

Assessment of Quality of Life of Doctors during Corona Pandemic in a Tertiary Hospital in Dhaka City

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Abstract:

Background: Corona pandemic is an event where there is a rupture of the normal life pattern. The healthcare professionals specially doctors had faced an unknown potential threat to life that made them work in an intense and fearful situation. So, their quality of life (QOL) was affected in that pandemic. **Objectives:** To assess the physical health, psychological, social relationship, and environmental domains of quality of life of doctors during COVID-19 pandemic in a tertiary level hospital. **Methods:** It was a cross sectional study that included 100 doctors who were working during corona pandemic in BSMMU. Then they were interviewed with a semi-structured socio-demographic questionnaire. Quality of life was assessed by validated Bengali version of World Health Organization quality of life scale brief (WHOQOL–BREF). Data analysis was performed by statistical package for social science (SPSS), version-20. **Results:** Among the four domains, the environmental domain had the lowest score followed by physical health and psychological health domain and the social relationship domain showed a relatively higher score. Besides,

environmental health scores of female doctors were significantly higher than those of male doctors. Perceptions of quality of life were significantly poor among doctors who were in current economic struggle ($p=0.034$) or in fear of future economic struggle ($p=0.009$). Score of environmental health domain were significantly low among doctors who were in current economic struggle ($p=0.0137$) as well as in fear of future economic struggle ($p=0.015$). **Conclusion:** All domains of quality of life were impaired in doctors during COVID-19 pandemic situation. Among the four domains of WHOQOL–BREF scale, environmental domain was mostly affected. Environmental health of male doctors was worse than female doctors during COVID-19 pandemic. Current as well as fear of future economic struggle in COVID-19 pandemic detrimentally affected perception of quality of life among responded doctors. These also caused poor environmental health among doctors in COVID-19 pandemic.

Key Words: Quality of life; Corona pandemic; Doctor.

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Introduction:

Corona pandemic, also known as COVID-19 pandemic, was a major threat to the global community. In response to that global health crisis, quarantine and lock down measures were implemented by international and government health organizations to contain the rapid spread of the virus.¹ The COVID-19 pandemic had placed doctors in stressful circumstances with increased patient loads, disruption of normal life, and high risk of exposure. It significantly affected quality of life (QOL) of physicians.

Methods:

It was a cross-sectional, descriptive study. This study was conducted in the Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University (BSMMU) from March 2020 to February 2022. Data were collected from 100 doctors who were working in Indoor and outdoor of ten assigned Departments of BSMMU. Two stage random sampling was done. At first stage, out of total 55 Departments in BSMMU, 10 Departments were selected by lottery. At second stage, among the selected Departments, 50% of doctors that present on the day of sample collection were selected by lottery excluding previously selected ones.

Doctors who had known chronic physical and mental illness were excluded from this study. Finally total 100 doctors were enrolled in this study.

A semi structured questionnaire designed by the researcher to collect information regarding socio-demographic variables such as - age, sex, occupation, educational qualification, marital status, history of positive testing for COVID -19, worked in COVID-19 dedicated wards and economic struggle. World Health Organization Quality of life Scale, brief version (WHOQOL- BREF) was used to assess the quality of life of doctors during corona pandemic. After collecting data with the Bengali version of WHOQOL-BREF questionnaire, scoring was done according to WHOQOL-BREF scoring guideline. After collecting the data it was checked and rechecked for omission of inconsistencies and improbabilities. After cleaning the data it was entered into the computer then was edited and coded. Data analysis was performed by statistical package for social science (SPSS), version-20.

Results:

A total of 100 doctors were enrolled in the study. Majority (56%) of the respondents were in the age range of 31- 40 years, followed by 21-30 years (37%), 41- 50 years (05%) and 51- 60 years (02%) . The mean age of the respondents was 33.9±4.5 years. Sixty-nine percent of the respondents were male and 31% were female. Out of total 100 responded physicians, seventy-seven percent completed MBBS (Bachelor in Medicine and Bachelor in Surgery) whereas 23% had completed post-graduation following MBBS. Out of 100 responded doctors, fifty-seven percent of the responded doctors were BCS cadre, 35% were working as non govt. residents and medical officers. Other 8% were diploma students who were self-employed (private practice, etc.). Out of 100 responded physicians, seventy-seven percent were married, 20% were unmarried and 3% were divorced. Among 100 doctors, ninety-two percent of the doctors were working directly with COVID-19 patients in corona dedicated wards and 30% had history of positive testing for COVID-19. Among 100 doctors, 45 doctors (45%) were facing economic struggle currently whereas 62 doctors (62%) were reported fear of future economic struggle due to COVID-19 pandemic.

