

# Impact of Sociodemographic Factors on Quality of Life of Health care Workers

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## Abstract

**Purpose:** Several studies have proved that poor health state is a major risk factor for numerous unwanted effects. This study aimed to assess quality of life (QoL) and determine various factors persuading QoL in health care workers (HCWs). **Materials and Methods:** A cross-sectional study using WHOQOL-BREF research tool was designed and conducted among HCWs in Al-Kharj, Saudi Arabia. Descriptive, comparative, and inferential statistics were performed using Statistical Package for the Social Sciences (SPSS). **Results:** A total of 289 HCWs participated in the final study, 48% were male and 52% were female. A total of 69% of the study HCWs were married, and 58% had <10 years of experience. Statistically significant differences ( $P < 0.05$ ) in marital status, education level, income, and year of practice were found in various domains of WHOQOL-BREF. Overall, mixed findings in various domains of WHOQOL-BREF were observed regarding HCWs' QoL in the studied cohort. **Conclusion:** The results indicated that HCWs had good-excellent QoL in various domains of WHOQOL-BREF in Saudi Arabia.

**Key words:** Quality of life, health care workers, WHOQOL-BREF, Saudi Arabia

## INTRODUCTION

The Alma Ata declaration by the World Health Organization (WHO) mainly focusses on the provision of primary health care services and facilities that are easily accessible to every individual and their families.<sup>[1-4]</sup> Health care workers (HCWs) quality of life (QoL) can be affected that could further affect their own health status and professional performance in fulfilling the health-care needs and provision of basic health-care facilities to the general public.<sup>[3-7]</sup> QoL is a multidimensional aspect that can be used to assess the general well-being of individuals and societies.<sup>[4,5]</sup> QoL also represents the health state of an individual and a society that primarily focusses on all aspects of physical and mental health and its impact on QoL.<sup>[6-8]</sup>

Besides, demanding professional responsibilities, sociodemographic and socioeconomic changes, and diverse treatment regimens can also affect QoL of HCWs.<sup>[7-9]</sup> Across the globe, fewer studies in the past have explored impact of various factors such as age, gender, education, monthly income, experience, and up-to-date knowledge of HCWs on overall

QoL of HCWs and observed mixed findings.<sup>[8-13]</sup> As a matter of fact, a decrease in overall QoL of HCWs can easily affect their work abilities and capacity, burden of work, provoking the negative feelings, decreased professional attitude and aptitude, their patients' QoL, and even unwanted conflicts with the peers.<sup>[14-16]</sup>

The WHOQOL-BREF research tool has been used by plenteous studies conducted in different parts of the world to determine QoL of HCWs as well as their patients.<sup>[7-10,17]</sup> To date, QoL among HCWs in central region of Saudi Arabia has not been well-explored using the WHOQOL-BREF. This study aimed to fill this scarcity and the need for published literature about overall QoL of HCWs in Central Saudi Arabia. This study determined the impact of various factors such as gender, age, marital status, educational level, monthly income, and continuous professional development (CPD) or continuous medical education (CME).

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## MATERIALS AND METHODS

A cross-sectional study was performed among HCWs in using a convenience sampling method in 2018 for 5 months in Al-Kharj, Saudi Arabia. The WHOQOL-BREF research tool was used to assess QoL among HCWs. The WHOQOL-BREF has already been used to determine QoL among several populations in numerous countries across the globe. Impact of various factors such as gender, age, marital status, educational level, income, and CPDs or CMEs on QoL of HCWs was explored. All of the study participants were aged >18 years and signed written consent before taking part in the study. For exclusion criteria, those aged below 18 years, pregnant female HCWs or those who refused to sign the consent forms were excluded from the study. The study protocol was approved by the research and ethics committee of the concerned department, however, participation in this study was voluntary. All aspects of the study protocol were strictly confidential.

