

Original Research

Level of Knowledge about Covid 19 during Pregnancy.

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Key words: Covid, Respiratory, Pregnant, Transmission.

Article Information:

Received Date: April 22, 2021

Revised Date: Aug 08, 2021

Accepted Date: Oct 22, 2021

Published Date: Dec 03, 2021

Abstract

Introduction: Coronavirus disease (COVID-19) is a respiratory disease. The aim of this study was to assess the level and knowledge and types of attitudes towards COVID-19 among pregnant women attending OPD of Gynecology for an antenatal check-up in Chattogram Medical College Hospital of Bangladesh.

Methods: This was an interview-based cross-sectional study that was conducted at the Department of Obstetric Gynae, Ashiyan Medical College Hospital, Barua Khilkhet, Dhaka, Bangladesh during the period from 1st June to 30th July 2020. In total 100 pregnant women who had an antenatal check-up for their current pregnancy in the hospital during the study period were selected as the study population. All data were processed, analyzed, and deiminated by MS Office and SPSS version 25 as per need.

Result: The majority of the participants were young adults aged between 25-34 years old. Most of them (79%) were housewives. 64% of the participants were of middle economic status. The majority of the participants believed fever and dry cough to be a symptom of COVID-19. 73% believed that pregnant women have a higher risk with COVID-19 than others. 38% thought that COVID is common only in a cold climate, but 49% disagreed with this fact. Proper knowledge of COVID-19 was common in 41% of the participants only. And 35% of the total participants had a positive attitude towards the current pandemic, which was below satisfaction level.

Conclusion: knowledge level of the participants was found satisfactory but the attitude was found lower than the general satisfaction level.

INTRODUCTION

COVID-19 is an emerging respiratory infection that was first discovered in December 2019, in Wuhan city, Hubei Province, China¹. The virus is highly contagious. Fever, dry cough, myalgia, fatigue, and dyspnea are its major clinical manifestation. World Health Organization (WHO) recommended necessary safety measures and interventions to minimize the spread of the disease from one to another area of the world. But, for more effective management of such a ferocious pandemic, some steps like awareness building, ensuring positive attitude, and behavioral changes of people are very essential. SARS-CoV-2 belongs to the larger family

of ribonucleic acid (RNA) viruses, leading to infections, from the common cold to more serious diseases, such as Middle East Respiratory Syndrome (MERS-CoV) and severe acute respiratory syndrome (SARS-CoV)². The main symptoms of COVID-19 have been identified as fever, dry cough, fatigue, myalgia, shortness of breath, and dyspnoea³. Infectious diseases can play a significant role in pregnancy, particularly by affecting maternal and fetal outcomes.⁴ Pre-natal respiratory infections may also result in stillbirth, miscarriage, and preterm delivery.⁵ WHO has dubbed COVID-19 as “the pandemic of the century”

as a result of its extremely rapid widespread in all parts of the world.⁶ Patients infected with COVID-19 can experience various conditions, ranging from a common cold to severe acute respiratory failure.⁷ Preventive measures are the best methods to protect people against this infection, as there are no definite medications available to prevent or cure this virus.⁸ It is of note that pregnant women are more susceptible to developing severe cases of COVID-19 and consequently being admitted to hospitals and intensive care units because of their physiological changes.⁹ Some contributing factors like higher maternal age, presence of comorbidities, and high body mass index have been considered as risk factors for developing severe COVID-19 in expecting mothers.⁹ Moreover, one proven case of transplacental transmission of COVID-19 has also been recorded thus far.¹⁰ SARS also belongs to the same family of COVID-19, with a 25% case fatality rate during pregnancy and various perinatal complications, including disseminated intravascular coagulation, kidney (renal) failure, secondary bacterial pneumonia, sepsis, and abortion.⁷ Besides, the need for mechanical ventilation in pregnant mothers infected with SARS is higher than that for nonpregnant ones.⁷ According to the aforementioned conditions, prevention in the course of this outbreak is very vital for pregnant women. Because both knowledge and attitude can play key roles in the prevention of infectious diseases.¹¹ The present study was conducted on a statistical sample of pregnant women residing in Shiraz, the fifth populous city located in southwestern Iran, to figure out their knowledge and attitude toward COVID-19.

