Original Article

QUALITY OF LIFE OF COVID-19 PATIENTS ATTENDING SELECTED POST-COVID UNITS

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ABSTRACT

Background: Disease process and its outcome can create impacts on human life; it also impairs quality of life (QoL). During the COVID-19 pandemic situation, a devastating impairment of quality of human life has been occurred over the world. This study aimed to state the quality of life of COVID-19 patients attending post-COVID units of Dhaka Medical College Hospital and Bangabandhu Sheikh Mujib Medical University, Dhaka.

Methods: A cross-sectional study was conducted among 90 COVID-19 Patients (post-COVID period) in post COVID unit of Dhaka Medical College Hospital and Bangabandhu Sheikh Mujib Medical University by pretested structured questionnaire, from July 2021 to December 2021, using a convenient sampling method. Data were collected through face-to-face interviews.

Results: The majority of the respondents (46.7%) were within the 30 to 39 years of age group. In this study about 73.3% of respondents lead poor quality of life after recovery from COVID-19. The findings revealed that, Post COVID depression history of the respondents was associated with the quality of life of the respondents after recovery from COVID-19 (p=0.001). The findings also revealed that the type family of the respondents was associated with the quality of life of the respondents after recovery from COVID-19 (p=0.001). Those who were not admitted into hospital during COVID-19 period maintain good quality of life after recovery from COVID-19 than those who were admitted on hospital during COVID-19 period (p=0.006). Inferential statistics were done at a 95% confidence interval and 5% level of significance.

Conclusions: This study described state of quality of life of COVID-19 patients attending on post-COVID units. It was found that near about three fourth of the respondents seemed that their quality of life became poor after recovery from COVID-19.

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INTRODUCTION

In human history, it is generally zoonosis constitute most of the widespread outbreaks, resulting from the domestication of animals. Cholera, bubonic plague, smallpox, and influenza are some of the most brutal killers in human history. Among the outbreaks of these various diseases are those defined as pandemic, especially smallpox, which throughout history, has killed between 300-500 million people in its 12000 years existence, from 1346 to 1353 an outbreak of the Plague ravaged Europe, Africa, and Asia, with an estimated death toll between 75 and 200 million people, the third major outbreak of Cholera in the 19th century lasted from 1852 to 1860. Like the first and

second pandemics, the Third Cholera Pandemic originated in India, spreading from the Ganges River Delta before tearing through Asia, Europe, North America and Africa and ending the lives of over a million people, HIV/AIDS was first identified in Democratic Republic of the Congo in 1976, HIV/AIDS has truly proven itself as a global pandemic, killing more than 36 million people since 1981 [1]. And at last, since December 2019, there has been an outbreak of pneumonia of an unknown aetiology that was first reported in Wuhan, Hubei Province, China [2]. Following the outbreak, a novel coronavirus, SARS-CoV-2, was identified as the causative virus for the pandemic in China and other parts of the world by the World Health Organization (WHO [3]. By 11 February 2020, there were 43,103 confirmed cases of COVID-19, and of these, 42,708 cases (99.1%) were from China [4]. A comprehensive search from Chinese and worldwide official websites and announcements was performed between 1 December 2019 and 9:30 am 26 January 2020 (Beijing time). A latest summary of 2019-nCoV and the current outbreak was drawn. Up to 24 pm, 25 January 2020, a total of 1975 cases of 2019-nCoV infection were confirmed in mainland China with a total of 56 deaths having occurred [5]. As these data indicates, China has been severely affected by the COVID-19, which has been a major public health disaster [6]. COVID-19 has been considered a relative of severe acute respiratory syndrome (SARS), which has the possibility of transmission from animals to humans [7]. Currently, it is still unclear when the pandemic will reach its peak. However, the SARS-CoV-2 infection has been associated with contact with a local seafood vendor in Wuhan that illegally sold some wildlife animals including bats [8]. In Bangladesh more than 5 lakhs people has been affected and near about 8 thousand people died by COVID-19 disease. The long durable existence of this disease outbreak creates unseen impact over the quality of life of affected patients in different countries. Bangladesh is not out of that. Disease process and outcome create impact on human life according to the duration and severity of that disease. The Constitution of the World Health Organization (WHO) defines health as 'A state of complete physical, mental, and social well-being not merely the absence of disease' that means, this follows that the measurement of health and the effects of health care must include not only an indication of changes in the frequency and severity of diseases but also an estimation of wellbeing and this can be assessed by measuring the improvement in the quality of life related to health care. The quality of life of human being depends on their coping capability during disease period and condition of the period of rehabilitation after the disease. However, few studies have reported the impact of the COVID-19 pandemic on mental health or quality of life in mainland China, even though the pandemic has severely affected China and many other parts of the world [9].