### Statistical analyses

Data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS) version 24.0. Descriptive and inferential statistics were used to determine socioeconomic determinants of QoL among HCWs. 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. Chi-square test was also used to further investigate the statistically differences obtained.  $P < 0.05$  was considered as statistically significant.

but only 289 replied with complete response for the filled questionnaire. There were more females (52.9%) than males (47.1%) participated in the study. Around 81.3% of the studied HCWs were Saudi nationals, and only 18.7% of the HCWs were non-Saudis.

Figure 2 presents the mean QoL scores obtained for all four domains of WHOQOL-BREF research tool among the studied HCWs. The mean scores in all four domains of the WHOQOL-BREF with standard deviations (SD) are presented. In the physical domain of WHOQOL-BREF, the score was  $67.01 \pm 13.67$ . In the psychological domain, the score was  $71.27 \pm 14.15$ . In the social domain, the score was  $71.92 \pm 17.06$ , and in environment domain, the score was  $68.00 \pm 14.73$ .

Table 1 denotes correlation coefficients and the relationship (bivariate) between studied factors and the mean domain scores. Statistically significant differences were observed between the scores for marital status and the social and environment domains ( $P < 0.001$  and  $<0.001$ , respectively). The HCWs had significantly higher QoL scores in the social domain than in the environment domain,  $73.47 \pm 15.38$  and  $69.80 \pm 15.43$ , respectively. Besides, statistically significant differences were also observed between the scores for the environment domain against the highest education level ( $P = 0.005$ ). Statistically significant differences were seen in all WHOQOL-BREF domains against experience levels.

Table 2 denotes statistically significant correlation coefficients between studied factors and the WHOQOL-BREF domains. Statistically significant positive and negative correlations were observed between the studied factors and the WHOQOL-BREF domains ( $P = 0.001-0.043$ ).

## RESULTS

The demographic factors of the study's participants are presented in Figure 1. A total of 314 HCWs were approached

## DISCUSSION

Several studies conducted in numerous countries have explored diverse aspects of QoL among HCWs, but the

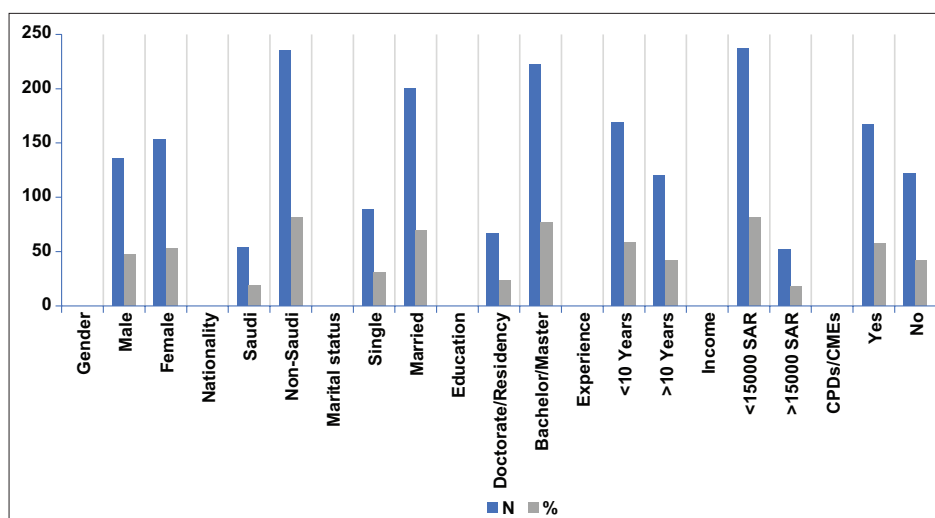
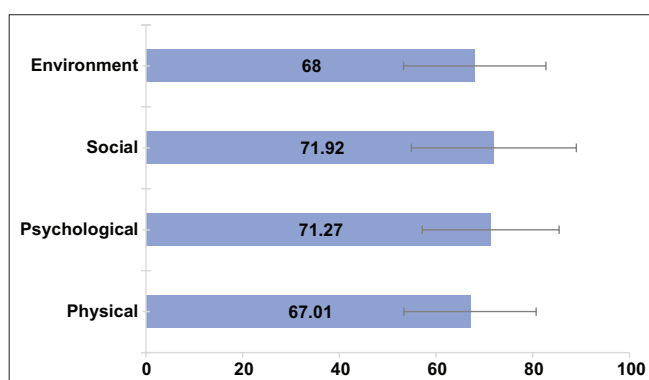