Table-I: Distribution of WHOQOL-BREF scores of four domains of quality of life among the doctors (n=100)

WHOQOL-BREF	Mean±SD
Domain 1: Physical	56.03±4.35
Domain 2: Psychological health	56.50±3.24
Domain 3: Social relationship	58.14±1.75
Domain 4: Environmental health	50.04±5.57

The mean scores of physical health, psychological, social relationship and environmental health were 56.03±4.35, 56.50±3.24, 58.14±1.75, 50.04±5.57 respectively (Table-I). According to WHOQOL-BREF scale higher the mean scores better the quality of life. In this table environmental health domain scores were lowest. So COVID-19 pandemic caused most detrimental adverse effect on environmental domain of quality of life.

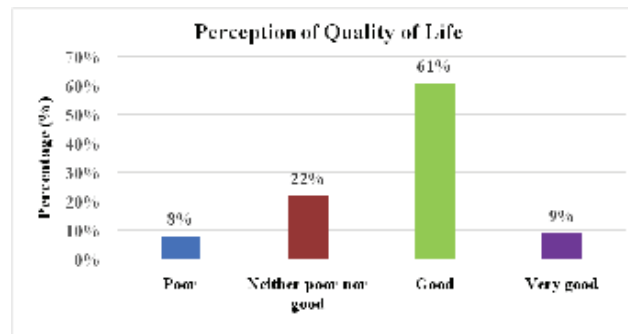


Figure-1: Perception of quality of life among the respondents (n=100)

Figure-1 shows that among 100 responded doctors, 61% of the respondents rated their quality of life as good followed by 22% rated neither poor nor good, 08% rated poor, but only 09% rated very good.

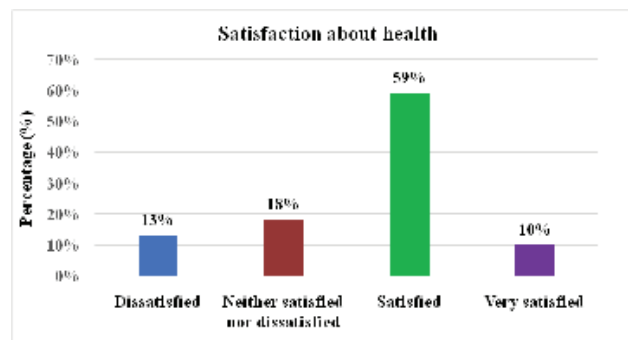


Figure-2: Satisfaction about health among the respondents (N=100)

Figure-2 shows that regarding satisfaction with health, out of 100 responded doctors, 59(59%) of the respondents reported satisfaction, 18(18%) reported neither satisfied nor dissatisfied, 13(13%) reported dissatisfied but only 10(10%) reported very satisfied.

Table-II: Association of gender with WHOQOL - BREF scores of four domains of quality of life among responded doctors (N=100).

WHOQOL-BREF scores	Gender		p value
	Male (n=69) mean±SD	Female (n=31) mean±SD	
Physical Health	55.80±3.71	56.55±5.55	0.427
Psychological health	56.04±3.56	56.98±2.41	0.184
Social relationship	58.59±1.90	58.03±1.38	0.144
Environmental health	48.25±6.09	51.03±3.67	0.020*

p-value was determined by independent student t test.

* -indicate statistically significant (p< 0.05).

Table-II shows that environmental health scores of female doctors significantly higher than those of male doctors. It indicate that environmental health of male doctors were worse than female doctors during COVID-19 pandemic.

Table-III: Association of presence of current economic struggle with perception of doctors about quality of life (N=100)

Perception towards quality of life	Economic struggle (current)		P value
	Yes (n=45) n (%)	No (n=55) n (%)	
Poor	5 (11.1)	3 (5.5)	0.034*
Neither poor nor good	14 (31.1)	8 (14.5)	
Good	25 (55.6)	36 (65.5)	
Very good	1 (2.2)	8 (14.5)	

P value was determined by Chi-square test.

