi-square test and crude odds ratio (OR) was obtained. Multivariate analysis using multiple logistic regressions was performed to obtain adjusted (pure) OR (AOR) and to determine the pure determinants of QoL among HCPs. A $P < 0.05$ was considered as statistically significant.

RESULTS

The demographic characteristics of the HCPs are presented in Table 1. There was a total of 310HCPs who participated

Table 1: Socioeconomic characteristics of the study participants ($n = 310$)

Variables	Frequency	%
Gender		
Male	122	39.4
Female	188	60.6
Marital Status		
Single/separated	95	30.6
Married	215	69.4
Highest education		
Bachelors	76	24.5
Masters	234	75.5
Job nature		
Public	289	93.2
Private	21	6.8
Experience		
<10 years	189	61.0
>10 years	121	39.0
Income		
< RM 15000	170	54.8
> RM 15000	140	45.2
Attending CPDs/CMEs		
Yes	188	60.6
No	122	39.4

CPDs: Continuous professional development, CMEs: Continuous medical education

in the study, with more females than males (n = 188, 60.6%, and n = 122, 39.4%, respectively). Two hundred and thirty-four (75.5%) had a post bachelor's level of education and 76 (24.5%) had a bachelor's level education. Two hundred eighty-nine (93.2%) participants were serving the public sector, whereas 21 (68%) were private-sector employees. One hundred eighty-eight (60.6%) participants had attended CPDs or CMEs courses.

Figure 1 denotes the mean QoL scores for all four domains of the WHOQOL-BREF among the participants. The mean scores with SD for the physical health, psychological, social, and environmental domains were 68.91 ± 13.60, 72.31 ± 15.93, 73.49 ± 16.17, and 70.42 ± 15.86, respectively.

Table 2 shows the findings of univariate and multivariate model analyses. The socioeconomic determinants of QoL that showed statistically significant ($P < 0.05$) findings in physical domain among the total studied variables are presented. A total of two determinants (gender and income) were observed as statistically significant ($P < 0.05$) in univariate analysis, but in the multivariate logistic regression model, none of the determinants was found to be statistically significant ($P < 0.05$).

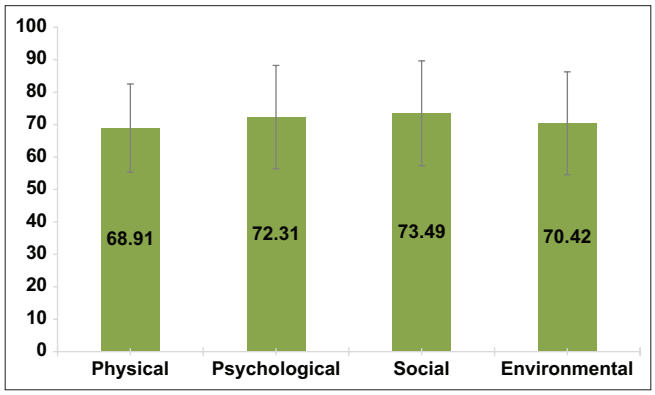

Figure 1: Quality of life scores for four domains of World Health Organization Quality of Life-BREF (Mean±SD)

Table 3 shows the findings from univariate and multivariate model analyses. The socioeconomic determinants of QoL that showed statistically significant ($P < 0.05$) findings in psychological domain among the total studied variables are presented. A total of one determinant (experience) was observed as statistically significant ($P < 0.05$) in univariate analysis and in multivariate logistic regression analysis model, it was also found statistically significant ($P < 0.05$).

Table 4 illustrates the findings from univariate and multivariate model analyses. The socioeconomic determinants of QoL that showed statistically significant ($P < 0.05$) findings in social domain among the total studied variables are presented. A total of three determinants (marital status, job nature, and experience) were observed as statistically significant ($P < 0.05$) in univariate analysis and in multivariate logistic regression analysis model, two (marital status and job nature) were also found statistically significant ($P < 0.05$).

