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PERCEIVED FEAR AND PREVENTIVE BEHAVIORS OF PREGNANT WOMEN DURING COVID 19 PANDEMIC IN WESTERN NEPAL
Srishti Bajracharya, Saraj Gurung, Binita Khatri,

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ABSTRACT

INTRODUCTION

The perceived fear of COVID-19 is expected to have a significant positive impact on preventive behaviors as it triggers people to prevent themselves against threats. People take necessary actions to engage in preventive behaviors if they perceive high fear of transmission of disease.

MATERIAL AND METHODS

Cross-sectional analytical study was conducted to find out the perceived fear and preventive behaviors of pregnant women during COVID-19 pandemic. One hundred and fifty normal pregnant women attending Antenatal Checkup (ANC) out-patient department and ward of Universal College of Medical Sciences Teaching Hospital (UCMS-TH), Rupandehi were selected by using purposive sampling technique. Structured interview schedule was used for data collection. Descriptive statistics and inferential statistics were used for analysis with Statistical Package for Social Science (SPSS) software version 16.

RESULTS

The study findings revealed that more than half of the respondents had high level of fear regarding COVID-19. Although participants were largely engaged in all preventive behaviors like wearing facemask, hand washing, covering nose and mouth, cleaning and disinfecting and maintaining healthy diet while, maintaining social distance, avoiding public transport, avoiding crowd, exercising regularly and quitting tobacco and alcohol were the least. There was positive correlation between perceived fear and preventive behaviors although it was not proved significantly.

CONCLUSION

The study findings concluded that more than half of the respondents had high level of fear regarding COVID-19. Adequate counseling and reassurance of these pregnant women in the current scenario tends to reduce their fears and increase the probability of adapting preventive measures against the spread of COVID-19.

KEYWORDS

COVID-19, Fear, Pregnant woman, Preventive measures.

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INTRODUCTION

An outbreak of 2019 Novel Corona virus diseases (COVID-19) in Wuhan, China has spread quickly nationwide.[1] It has become a global health threat.[2] As per the rapid progressive spread of this current COVID-19, it is reasonable to expect that pregnant women also have already become infected.[3]

Globally, total cases of COVID 19 are 134,957,021. Among them, 29,18,752 deaths has occurred till April 11, 2021 and 66,92,48,795 vaccine doses has been administered till April 7, 2021.[4] In South East Asia, there are 16,177,826 confirmed cases till date. As per Centers for Disease Control and Prevention (CDC), from January 22 to November 16, 2020, 20,20,39,857 cases were pregnant women.[5] The disease spread has caused 2,000 to 9,450 more maternal deaths worldwide each month.[6] Study done at New York hospitals showed that COVID-19 disease severity in pregnant women was 86% mild, 9.3% severe and 4.7% critical.[7]

In the context of Nepal, between January 23, 2020 to April 12, 2021, 2,80,028 have been affected by COVID-19 where 98,623 are females. Whereas, in Lumbini Province, there are total 31,665 cases, among which 9,976 are females and in Rupandehi district of Lumbini Province, there are total cases of 7842 where 3647 are females.[4] A study has shown that the maternal mortality rate has increased by 8 to 38% during COVID-19 as compared to the situation before lockdown, which were around 1200 maternal deaths per year.[6]

There is a report of the first death of a 29-years-old postpartum woman due to COVID-19 in Nepal who was referred from a rural health center to Dhulikhel Hospital.[8] The fact that a postpartum woman being registered as the first case of COVID-19 related death in Nepal shows the importance of early clinical suspicion and the necessity of safety first to the pregnant women.

Pregnant women due to changes in their bodies and immune system can be affected badly by some respiratory infections and have an increased risk of developing severe COVID-19 and more often require care in intensive care units. It is therefore important that pregnant women take precautions to protect themselves against COVID-19 and report possible symptoms including fever, cough or difficulty in breathing to their healthcare provider.[6]

According to World Health Organization (WHO), the best way to prevent and slow down transmission is to be well informed about the COVID-19 virus, its causes and its spread by protecting own self and others from infection by washing hands or using an alcohol based rub frequently and not touching owns face.[9]

The virus has caused tremendous anxiety and fear among pregnant women. A study conducted among 286 pregnant women showed that the majority (67.8%) of women perceived that COVID-19 can affect the pregnancy, the virus can be transmitted to their newborn baby (83.2%) and can affect the child if mother has virus (84.6%). Most of the women (84.6%) were afraid of COVID-19 infection and reported mean fear level of 5.86 ±3.12 on a scale of 1 to 10. As preventive measures, 97.6% women reported that they had been washing their hands frequently, about 82% women covered their faces and 93.7% women avoided gatherings.[10]

The findings of a research indicated that fear of COVID-19 was significantly and positively associated with preventive behaviors which also benefits in coping with the stress that comes with COVID-19 and consequences like depression, suicidal intention, mental quality of life.[11] However, there are scarce literature regarding the perception, fear and preventive measures the pregnant women are taking for COVID-19. Thus, preventive maternal health during COVID-19 requires further research.[8]

This study was conducted to assess the level of perceived fear of pregnant women, to identify the preventive behaviors of pregnant women and to measure correlation between perceived fear and preventive behaviors of pregnant women during COVID-19 pandemic.