METHODS

Study design and settings
This hospital based cross-sectional study was undertaken to determine the level of quality of life of COVID patients on COVID unit at Dhaka Medical College Hospital (DMCH) and Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh.

Participants were conveniently selected 90 patients aged ≥18 years, and who was recovered from COVID-19 and admitted purposively or took treatment in the selected hospitals.

Data collection procedures
The studied participants were interviewed by a pretested semi-structured questionnaire through the face-to-face interview on January 2021. Pre-test was done among the post-COVID patients came in the post-COVID unit at 500 Bed Mugda General Hospital, Dhaka, Bangladesh.

Statistical analysis
Collected data were checked, edited, coded, and recoded by using IBM SPSS v25. Descriptive statistics such as mean, standard deviation and percent were computed for continuous variables of the participants. Chi-square was used to assess the significance of

associations between two nominal variables and a p-value of <0.05 at a 95% confidence interval was taken as significant. The results were presented in tables and chart.

Ethical approval
Informed written consent was obtained from each participant. Ethical approval was obtained from the Institutional Review Board (IRB) of the National Institute of Preventive and Social Medicine (NIPSOM), Dhaka 1212, Bangladesh. **(NIPSOM/IRB/2020/1225)**

RESULTS

Table 1 describes the socio-demographic characteristics of the post-COVID patients. The mean age of the post-COVID patients was 37.4±8.3 years and most of them (46.7%) were from the age group 30-39 years. Most of the patients were male (59.0%) and married (90.0%). Two-thirds of the patients (66.7%) completed graduation and above level, and service

holders as occupational state. Nearly three-fourths of the patients (74.4%) came from nuclear family. The mean of average monthly income was 52,485.8±18,208.2 taka.

Figure 1 portrays the post-COVID physical syndromes. The most prevalent symptoms were weakness (83.3%), cough (70.0%), headache (37.8%), and palpitations (27.8%).

Figure 2 shows the post-COVID psychological syndromes. The most prevalent symptoms were insomnia (67.8%), depression (63.3%), vertigo (42.2%), lack of concentration (36.7%) and anxiety (36.7%).

Table 2 demonstrates the different activities related to the QoL of the post-COVID patients. Regarding working hours, about two-thirds of the patients (73.3%) were able to works 8-12 hours daily before COVID positive, but in post-COVID period one-third of the patients (33.3%) were able to works same duration. Regarding physical exercise, about two-thirds of the patients (74.4%) did exercise regularly, but in post-COVID period it's declined on 44.4%. Cent percent patients (100%) were physically active before COVID positive, but in post-COVID period dependency among the patients were increased 37.8%. Regarding sleep pattern, about cent percent patients (98.9%) had a regular sleep pattern, but it's became 26.7% after COVID recovery.

Figure 3 illuminates the levels of QoL of the post-COVID patients. The majorities of the patients (86.7%) lead a good quality of life before COVID, and about two-thirds of the patients (73.3%) lead a poor quality of life in post-COVID period.

Table 3 interprets that the quality of life of the post-COVID patients were significantly associated with family type (p=0.001), post-COVID anxiety (p=0.001), and post-COVID depression (p=0.006). The QoL was poor among the patients belongs to nuclear family (83.6%), and had a history of anxiety (100%), and depression (96.5%).