Table 5 demonstrates the findings from univariate and multivariate regression model analysis. The socioeconomic determinants of QoL that showed statistically significant ($P < 0.05$) findings in environmental domain among the total studied variables are presented. A total of two determinants (marital status and highest education) were observed as statistically significant ($P < 0.05$) in univariate analysis and in the multivariate logistic regression analysis model, one determinant (marital status) was found statistically significant ($P < 0.05$).

Table 2: Socioeconomic determinants of QoL in the physical domain

Variables	Mean±SD	Univariate analysis		Multivariate analysis	
		COR (95% CI)	*P*-value	AOR (95% CI)	*P*-value
Gender					
Male	70.02±14.32	Referent		Referent	
Female	68.19±13.10	0.367 (0.21–1.35)	0.047*	1.582 (1.01–2.25)	0.455
Income					
<15000 RM	67.68±13.78	Referent		Referent	
>15000 RM	70.40±13.27	1.079 (0.87–3.44)	0.046*	2.731 (1.32–3.56)	0.179

*Statistically significant ($P<0.05$). QoL: Quality of life, COR: Crude odds ratio, AOR: Adjusted odds ratio

Table 3: Socioeconomic determinants of QoL in the psychological domain

Variables	Mean±SD	Univariate analysis		Multivariate analysis	
		COR (95% CI)	*P*-value	AOR (95% CI)	*P*-value
Experience					
<10 years	70.85±17.47	Referent		Referent	
>10 years	74.58±12.92	2.709 (1.37–3.89)	0.034*	3.138 (2.59–5.07)	0.047*

* Statistically significant ($P<0.05$). QoL: Quality of life, COR: Crude odds ratio, AOR: Adjusted odds ratio

Table 4: Socioeconomic determinants of QoL in the social domain

Variables	Mean±SD	Univariate analysis		Multivariate analysis	
		COR (95% CI)	*P*-value	AOR (95% CI)	*P*-value
Marital status					
Single	67.66±16.35	Referent		Referent	
Married	76.07±15.38	2.589 (0.97-5.24)	0.022*	3.555 (1.69-4.72)	0.042*
Job nature					
Public	73.01±16.16	Referent		Referent	
Private	80.09±15.18	1.836 (0.45–3.29)	0.025*	2.684 (1.69–4.17)	0.041*
Experience					
<10 years	71.56±18.01	Referent		Referent	
>10 years	76.52±12.25	3.621 (2.74–5.74)	0.046*	4.118 (3.95–6.33)	0.887

* Statistically significant (P<0.05). QoL: Quality of life, COR: Crude odds ratio, AOR: Adjusted odds ratio

Table 5: Socioeconomic determinants of QoL in the environmental domain

Variables	Mean±SD	Univariate analysis		Multivariate analysis	
		COR (95% CI)	*P*-value	AOR (95% CI)	*P*-value
Marital status					
Single	65.30±15.70	Referent		Referent	
Married	72.68±15.43	1.487 (1.51–3.93)	0.032*	1.676 (0.21–4.63)	0.044*
Highest education					
Bachelors	74.81±12.27	Referent		Referent	
Masters	69.00±16.64	4.042 (3.65–5.87)	0.033*	2.902 (1.63–4.65)	0.417

*Statistically significant (P<0.05). QoL: Quality of life, COR: Crude odds ratio, AOR: Adjusted odds ratio

DISCUSSION

The HCPs in Malaysia are moderately-satisfied with their QoL in social, psychological, and environmental domains of the WHOQOL-BREF and are relatively less satisfied in their physical domain. In Malaysia, overall, the HCPs have better access to excellent healthcare facilities, self-esteem, and social circles. According to the results of this study, married HCPs were more satisfied in all four domains than the single participants. It was also observed that highly educated (post-bachelor) HCPs had comparatively less QoL scores in all four domains of the WHOQOL-BREF, and this may be because they had less demanding jobs, professional responsibilities, and stress levels than the bachelor-degree holders. These challenging roles of the highly educated HCPs may also include a better understanding of their own and their patients' disease states and handling of the managerial/administrative responsibilities along with professional duties. In the past decade, QoL has been an emergent concept and an important treatment outcome parameter in assessing individuals' general health state and monitoring treatment efficacy and overall disease management.[11-14] This study is also novel and first of its kind because fewer studies are done in various countries to measure determinants of QoL of HCPs, but nothing is reported in Malaysia using the WHOQOL-BREF.