Figure 1: Demographics of the studied health care workers

**Table 1: WHOQOL-BREF domains' mean scores of studied factors**

Factors	WHOQOL-BREF domains			
	Physical	Psychological	Social	Environment
Gender				
Male	67.37±14.32	70.72±16.11	71.35±16.93	69.29±14.03
Female	66.69±13.10	71.77±15.76	72.42±15.61	66.86±16.90
<i>P</i> -value	0.247	0.139	0.158	0.158
Nationality				
Saudi	65.62±13.47	70.01±16.30	71.55±16.16	69.57±15.87
Non-Saudi	67.33±15.61	71.56±08.61	72.00±15.18	67.64±16.16
<i>P</i> -value	0.801	0.195	0.053	0.777
Marital status				
Single/separated	65.10±11.99	71.39±14.53	68.43±16.35	63.97±15.70
Married	67.87±13.50	71.22±16.50	73.47±15.38	69.80±15.43
<i>P</i> -value	0.143	0.267	<0.001*	<0.001*
Education				
Doctorate/specialized	70.35±12.52	72.38±12.60	74.14±12.12	72.34±12.27
Bachelor/master	66.00±13.88	70.94±16.86	71.24±17.28	66.69±16.64
<i>P</i> -value	0.098	0.308	0.373	0.005*
Experience				
<10 years	65.17±13.82	70.66±17.47	70.65±18.01	65.69±16.99
>10 years	69.61±12.95	72.13±12.92	73.70±12.25	71.26±13.59
<i>P</i> -value	0.013*	0.044*	0.008*	0.021*
Income				
<15,000 SAR	66.05±13.78	70.64±14.44	71.13±16.28	66.59±16.20
>15,000 SAR	71.38±13.27	74.15±17.62	75.48±16.00	74.46±15.31
<i>P</i> -value	0.079	0.688	0.216	0.072
CPDs/CMEs				
Yes	68.83±12.99	73.28±16.98	73.38±15.63	70.04±14.90
No	64.53±14.10	68.53±13.85	69.91±16.84	65.22±16.05
<i>P</i> -value	0.003*	0.023*	0.076	<0.001*

**Figure 2:** Mean quality of life scores of domains of WHOQOL-BREF

evidence is scarce in the literature from Saudi Arabia. Frequent access to health-care facilities, job frustration, availability of a variety of treatment regimens and medication use, and

positive and negative psychological influences are among the major concerns affecting QoL among HCWs.<sup>[18,19]</sup> To the best of our knowledge, to date, this is among the pioneer studies from Saudi Arabia regarding QoL of HCWs using WHOQOL-BREF, thus there are only fewer studies evident as cross-reference to this study. This study was especially designed to determine the impact of sociodemographic factors on QoL of HCWs in Saudi Arabia. Several factors were explored and their relationships toward overall QoL were determined using the WHOQOL-BREF.