OBJECTIVES

To assess the level and knowledge about COVID-19 among participants.

To assess attitude about COVID-19 among participants.

METHODS

This was an interview-based cross-sectional study that was conducted at the Department of Obstetric Gynae, Ashiyan Medical College Hospital, Barua Khilkhet, Dhaka, Bangladesh during the period from 1st June to 30th July 2020. In total 100 pregnant women who had an antenatal check-up for their current pregnancy in the hospital during the study period were selected as the study population. This

study was approved by the ethical committee of the mentioned hospital. Proper written consent was taken from all the participants before starting data collection. According to the inclusion criteria of this study, only pregnant women from all age groups were included as the study people. On the other hand, according to the exclusion criteria of this study, severely ill patients, unconscious patients, and patients without proper document were excluded from this study. A pre-designed questioner was used in data collection. All data were processed, analyzed, and deiminated by MS Office and SPSS version 25 as per need.

RESULT

Table 1 shows the socio-demographic status of the participants of this study. The majority of the participants were young adults, aged between 25-34 years old. 40% were from the age group of 15-24 years, and only 11% were older than 34 years in age. The majority of the participants were from urban areas. 79% of women were housewives, 16% service holders and only 6% were in business. 64% of the participants were of middle economic status, 32% were from lower economic status, and only 4% were from upper economic status. 67% of the pregnant women had 2 or less children, and 33% had more than 2 children. The present pregnancy was unwanted in 23% of the cases. Almost half the participants had mass media as a primary source of information about covid-19. 31% had social media, 9% received primary information from health workers, and the remaining participants received information from other sources. Table II shows the knowledge level of participants regarding covid-19 facts. This included symptoms and other facts as well. The majority of the participants believed fever and dry cough to be a symptom of COVID-19. 73% believed that pregnant women have a higher risk with COVID-19 than others. On the other hand, 65% did not believe that covid can spread without showing symptoms, and 61% did not think that difficulty in breathing is a symptom of COVID-19. 46% believed runny nose to be a symptom of covid, and 43% did not. Although 75% believed that the whole population was vulnerable to the pandemic, 22% did not think so. The incubation period of covid is 2-14 days, and this was believed by 62%, but 7% did not believe so and 31% had no idea regarding this. Table III depicted some of the beliefs and faiths of the participants. Shockingly, 80% of the participants believed that taking any form of preventive measures meant not believing in the Creator. Another claim that COVID-

19 is a result of our sin, was believed by 54% of the participants. 38% thought that COVID is common only in a cold climate, but 49% disagreed with this fact. Another misconception that COVID is caused by eating haram food was believed by 34% of the participants, and 53% disagreed with this idea. Some of the less believed misconceptions, like COVID-19 only attacks rich people, it's only common in old people, it's only common in white people, was believed by 17%, 27%, and 26% respectively. Table IV showed the average levels of awareness in the participants. Proper knowledge of COVID-19 was common in 41% of the participants only. And 35% of the total participants had a positive attitude towards the current pandemic.

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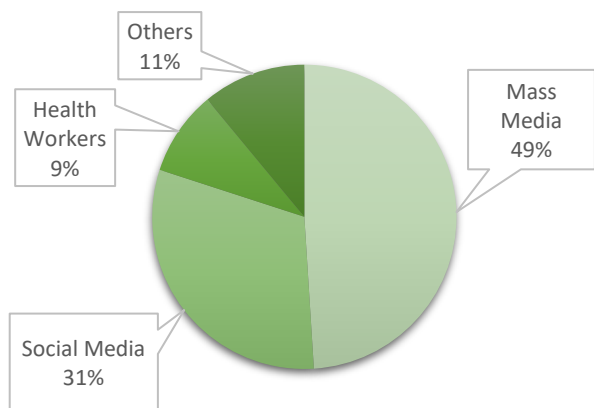


Figure 1: Primary source of information about COVID 19 for participants (n=100)

Almost half the participants had mass media as a primary source of information about covid-19. 31% had social media, 9% received primary information from health workers, and the remaining participants

received information from other sources.