In univariate analysis, for physical domain findings, our results indicated that gender and income showed statistically significant differences ($P < 0.05$) among male and female HCPs. In the gender determinant, univariate odds ratio (UOR) 0.367 with CI (0.21–1.35) and $P = 0.047$ were observed, whereas, in multiple regression, AOR 1.582 with CI (1.01–2.25) and $P = 0.455$ were observed. In the income determinant, UOR 1.079 with CI (0.87–3.44) and $P = 0.046$ were observed, whereas, in multiple regression, AOR 2.731 with CI (1.32–3.56) and $P = 0.179$ were observed. These findings indicated that although female HCPs had lower QoL than male HCPs, they were not observed as pure determinants of QoL in the physical domain. This finding also validated a few earlier concerns reported by another study done by Madeeha *et al*. that single HCPs and female HCPs had higher levels of stress as compared with the rest.[17] For psychological domain, our results indicated that experience showed statistically significant differences ($P < 0.05$) among <10 years and >10 years experienced HCPs in both univariate and multivariate analysis. These findings showed that experience was a pure predictor of QoL among HCPs in Malaysia in the psychological domain of the WHOQOL-BREF and HCPs having more than 10 years of experience had 2.709 times better QoL than the other group. In the psychological domain, our study results were similar to another study done, which reported that highly educated and

well-trained HCPs had a better QoL that usually reflects in their professional practices and a better understanding of the disease state of their patients.[17]

In the social domain of the WHOQOL-BREF, marital status, job nature, and experience were observed as determinants of QoL in univariate analysis. Besides, in multivariate analysis, marital status and job nature were observed as pure determinants of the QoL among HCPs. In environmental domain, marital status and highest education were observed as determinants of QoL among HCPs with UOR 1.487; $P = 0.032$ and UOR 4.042; $P = 0.033$, respectively. In addition, the marital status was noted as a pure determinant in multivariate analysis (AOR 1.676; $P = 0.044$). These findings indicated that married HCPs had 1.676 times better QoL in environmental domain than the singles. Providing higher educational professional activities in terms of CPDs and CMEs, short courses in their specialized fields, knowledge refreshing workshops, and professional educational seminars often prove as essential predictors of an improved QoL among HCPs.[18-20]

In some of the domains, the studied HCPs obtained lower QoL scores which might be due to diverse education levels, non-attendance of the CMEs, increased living costs, inability to work in a particular environment, and less availability or enjoyment of social activities. Our study results are opposite to another study done by Saeed and Ibrahim, where they reported a lack of self-confidence and professional competence and higher stress among HCPs with fewer healthcare facilities might affect their QoL.[20] Improving working relationships, job facilities, promoting healthy activities among HCPs will help them in a better understanding of their professional responsibilities that ultimately will result in improving their work performances.[19-21] The finding of this study is an imperative contribution in literature for understanding the overall QoL among HCPs in Malaysia. Since most of the information evident in the literature regarding the QoL of HCPs from other countries, whose extrapolation to Malaysian society was limited by cultural, religious, socioeconomic differences and the way the healthcare system developed and managed in Malaysia. The results of this study could also help HCPs and their family members to better understand the physical, psychological, social, and environmental problems that HCPs usually face while performing their professional duties. This, in return, will definitely help and encourage them to provide more physical, psychological, and social support to HCPs.

CONCLUSION

This study confirmed that the WHOQOL-BREF research tool is a reliable instrument to measure socioeconomic determinants of QoL among HCPs in Malaysia. From the obtained data, it is evident that HCPs in Malaysia enjoy overall good QoL, although in some of the determinants, they showed relatively moderately-good QoL scores.

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