

Knowledge And Attitude Towards COVID-19 Patients Management Among The Nurses In A Selected Tertiary Care Hospital In Bangladesh

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ABSTRACT

A cross-sectional study was conducted among a total 105 nurses who were working at different COVID-19 dedicated hospitals in Dhaka city to know their level of knowledge and attitude towards the management of COVID-19 patient. The mean age of the respondent's was 31.56 ± 4.859 years. Of them 82.9% were female and 76.2% were married. By professional qualification, 54.3% of the respondents completed their diploma in Nursing followed by 27.6% of BSc in Nursing and rest 18.1% completed their Masters. Among the respondents, 56.2% had professional experience of more than 5 years, followed by 25.7% of 3-5 years and 18.1% respondents have less than 3 years of professional experience. It was learned that the mean monthly income of these respondents was 30595.24 ± 5337.23 BDT. Among the respondents, 71.4% had excellent knowledge level whereas 28.6% had been considered as with good knowledge level. By attitude, 50.5% of the total respondents had satisfactory level of attitude scoring 41 – 60, 39% had poor level of attitude scoring up to 40, 8.6% had good attitude scoring 61-80 and 1.9% had excellent attitude scoring 80-100. Statistically significant better knowledge was found among female respondents over the male and respondents having Diploma in nursing degree over the respondents having Graduate and or Masters Group. there is no significant difference in attitude level between individuals aged up to 30 years and those above 30 years and between individuals with a diploma in nursing and those with graduate and master's degrees, but have a significant difference between males and females). Refreshment continual medical education program on COVID -19 patient management for the nurses is highly recommended.

Key words: COVID -19, Nurses, Knowledge and attitude, Bangladesh

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I. INTRODUCTION

COVID-19 is the world's largest and longest pandemic causing severe acute respiratory syndrome¹, and it is continuing. Approximately, 20% of COVID-19 cases had experienced respiratory distress syndrome, sepsis, septic shock, and organ failure². In response to this serious situation, COVID-19 was declared as a public health emergency of international concern by the World Health Organization (WHO) on January 30 and called for collaborative efforts of all countries to prevent the rapid spread of COVID-19³. It was first noticed in December 2019, among the patients with pneumonia in Wuhan city, China and considered to be as the significant health problem throughout the world⁴. The first case of COVID-19 disease was reported in Bangladesh on March 8, 2020 by the Institute of Epidemiology Disease Control and Research (IEDRC) of Bangladesh^{5,6}. In very short period the disease has spread out across the country and observed the first death due to COVID-19 on March 18, 2020⁷. Nurses are at the frontline of COVID-19 pandemic fighter and are exposed to, not only infection with COVID-19 due to their frequent exposure to infected individuals, but also psychological distress, long working hours, fatigue, occupational stigma and physical violence⁸. Indeed, nurses' inadequate knowledge, attitude and practice can delay recognition and handling of potential COVID-19 patients during the pandemic period. Nurses have an effective role in the management of COVID-19 patients. All nursing and midwifery staffs are fundamental to informing the public and reassuring them about the COVID-19 outbreak. This study aims to

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assess the level of Nurse’s knowledge and attitude towards COVID-19 Patients Management in a Selected Tertiary Care Hospital in Bangladesh.

II. METHODS AND METHODOLOGY

This cross-sectional descriptive study was conducted from May to August 2021 using a self-administered questionnaire to see the level of nurses’ knowledge, attitude and practice with regard to provide nursing care for COVID-19 patients at in National Institute of Cardiovascular Diseases (NICVD), Dhaka Bangladesh (one of the COVID-19 dedicated hospital in Dhaka City). A total of 105 nurses participated in this study. A semi-structured interviewer administered questionnaire having a total of 20 questions (6 for knowledge and 7 for attitude adapted and modified from previously published literature regarding viral epidemics related to MERS-CoV disease.) was developed to collect data. The attitude was indicated on a 3-point Likert scale as follows 0 (“Disagree”), 1 (“Undecided”), and 2 (“Agree”). The total score was calculated by summing the raw scores of the six questions ranging from 0 to 12, with an overall greater score indicating more positive attitudes towards COVID-19. Knowledge level was calculated by adding the score against each question individually and then made percentage. The level of knowledge was ranked as poor (up to 40%), satisfactory (41-60%), good (61-80%) and excellent (81-100%). Similarly practice level was calculated. Attitude was also calculate adding the scores and ranked as negative (40%), nor negative nor positive (41-61%) and positive (61-100%). After collection of data, all interviewed questionnaires were checked for completeness, correctness and internal consistency to exclude missing or inconsistent data and those were discarded.