Table 1: Socio-demographic characteristics of the patients (n=90)

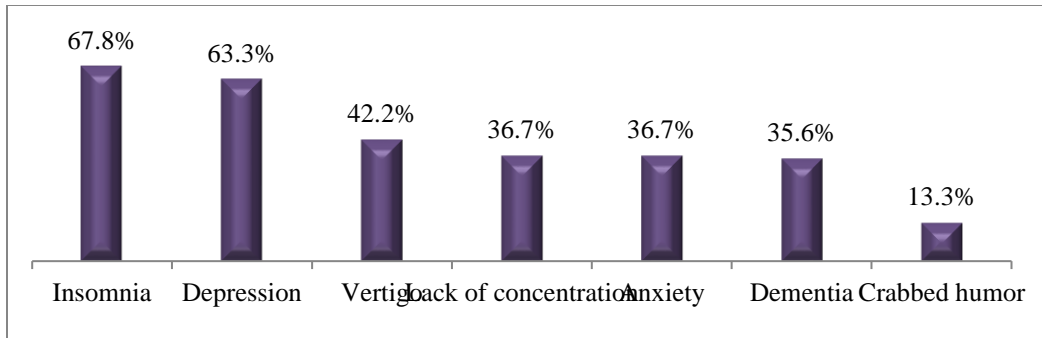| Traits		Frequency (n)	Percent (%)
Age groups (years)	18-29	13	14.4
	30-39	42	46.7
	40-49	12	13.3
	>50	23	25.6
	Mean±SD	37.4±8.3	
Sex	Male	53	59.0
	Female	37	41.0
Marital state	Married	81	90.0
	Single	9	10.0
Education	Below graduation	30	33.3
	Gradation and above	60	66.7
Occupation	Service holders	60	66.7
	Homemakers	14	15.4
	Businessmen	13	14.3
	Students	3	3.3
Family type	Nuclear	67	74.4
	Extended	23	25.6
Monthly family income (Taka)	≤40,000	13	14.4
	40,001-60,000	39	43.3
	>60,000	38	42.2
	Mean±SD	52,485.8±18,208.2	

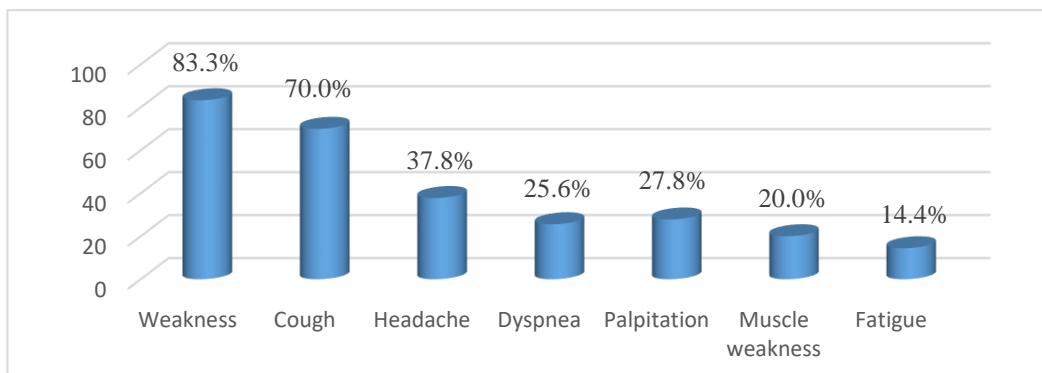**Figure 1: Post-COVID-19 physical syndromes**

Figure 2: Post-COVID-19 psychological syndromes

Table 2: Activities related to the QoL of the patients (n=90)

|		Before COVID positive		After recovery	
		Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Working hours	1-4	6	5.6	35	38.9
(hours)	4-8	17	18.9	25	27.8
	8-12	67	73.3	30	33.3
	Mean±SD	±3.68		±2.87	
Physical exercise	Yes	67	74.4	40	44.4
	No	23	25.6	50	55.6
Physical condition	Active	90	100	56	62.2
	Dependent	0	0	34	37.8
Sleep pattern	Regular	89	98.9	28	31.1
	Interrupted	1	1.1	62	68.9
Quality of life	Good	78	86.7	24	26.7
	Poor				
		12	13.3	66	73.3
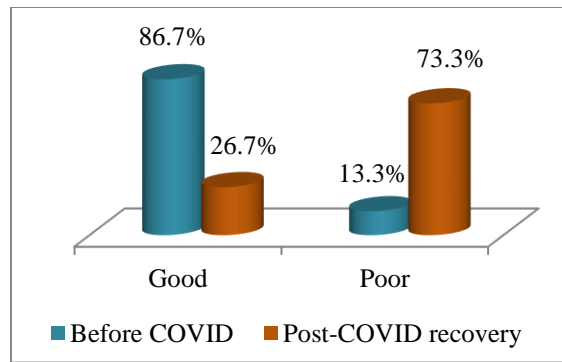
Figure 3: Levels of QoL of the post-COVID patients (n=90)