Table 2 shows the knowledge level of participants regarding covid-19 facts. This included symptoms and other facts as well. The majority of the participants believed fever and dry cough to be a symptom of COVID-19. 73% believed that pregnant women have a higher risk with COVID-19 than others. On the other hand, 65% did not believe that covid can spread without showing symptoms, and 61% did not think that difficulty in breathing is a symptom of COVID-19. 46% believed runny nose to be a symptom of covid, and 43% did not. Although 75% believed that the whole population was vulnerable to the pandemic, 22% did not think so. The incubation period of covid is 2-14 days, and this was believed by 62%, but 7% did not believe so and 31% had no idea regarding this.

Table 1: Socio-demographic status of participants (n=100)

Characteristics	n	%
Age in year		
15 - 24	40	40
25 - 34	49	49
35 - 44	11	11
Residence area		
Urban	64	64
Rural	36	36
Occupation		
House wife	79	79
Service	16	16
Business	6	6
Economic status		
Upper	4	4
Middle	64	64
Lower	32	32
Number of children		
≤ 2	67	67
> 2	33	33
Condition of pregnancy		
Wanted	77	77
Unwanted	23	23

Table 2: Knowledge level of participants regarding COVID-19 (n=100)

Statement	Yes (%)	No (%)	Not Sure (%)
Fever is a sign and symptom of COVID-19	74.00%	26.00%	00.00%
Dry cough is a sign and symptom of COVID-19	64.00%	36.00%	00.00%
COVID-19 is caused by virus	78.00%	3.00%	19.00%
Respiratory droplets & near contact are primary transmission route	70.00%	4.00%	26.00%
The incubation period of COVID-19 is 2-14 days	62.00%	7.00%	31.00%
Largely the whole population are vulnerable to the pandemic	75.00%	22.00%	03.00%
Headache is a sign and symptom of COVID-19	43.00%	46.00%	11.00%
Sore throat is a sign and symptom of COVID-19	57.00%	17.00%	26.00%
A runny nose is a symptom of COVID-19	46.00%	43.00%	11.00%
Difficulty in breathing is a symptom of COVID-19	28.00%	61.00%	11.00%
Staying indoors & face mask can prevent transmission of COVID-19	63.00%	6.00%	31.00%
Pre-existing disorders have weak prognostic result if with COVID-19	56.00%	20.00%	24.00%
Without signs and symptoms, COVID-19 patient can still spread it	21.00%	65.00%	14.00%
Pregnant women are at higher risk than others if with COVID-19	73.00%	6.00%	21.00%

Table 3: Attitude and faith of participants regarding COVID-19 (n=100)

Attitude questions	Agree (%)	Disagree (%)	Neutral (%)
COVID-19 is due to our fault or sin	54.00%	32.00%	14.00%
COVID-19 attacks only rich people	17.00%	70.00%	13.00%
COVID-19 is caused by eating haram food	34.00%	53.00%	13.00%
COVID-19 is common only in cold climate	38.00%	49.00%	13.00%
COVID-19 is common only in white people	26.00%	70.00%	04.00%
COVID-19 is common only in old people	27.00%	66.00%	07.00%
Taking preventive measures is not believing in God	80.00%	11.00%	09.00%

Table 3 depicted some of the beliefs and faiths of the participants. Shockingly, 80% of the participants believed that taking any form of preventive measures meant not believing in the Creator. Another claim that COVID-19 is a result of our sin, was believed by 54% of the participants. 38% thought that COVID is common only in a cold climate, but 49% disagreed with this fact. Another misconception that COVID is caused by eating haram food was believed by 34% of the participants, and 53% disagreed with this idea. Some of the less believed misconceptions, like COVID-19 only attacks rich people, it's only common in old people, it's only common in white people, was believed by 17%, 27%, and 26% respectively. Table 4 showed the average levels of awareness in the participants. Proper knowledge of COVID-19 was common in 41% of the participants only. And 35% of the total participants had a positive attitude towards the current pandemic.