III. FINDINGS

Table 1: Distribution of respondents by socio-demographic variables

	Frequency	Percentage
Age group		
20 - 25 years	12	11.4
26 - 30 years	36	34.3
31 - 35 years	38	36.2
Above 35 years	19	18.1
Mean 31.56±4.859 years		
Gender		
Male	18	17.1
Female	87	82.9
Marital status		
Married	80	76.2
Unmarried	25	23.8

Table -1 shows that among the total 105 respondents, 36.2% were of 31 - 35 years age, followed by 34.3% within 26 - 30 years, 18.1% were of above 35 years age and 11.4% were within 20 - 25 years age. Among the respondents 82.9% were female and 76.2% were married.

Table 2: Distribution of respondents by professional qualification and experience

Professional qualification	Frequency	Percent
Diploma in Nursing	57	54.3
BSc in Nursing	29	27.6
Masters	19	18.1
Professional experience		
Less than 3 years	19	18.1
3 - 5 years	27	25.7
More than 5 years	59	56.2

Table-2 shows the respondents’ distribution based on professional qualifications where 54.3% completed their diploma in Nursing followed by 27.6% of BSc in Nursing. The rest 18.1% completed their

Masters. By professional experience 56.2% have more than 5 years; followed by 25.7% of 3-5 years and 18.1% respondents have less than 3 years.

Table 3: Distribution of respondents by correct answers of knowledge related issues (percentages are in parentheses)

Knowledge related questions	Frequency of answers						
	3	4	5	6	7	8	9
Symptoms of COVID-19 infection (9)			2(1.9)	10(9.5)	11(10.5)	26(24.8)	56(53.3)
Most at risk for COVID-19 infection (7)			28(26.7)	25(23.8)	52(49.5)		
Suspect patient need to COVID test (1)			105 (100)				
Mild symptoms of Corona (7)		2(1.9)	6(5.7)	19(18.1)	78(74.3)		
Symptoms of moderate corona patient (8)	2(1.9)		4(3.8)	10(9.5)	12(11.4)	77(73.3)	
Symptoms of acute corona patient (7)			4(3.8)	21(20.0)	20(19.0)	60(57.1)	

On the question ‘Symptoms of COVID-19 infection’, out of nine options, 53.3% answered all followed by 24.8% answered 8 and 10.5% answered 7 options.,

Table 4: Distribution of respondents by Knowledge level and age group, gender, Professional education (percentages are in parentheses)

Knowledge Level	Age Group		Test of significant
	Age up to 30 years	Age above 30 years	
Score 61 - 80 (Good)	14 (29.2)	16 (28.1)	$\chi^2 = 0.015$
Score more than 81 (Excellent)	34 (70.8)	41 (71.9)	Fisher test 0.536
	Gender		
	Male	Female	
Score 61 - 80 (Good)	10(55.6)	20(23.0)	$\chi^2 = 7.751$ p= 0.005
Score more than 81 (Excellent)	8(44.4)	67(77.0)	
	Professional education		
	Diploma in Nursing	Graduate and or Masters	
Score 61 - 80 (Good)	8(14.0)	22(45.8)	$\chi^2 = 12.980$
Score more than 81 (Excellent)	49 (86.0)	26(54.2)	p= 0.000