Numerous developing countries are facing challenges in providing optimum health-care facilities to their population through highly qualified and competent HCWs. Undeniably, Saudi Arabia have one of the best health-care systems throughout the world where all of the health-care costs are borne by the government. Similarly, better treatment plans, adherence to the medications, compliance with the treatment

**Table 2: Factors' correlation with WHOQOL-BREF domains**

Factors	Physical	Psychological	Social	Environment
Marital status	-	-	0.001*	0.001*
Education	-	-	-	0.011*
Experience	0.004*	-	0.043*	0.023*
Income	-	-	-	-
CPDs/CMEs	0.006*	0.006*	-	0.001*

\* Significant at <0.05 level (two tailed)

regimens, lifestyles modification, and awareness of the precise drug regimen are greater contributing factors affecting QoL of the patients. Equally, patients' QoL is directly influenced by the QOL of the HCWs as if they are happier and satisfied with their lives and jobs, they will provide the best care plans to their patients and vice versa.<sup>[20,21]</sup>

Similar to another study, our study found a number of sociodemographic factors that affected HRQoL and can be considered as significant contributors of QoL among HCWs.<sup>[21,22]</sup> This study did not observe any statistically significant effect ( $P > 0.05$ ) of gender on all domains of WHOQOL-BREF, whereby in physical domain, males were happier and more satisfied ( $67.37 \pm 14.32$ ) than females. In terms of psychological domain, females ( $71.77 \pm 15.76$ ) were found to be enjoying better QoL than males ( $70.72 \pm 16.11$ ). In social domain of WHOQOL-BREF, again females had better QoL than males,  $72.42 \pm 15.61$  and  $71.35 \pm 16.93$ , respectively, and in environment domain, males ( $69.29 \pm 14.03$ ) had good scores of QoL than females ( $66.86 \pm 16.90$ ). These results were similar to other studies where the investigators found that no statistically significant differences exist in QoL scores between males and females although they were different populations, more female-oriented societies, different study sites, and different research tools used.<sup>[17,23,24]</sup>

Higher education level often advances self-interest and involvement in improving general health states, which is a key determinant of self-satisfaction and an improved QoL. It is also a common observation that highly educated HCWs could have a better understanding of their patients' diseased state, drug doses, treatment regimens, and overall disease management.<sup>[22-25]</sup> Besides, to provide pharmacotherapy, they are more likely to acclimatize their own lifestyle and adopt preventive measures, resulting in improvement in overall QoL of their patients but may result in decreased self QoL.<sup>[18-20]</sup> In both developed and developing countries across the globe, more educated individuals are reported to live longer and enjoy better health conditions and status compared to the less educated.<sup>[25]</sup> In our study, highly educated (doctorate/specialized) HCWs had higher QoL in all four domains of the WHOQOL-BREF than the other studied group with less education (bachelors/masters). This could help them in better understanding of their patients' disease states, which ultimately could help their patients to have an improved QoL.<sup>[25,26]</sup> Interestingly, a statistically significance

( $P < 0.05$ ) was observed in environment domain between the two groups. These study findings are similar to another study done in Malaysia where they observed the similar findings.<sup>[27]</sup>

Additional noteworthy finding of the study was about income level that showed that HCWs earning more were more satisfied with their life and their QoL scores in all four domains of the WHOQOL-BREF. They were much better than the other group that was earning less than them but no statistically significant differences ( $P > 0.05$ ) were found among all of the domains. It is evident from the results of the study that those earning more than 15,000 RM scored much higher in almost every domain of WHOQOL-BREF than the other group. These differences may be due to better economic and social conditions with better access to financial resources, the quality of their health care, and better access to opportunities to acquire the latest medical information and financial resources. Excellent lifestyle and high earnings can significantly improve overall QoL of an individual. Another contributing factor may be their social status, that is, spending more time with families and friends may positively affect their personal and social relationships. Undeniably, access to better financial resources appears to be a unique predictor of an improved QoL.<sup>[25,27]</sup> According to the findings of two other studies, income was significantly associated with the psychological and environment domains and overall general health satisfaction states.<sup>[25,27]</sup> Upgrading in the work environment, healthy lifestyle and positive and enjoyable social activities may positively improve work performances of the HCWs.

## CONCLUSION

Our study highlights that HCWs in Saudi Arabia enjoyed moderate-good QoL in the domains of WHOQOL-BREF. In physical and environment domains, males had better QoL while in psychological and social domains females had better QoL.

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