Table 4: Average awareness level of participants regarding COVID-19 (n=100)

Awareness parameter	%
Knowledge	41
Positive attitude	35

DISCUSSION

The aim of this study was to assess the level and knowledge and types of attitudes towards COVID-19 among pregnant women, specifically among those who attended OPD of Gynecology for an antenatal check-up in Chattogram Medical College Hospital of Bangladesh. In analyzing the knowledge level of participants regarding COVID-19 we observed, 74%, 64%, 43%, 57%, 46%, and 28% of participants knew respectively that fever, dry cough, headache, sore throat, runny nose, and difficulties in breathing are signs and/or symptoms of COVID-19. About 78% knew that COVID-19 is caused by a virus, 70% of participants knew that respiratory droplets & near contact are primary transmission routes. Besides these, 61% of participants knew that respiratory droplets & near contact are the primary transmission route of COVID-19, 63% of participants knew that, staying indoors & a face mask can prevent transmission of COVID-19. However, only 21% of participants knew that, without signs and symptoms, COVID-19 patients can spread COVID-19, and this 65% did not believe this fact. 73% of participants knew that, pregnant women are at higher risk than others

if with COVID-19. We also observe, some traditional thinking and strong faith in some misconceptions. Some prime examples of misconceptions are “taking preventative measures means not believing in God”, which was a common belief in 80% of the participants. 54% of the participants believed that covid is a form of punishment due to our faults and sins. 34% believed that COVID-19 is caused by eating haram food, but 53% participants did not believe in this. 38% of the participants believed that COVID-19 is only common in cold areas, and 49% disagreed with this belief. Some of the less common misconceptions are “covid is only common in old people”, “covid is only common in white people” which were believed by 27% and 26% of the participants respectively. Only 17% of the participants believed that COVID-19 affects the rich people only, and 70% of participants disagreed with this belief. Finally, according to the correct concept about COVID-19 and denial attitude to any type of preconception we observed, the average knowledge about COVID-19 was found 41% whereas the average positive attitude or concept was found 35%. These findings were supported by surveys conducted in different countries, for example, Nigeria, China, the United States, and Bangladesh, suggesting that pregnant women had acceptable levels of knowledge of COVID-19.¹² This could be the result of efforts made by governmental and non-governmental organizations aimed to educate people through various methods including social media, newspapers, television programs, and short message services. However, these findings were not universal as a study in Thailand¹³ had reported that most Thai women (74.1%) had poor knowledge about COVID-19. Talking about knowledge, the highest knowledge score was found for routes of transmission of COVID-19, which had been correctly answered by 70% of the pregnant mothers. These findings were consistent with the results of another Bangladeshi study¹⁴ in which most Bangladeshi women had adequate knowledge about routes of transmission of COVID-19. This high level of knowledge can be considered as an advantage point because it can lead people to take proper preventive measures. Besides, about two-thirds of the participants in the present study had acceptable knowledge regarding the most common manifestations of COVID-19. Having an acceptable level of knowledge regarding common symptoms of this condition can help people become aware of common symptoms of diseases and on-time referrals to healthcare centers and hospitals, and as a result decreasing the chances of infecting unaffected individuals. Nevertheless, this sector needs special attention as it can act as a double-edged sword. If people refer patients to hospitals for any and all unimportant manifestations of COVID-19, it can result in crowding in the hospitals and burnout among healthcare workers. On

the other hand, referring late to hospitals might give rise to higher rates of severe cases and even higher mortality rates. Similar to the findings of the present study, multiple other studies had revealed that individuals living in urban areas had more knowledge about COVID-19.^{15,16} This might be a result of more access to information technologies. The given results were further supported by other surveys that had shown that occupation, levels of education, and area of residence were predictors of knowledge score^{15,18}. This was further supported by the fact that people with lower levels of education and unemployment had gained lower knowledge score.¹⁵ With reference to occupation, a higher knowledge score could be because of more connections with other people, so there were more concerns about the virus, discussions about it with colleagues, and attempts to get more knowledge to protect themselves and their family. Moreover, a study had demonstrated a direct correlation between knowledge score and income as reported in the present study.¹⁶

LIMITATIONS OF THE STUDY

This was a single-centered study with a small-sized sample. So, the findings of this study may not reflect the exact scenario of the whole country.