Table- 4 shows that 71.4% of the total 105 respondents have excellent knowledge level scoring more than 81 whereas 28.6% have scored between 61-80 which has been considered as good knowledge level. Among the respondents of up to 30 years age group, 29.2% had good level knowledge and 70.8% had excellent level knowledge. Whereas among the respondents of up to 30 years age group, 28.1% had good level knowledge and 71.9% had excellent level knowledge. No significant difference was found among the both group of respondents on having either good or excellent level of knowledge on COVID-19 ($p>0.05$). It was also indicated that among the male respondents, 55.6% had good level knowledge and 44.4% had excellent level knowledge. Whereas among the female respondents, 23.0% had good level knowledge and 77.0% had excellent level knowledge. Statistically significant difference was found among the male and female respondents on having good or excellent level of knowledge on COVID-19 ($p<0.05$). Among the respondents having a Diploma in Nursing degree, 14.0% had good level knowledge and 86.0% had excellent level knowledge. Whereas among the respondents having Graduate and or Master’s degree, 45.8% had good level knowledge and 54.2 % had excellent level knowledge. Statistically significant difference was found among the both group of respondents on having good or excellent level of knowledge on COVID-19 ($p<0.05$). Respondents having Diploma in Nursing degree had excellent level of knowledge than that of Graduate and or Masters Group.

Table 5: Distribution of respondents by attitudes issues (percentages are in parentheses)

Attitude Statement	Attitude		
	Disagree	Agree	Undecided
Uncomfortable to think about Covid-19	52 (49.5)	22 (21.0)	31 (29.5)
Afraid of losing life while managing COVID-19 Patient	56(53.3)	22(21.0)	27(25.7)
Monitoring vital signs and oxygen saturation is sufficient for COVID-19 patient management	105 (100)		
Isolation of COVID-19 patients at designated hospitals is not necessary		105 (100)	
A mild case should be treated at home	103(98.1)	2(1.9)	
Prevention in spreading of coronavirus infection to healthcare providers is very vital		99(94.3)	6(5.7)

Table- 5 describes that 100% of respondents disagreed with the fact that Monitoring vital signs and oxygen saturation is sufficient for COVID-19 patient management and agreed that Isolation of COVID-19 patients at designated hospitals is not necessary. A total of 105 respondents has mixed feelings about being uncomfortable thinking about Covid-19 (49.5%- Disagree, 21.0%- Agree, and 29.5%- Undecided). 53.3% of them are not afraid of losing life due to handling COVID-19 patients whereas 25.7% could not decide and 21.0% showed some fear of managing COVID-19 Patients. 98.1% think that a mild case should not be treated at home but 94.3% responded positively that Prevention in spreading of coronavirus infection to healthcare providers is very vital. According to 94.3% of respondents, providing information about COVID-19 and its management to the patient is not part of job of nurse.

Table 6: Distribution of respondents by attitudes issues and age group, gender, Professional education (percentages are in parentheses)

Attitude level	Age Group		Test of Significant
	Age up to 30 years	Age above 30 years	
Score up to 40 (Poor)	19 (39.6)	22(38.6)	$\chi^2 = 2.046$ p= 0.563
Score 41 - 60 (Satisfactory)	24(50.0)	29(50.9)	
Score 61 - 80 (Good)	5(10.4)	4(7.0)	
Score 81 - 100 (Excellent)	0(0.0)	2(3.5)	
	Gender		$\chi^2 = 10.616$ p= 0.014
	Male	Female	
Score up to 40 (Poor)	13(72.2)	28 (32.2)	
Score 41 - 60 (Satisfactory)	5 (27.8)	48 (55.2)	
Score 61 - 80 (Good)	0(0.0)	9(10.3)	
Score 81 - 100 (Excellent)	0 (0.0)	2(2.3)	
	Professional education		$\chi^2 = 1.849$ p= 0.604
	Diploma in Nursing	Graduate and Masters	
Score up to 40 (Poor)	21(36.8)	20(41.7)	
Score 41 - 60 (Satisfactory)	29(50.9)	24(50.0)	
Score 61 - 80 (Good)	5(8.8)	4(8.3)	
Score 81 - 100 (Excellent)	2(3.5)	0(0.0)	