Table 3: Association of QoL with different attributes of post-COVID patients (n=90)

Attributes	Quality of life			χ2 value	p-value
	Good	**Poor**	**Total**		
	n(%)	n(%)	n(%)		
Family type					
Nuclear	11(16.4)	56(83.6)	67(100)	14.082	*0.001
Extended	13(56.5)	10(43.5)	23(100)		
Post-COVID anxiety					
Yes	0(0.0)	33(100)	33(100)	14.393	*0.001
No	16(34.8)	30(65.2)	46(100)		
Post-COVID depression					
Yes	2(3.5)	55(96.5)	57(100)	7.474	*0.006
No	14(63.6)	8(36.4)	22(100)		

*Statistically significant value

DISCUSSION

This cross-sectional study was carried out over the patients attending in post COVID unit at DMCH and BSMMU to determine the state of the quality of life of COVID-19 patients after their recovery from COVID-19. It was carried out for a period of one year from February 2021 to June 2021. The desired data were collected by using semi-structured questionnaire. Quality of life-based questionnaire were made by WHOQOL-BREF questionnaire. The significant findings of the study were discussed according to analysis of the tables and figures.

According to the study 42(46.7%) respondents age was between 30 to 39yrs. In this study 53(58.9%) of respondents were male where in another study they found 50.2% of respondents were male [10]. 81(81%) of respondents were married and 81(81%) were Muslim, 60(66.7%) of them completed their graduation, about 29(31.9%) were on government job and 27(29.7%) were on private job, 37(42.2%) of them earned above 60,000 takas. The result shown that 44(48.9%) of respondents need hospital admission and

39(45.6%) required oxygenation, 75(83.35%) developed post COVID weakness and 63(70%) of them developed cough, 61(67.8%) of them developed post COVID insomnia and 57(63.3%) developed depression. The study also shown that 67(73.3%) of respondent's had 8-12hrs working capability in pre COVID period; that declined at 30(33.3%) in post COVID period. In pre COVID period 67(74.4%) respondents did exercise where in post COVID period only 40(44.4%) did make the exercise. The result also shown that In post COVID period 62(68.9%) developed interrupted sleep, 52(57.8%) were dissatisfied with their health, 51(56.7%) gave a little concentration in their everyday life, 50(55.6%) were dissatisfied with their working place, 56(62.2%) had a little amount of money to meet their need and 66(73.3%) of them seemed their quality of life is poor. In this study 63.3% of respondents developed depression due to pandemic situation which hamper their quality of life. But in another study 52.1% of respondents were developed depression [9]. In this study we also found 44.4% of respondents spend their time in exercising but in their study, they found 59.7% of respondents did make their exercise [9]. The result

was not similar probably because of different lifestyle maintenance in different geographical area.

CONCLUSION

This study described state of quality of life of COVID-19 patients attending on post COVID units. The study was conducted in post COVID units at Dhaka medical college hospital and Bangabandhu Sheikh Mujib Medical University. It was found that near about half of the respondents age was between 30-39 years, about three fourth respondents completed their graduation, near about half of the respondent family income was above 60,000 takas. About half of the respondents had the history of hospitalization and oxygen requirement. More than three fourth of the respondents developed weakness and near about three fourth respondents developed insomnia, cough, depression and dependence in their daily life after recovery from COVID-19. More than half of the respondents were dissatisfied with their health, working place environment, condition of living place, access of health care services, sleep pattern, quantity of money to meet needs after recovery from COVID-19. Near about three fourth of the respondents seemed that their quality of life became poor after recovery from COVID-19. Study found the lack of post COVID units and lack of advertisement about post COVID units. Findings from the study can be useful to create the concentration of the policy maker as well as government by establishing more effective and specialized follow-up centre over the country, Thus the people can get proper follow-up care and retain their quality of life.

Recommendations

Number of the post COVID units should be increased. Establishment of more counselling centre for patients for life style modification should be institutionalized. Specialized follow up centre should be established.

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