CONCLUSION

In this study, the knowledge level of the participants was found satisfactory but the attitude was found below than general satisfactory level. Women’s age, educational status, occupational status, and family status were found related to knowledge of coronavirus outbreak. In addition, age, husbands’ educational status, condition of current pregnancy, and knowledge of outbreak were also the important predictor variables for attitude towards the coronavirus pandemic.

RECOMMENDATION

This study was conducted in a single institute with a small sample size and time frame. For better statistics, the study needs to be conducted with a larger sample size and wide demographics. The knowledge of COVID-19 is still being filtered, and this played a role in the proper knowledge levels of the participants.

REFERENCES

1. Wu F, Zhao S, Yu B, Chen Y-M, Wang W, Song Z-G, et al. A new coronavirus associated with human respiratory disease in China. *Nature*. (2020) 579:265–9. doi: 10.1038/s41586-020-2008-3.
2. Zhou P, Yang X-L, Wang X-G, Hu B, Zhang L, Zhang W, et al. A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature*. (2020) 579:270–3. doi: 10.1038/s41586-020-2012-7.
3. Riou J, Althaus CL. Pattern of early human-to-human transmission of Wuhan 2019 novel coronavirus (2019-nCoV), December 2019 to January 2020. *Eurosurveillance*. (2020) 25:2000058. doi: 10.2807/1560-7917.ES.2020.25.4.2000058
4. Adinolfi M, 1993. Infectious diseases in pregnancy, cytokines and neurological impairment: a hypothesis. *Dev Med Child Neurol* 35: 549–553.
5. Englund JA, Chu HY, 2018. Respiratory virus infection during pregnancy: does it matter? *J Infect Dis* 218: 512–515.
6. World Health Organization, 2020. Situation Reports. Geneva, Switzerland: WHO. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/>. Accessed February 5, 2020.
7. Rasmussen SA, Smulian JC, Lednicky JA, Wen TS, Jamieson DJ, 2020. Coronavirus disease 2019 (COVID-19) and pregnancy: what obstetricians need to know. *Am J Obstet Gynecol* 222: 415–426.
8. Allotey J et al., 2020. Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis. *BMJ* 370: m3320.
9. Vivanti AJ, Vauloup-Fellous C, Prevot S, Zupan V, Suffee C, Do Cao J, Benachi A, De Luca D, 2020. Transplacental transmission of SARS-CoV-2 infection. *Nat Commun* 11: 3572.
10. Swaddiwudhipong W, Lerdlukanavong P, Khumklam P, Koonchote S, Nguntra P, Chaovakiratipong C, 1992. A survey of knowledge, attitude and practice of the prevention of dengue hemorrhagic fever in an urban community of Thailand. *South-east Asian J Trop Med Public Health* 23: 207–211.
11. World Health Organization, 2020. Myth Busters. Geneva, Switzerland: WHO. Available at: https://www.who.int/images/default-source/health-topics/coronavirus/myth-busters/web-mythbusters/mythbuster-4.png?sfvrsn=e163bada_8. Accessed February 5, 2020.
12. Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, Li Y, 2020. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *Int J Biol Sci* 16: 1745–1752.
13. Srichan P, Apidechkul T, Tamornpark R, Yeemard F, Khunthason S, Kitchanapaiboon S, Wongnuch P, Wongphaet A, Upala P, 2020. Knowledge, attitude and preparedness to respond to the 2019 novel coronavirus (COVID-19) among the bordered population of northern Thailand in the early period of the outbreak: a cross-sectional study. *WHO South East Asia J Public Health* 9: 118–125.
14. Farhana M, Mannan D, 2020. Knowledge and perception towards novel coronavirus (COVID 19) in Bangladesh. *Int Res J Business Soc Sci* 6: 76–87.
15. Rahman A, Sathi N, 2020. Knowledge, attitude, and preventive practices toward COVID-19 among Bangladeshi internet users electronic *J Gen Med*, 17: em245.
16. Abdelhafiz AS, Mohammed Z, Ibrahim ME, Ziady HH, Alorabi M, Ayyad M, Sultan EA, 2020. Knowledge, perceptions, and attitude of Egyptians towards the novel coronavirus disease (COVID-19). *J Commun Health* 45: 881–890.

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