Table- 6 shows that 50.5% of the total 105 respondents had satisfactory level of attitude scoring 41 – 60, 39% had poor level of attitude scoring up to 40, 8.6% had good attitude scoring 61-80 and 1.9% had excellent attitude scoring 80-100. No statistical significance difference of attitude level between age groups. A higher proportion of females (55.2%) scored in the satisfactory range, while a higher proportion of males (72.2%) scored in the poor range. This finding also indicates that there is no significant difference in attitude level between individuals aged up to 30 years and those above 30 years and between individuals with a diploma in nursing and those with graduate and master's degrees(p>0.05), but have a significant difference between males and females (p<0.05).

IV. DISCUSSION

A cross-sectional study was conducted among a total 105 nurses who were working at different COVID-19 dedicated hospitals in Dhaka city to know their level of knowledge and attitude towards the management of COVID-19 patient. The mean age of the respondents was 31.56 ± 4.859 years, 82.9% were female and 76.2% were married. By professional qualification, 54.3% of the respondents completed their diploma in Nursing followed by 27.6% of BSc in Nursing and rest 18.1% completed their Masters. Among the respondents, 56.2% had professional experience of more than 5 years; followed by 25.7% of 3-5 years and 18.1% respondents have less than 3 years of professional experience.

The findings of this current study suggest that a majority of the study nurses had an excellent level of knowledge on COVID-19, with a smaller proportion having a good level of knowledge. The study also indicates that age was not a significant factor in determining the level of knowledge among the respondents ($p > 0.05$). This study also indicated that a higher proportion of female respondents had an excellent level of knowledge compared to male respondents, whereas a higher proportion of male respondents had a good level of knowledge compared to female respondents ($p > 0.05$). These results are consistent with several other studies that have assessed the knowledge level of healthcare professionals on COVID-19. For instance, study conducted in Pakistan found that the majority of healthcare workers had good knowledge of COVID-19, with a smaller proportion having excellent knowledge⁹. Similarly, study conducted in Ethiopia¹⁰ found that the majority of healthcare workers had good knowledge of COVID-19. However, study conducted in Saudi Arabia¹¹ found that only 55.8% of healthcare workers had a good level of knowledge on COVID-19 and females had higher knowledge scores compared to males. Study conducted in Bangladesh¹² found that females had better knowledge on COVID-19 compared to males. This current study also observed that nurses having Diploma in Nursing degree had excellent level of knowledge than that of Graduate and or Masters Group. This result is contrary to what one might expect, as nurses with higher academic qualifications would be expected to have a deeper understanding of the subject matter. One possible explanation for this finding is that nurses with a Diploma in Nursing degree may have had more practical experience and training in infection prevention and control, which would have contributed to their higher knowledge levels on COVID-19 ($p < 0.05$). Nonetheless, this current study's finding of a significant difference in attitude level between males and females suggests that gender may be an important factor to consider in nursing education and training programs, as well as in healthcare workplace settings. This current study found that there is no significant difference in attitude level between age groups, between individuals with a diploma in nursing and those with graduate and master's degrees and between males and females. The lack of significant difference in attitude level between age groups suggests that nursing education and training programs should target both younger and older nurses equally, as both groups appear to have similar attitudes towards nursing COVID patients. However, higher levels of education may not necessarily translate into more positive attitudes towards nursing. It is important to note that this finding does not necessarily mean that higher education is not valuable in nursing. Gender-related biases and stereotypes may still exist in some healthcare workplaces, which may affect how nurses are perceived and valued.

V. CONCLUSION

This study concludes that among the study population, 71.4% had excellent knowledge level whereas 28.6% had good knowledge level on COVID-19 patient management. Statistically significant better knowledge was found among female respondents over the male and respondents having Diploma in nursing degree over the respondents having Graduate and or Masters Group. By attitude almost all had positive attitude towards COVID-19 patient management with some difference on some specific statement between male-female and age group. On asking the practices issues, all the respondents were found to do all the issues related to COVID-19 patient management. Refreshment continual medical education program on COVID -19 patient management for the nurses is highly recommended.

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