* - statistically significant (p < 0.05) .

Table-III shows that there was statistically significant difference in perception of quality of life between doctors who were in current economic struggle and who were not. It indicated that current economic struggle in COVID-19 pandemic detrimentally affected perception of quality of life among responded doctors.

Table-IV: Association of presence of current economic struggle with WHOQOL-BREF scores of four domains among responded doctors (N=100).

WHOQOL-BREF scores	Economic struggle (current)		P value
	Yes(n=45) mean±SD	No (n=55) mean±SD	
Physical Health	55.43±3.07	57.02±5.07	0.06
Psychological health	56.43±2.88	57±3.50	0.383
Social relationship	58.07±1.71	58.30±1.80	0.517
Environmental health	48.73±5.90	51.47±5.01	0.0137*

p-value was determined by independent sample t test.

* - statistically significant (p< 0.05) .

Table-IV shows that scores of all domains of quality of life were lower among doctors who were in current economic struggle than who were not. But in case of environmental health domain, p value was 0.013(<0.05) that was statistically significant. So it indicated that current economic struggle caused statistically significant lower environmental health among doctors in COVID-19 pandemic.

Table-V: Association of presence of fear of economic struggle in future with perception of doctors about quality of life (N=100)

Perception towards quality of life	Fear of future economic struggle		P value
	Yes (n=62) n (%)	No (n=38) n (%)	
Poor	3 (3.8)	5 (13.1)	0.009*
Neither poor nor good	20 (32.3)	2 (5.3)	
Good	35 (56.5)	26 (68.5)	
Very good	4 (6.4)	5 (13.1)	

P value was determined by Chi-square test.

* - statistically significant (p< 0.05).

Table-V shows that there was statistically significant difference in perception of quality of life between doctors who were in fear of future economic struggle and who were not. It indicated that fear of future economic struggle in COVID-19 pandemic detrimentally affected perception of quality of life among responded doctors.

Table-VI: Association of presence of fear in future economic struggle with WHOQOL-BREF scores of quality of life among responded doctors (N=100)

WHOQOL-BREF scores	Fear of economic struggle in future		P value
	Yes (n=62) mean±SD	No (n=38) mean±SD	
Physical Health	55.74±4.63	56.0±3.87	0.772
Psychological health	56.47±2.89	56.53±3.67	0.928
Social relationship	57.95±1.58	58.48±1.98	0.142
Environmental health	48.19±5.91	50.95±4.54	0.015*

p-value was determined by independent sample t test.

* --indicate statistically significant (p< 0.05).

Table-VI shows that scores of all domains of quality of life were lower among doctors who were in fear of future economic struggle than who were not. But in case of environmental health domain, p value was 0.015(<0.05) that was statistically significant .So it indicated that fear of future economic struggle caused statistically significant lower environmental health among doctors in COVID-19 pandemic

Discussion:

Covid-19 pandemic had various impacts on a doctor's life. Among 100 doctors, 77% of respondents were married, 20% were unmarried, 3% were divorced. In this study there was no statistically significant difference in perception of quality of life among different marital statuses of the doctors. Han et al., 2014, conducted a large (594,202 participants) community health survey in South Korea. They concluded that there was a significant relationship between marital status and quality of life. Quality of life was better for married than unmarried or divorced persons.² Though in this study most of the scores of domain of married doctors were more than divorced or unmarried doctors but not statistically significant. Because, that study was done before COVID-19 pandemic. Moreover, it may be due to married doctors had to be concerned about economic security, social wellbeing's of family and worried about being infected by COVID-19 virus of their husband/wife or children during COVID-19 pandemic.

In this study, 45% doctors faced current economic struggle and 62% feared of economic struggle in future due to pandemic. In the present study, 45% doctors faced current economic struggle and 62% feared of economic struggle in future due to pandemic. Bodrud-Doza et al. 2020, suggested that lockdown in Bangladesh due to the COVID-19 pandemic increased economic burden, and loss of GDP despite the resuming of industrial operations. It has created psychosocial and socio-economic insecurity among people due to the loss of lives and livelihoods in all most all classes of people.³ Bhuiyan et al. 2020, also suggested that 70% of the people in Bangladesh live in lower socio economic condition. COVID-19 crisis caused extreme economic fallout among Bangladeshi people all professions.⁴

Here, four domains of quality of life- physical, psychological, social relationships and environmental domains were assessed by WHOQOL-BREF scale. A major finding of this study was that quality of life was low in all domains of doctors. In this study mean scores of physical health, psychological, social relationships, and environmental domain were 56.03 ± 4.35 , 56.50 ± 3.24 , 58.14 ± 1.75 , 50.04 ± 5.57 , respectively. According to WHOQOL-BREF scale, higher the mean scores better the quality of life. A study done by Tsusumi et al. 2006, found that mean scores of physical health, psychological, social relationships, and environmental domain of WHOQOL-BREF were approximately 69, 60, 65, 56 respectively for adult people of Dhaka city.⁵ Here it was found that mean scores of our study

were even lower than mean scores of adult people of Dhaka city before COVID-19 pandemic.

Gholami et al. 2013, conducted a cross-sectional study on 522 doctors of Neyshabur health-care centers from May to July 2011 in Neyshabur, Razavi Khorasan province, Iran. This indicates that all the four domains (physical health, psychological, social relationships and environmental domain) of quality of life of doctors were extremely low during corona pandemic in comparison to doctor before pandemic.⁶ Though setting were different.

Among the four domains, the environmental domain was mostly affected in COVID-19 pandemic. There was statistically significant difference in perception of quality of life between doctors who were in current economic struggle and who were not. There was also statistically significant difference in perception of quality of life between doctors who were in fear of future economic struggle and who were not. Those who were in fear of future financial crisis had significantly lower environmental health scores than who were not. This result was consistent with the result of study done by Liu et al. 2020 in Wuhan.⁷ Corona pandemic caused financial crisis, hampered freedom, physical safety, and security. Pandemic reduced accessibility and quality of health and social care. It negatively changed home environment and decreased participation in and opportunities for recreation and leisure activities. Lock down created problem in movement and going to work place.⁸ This is why environmental domain was mostly affected.

There was no statistically significant difference in perception of quality of life between COVID-19 test positive physicians and COVID-19 test negative physicians. In this study, no statistically significant difference was found in WHOQOL-BREF scores of four domains of quality of life between COVID-19 test positive physicians and COVID-19 test negative physicians. This study was done during second or third wave of COVID-19 pandemic in Bangladesh. During that time psychological resilience and coping behaviors were developed among health care workers (HCW). Social supports were also increased. Labrague, L.J. 2021, found in a study that despite the threat caused by the new virus and the pandemic's mental health consequences, HCWs reported having moderate to high levels of psychological resilience. Interestingly, the use of religious coping mechanisms—such as reciting the Quran for Muslims—had been identified as an effective strategy to reduce stress, anxiety and their adverse effects during the height of the pandemic. As a

coping strategy, prayer provided context, social connection and inner strength, making an individual capable of managing stress more effectively.⁹ For this reasons neither very poor perception of quality of life nor very dissatisfied about health were found.

In this study, there was no statistically significant difference in perception of quality of life between male and female doctors. But WHOQOL-BREF Environmental health score was significantly lower in male than female doctors. Though Aziz khan et al.2021, assessed quality of life and emotional well-being among healthcare workers during the COVID-19 pandemic in Iran and found women had a higher level of burn out than men (P=0.003).¹⁰ López-Atanes et al.2021, concluded that women were at risk of higher psychological distress and worse quality of life within the medical workplace during corona pandemic in Spain.¹¹ So, it indicated that our study results were inconsistent with above studies. This variation can be explained by different study set up, and different culture. Moreover, in Bangladesh, there is strong family bonding, shared responsibility, economic support, social support for female doctors. Husband and other family members are cooperative, friendly.

So, the present study revealed that COVID-19 pandemic deleteriously impacted on quality of life of doctors in relation to various socio-demographic characteristics which were reflected on the domain scores of the WHOQOL-BREF scale.

Conclusion:

The results of the study concluded that the quality of life of doctors were impaired during COVID-19 pandemic. The environmental domain was most impaired among the four domains of WHOQOL-BREF scale. In addition WHOQOL-BREF environmental health score was significantly higher in female than male doctors. Significantly poor perception of quality of life were found among doctors who were either in current or in fear of future economic struggle. Those who had current or in fear of future economic struggle had significantly lower environmental health scores.

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