MATERIAL AND METHODS

Analytical cross sectional study was conducted to find out the perceived fear and preventive behaviors of pregnant women during COVID-19 pandemic in Western Nepal. One hundred and fifty normal pregnant women were selected by using purposive sampling. The study was conducted in ANC out-patient department and ward of Universal College of Medical Sciences Teaching Hospital (UCMSTH), Rupandehi, Lumbini Province, Nepal.

Structured interview schedule was used for data collection. A valid tool FCV-19S was used for perceived fear.[12] The participants indicate their level of agreement with the statements using a five-item Likert type scale. Answers included "strongly disagree", "disagree", "neither agree nor disagree", "agree", and "strongly agree" and by was marked 1 to 5 respectively. The higher the score, the greater the fear of COVID-19 virus. Interpretation was done on the basis of scores:

Less than median score: Low level of fear
Equal and more than median score: High level of fear

A self-structured open ended questionnaire was used to find other fears during pregnancy, labor, postpartum and for newborn. Likert scale was used for seven types of preventive

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behaviors based on the recommendations from the CDC and WHO.[5,13] The participants indicated their level of agreement with the statements using a five-item Likert type scale. Answers included "never", "sometimes", and "always" and will be marked 1 to 3 respectively. Interpretation was done on the basis of frequency and percentage on each items. The researchers went to ward and OPD and obtained the written informed consent from each respondents for enrollment in this study. Data collection was done within four months (December 20, 2020 to March 28, 2021). Administrative and ethical approval was obtained from the Institutional Review Committee of Universal College of Medical Sciences and Teaching Hospital prior to data collection.

Descriptive statistics such as frequencies, percentage, mean, median, range and standard deviation and inferential statistics such as Pearson coefficient of correlation was used to find out the relationship between perceived fear and preventive measures with SPSS software version 16.

RESULTS

Table 1 Socio-demographic characteristics of the respondents (n=150)

Characteristics	Category	Frequency	Percentage (%)
Age (in years) Mean ±SD = 25.37 ±4.228 years Range = 18-38 years	18 to 22 years	47	31.3
	23 to 27 years	61	40.7
	28 to 33 years	30	20.0
	34 to 38 years	12	8.0
Ethnicity	Brahmin	10	6.7
	Chhetri	3	2.0
	Dalit	9	6.0
	Madhesi	89	59.3
	Janajati	20	13.3
	Others	19	12.7
Education	Who cannot read and write	32	21.3
	Informal	8	5.3
	Primary	32	21.3
	Secondary	60	40.0
	Above secondary	18	12.0
Occupation	Home maker	103	68.7
	Farmer	27	18.0
	Service	8	5.3
	Business	7	4.7
	Self employed	5	3.3
Gravida	Primi	57	38.0
	Multi	93	62.0
Trimester	First	12	8.0
	Second	19	12.7
	Third	119	79.3
Self-infected with COVID -19 during pregnancy	Yes	3	2.0
	No	147	98.0
Family members infected with COVID-19 during respondent's pregnancy	Yes	3	2.0
	No	147	98.0

Table 1 shows majority of the respondents were in age group 23 to 27 years, belonged to Madhesi, had achieved secondary level of education, were home makers, were multi mothers

and in their third trimester. Few respondents and their relatives suffered from COVID-19 during their current pregnancy.

Table 2. Level of perceived fear regarding COVID 19 (n=150)

Variables	Level	Frequency	Percentage (%)
Fear	Low (< median value)	72	48.0
	High (≥ median value)	78	52.0

Table 2 reveals 52% of the respondents had high level of perceived fear.

Table 3. Preventive behaviors for COVID 19 (n=150)

Preventive behaviors	Never (1)		Sometimes (2)		Always (3)		Mean	Standard deviation
	F	%	F	%	F	%		
Use facemask	19	12.7	62	41.3	69	46.0	2.33	0.692
Hand wash	12	8.0	49	32.7	89	59.3	2.51	0.642
Cover nose and mouth	31	20.7	46	30.7	73	48.7	2.28	0.787
Keep social distance	32	21.3	76	50.7	42	28.0	2.07	0.702
Avoid public transportation	29	19.3	69	46.0	52	34.7	2.15	0.721
Clean and disinfect	23	15.3	53	35.3	74	49.3	2.34	0.731
Exercise regularly	106	70.7	32	21.3	12	8.0	1.37	0.630
Maintain healthy diet	3	2.0	33	22.0	114	76.0	2.74	0.484
Avoid crowded gatherings	52	34.7	68	45.3	30	20.0	1.85	0.727
Quit tobacco and smoking	75	50.0	15	10.0	60	40.0	1.80	0.983

Table 3 shows although participants were largely engaged in all preventive behaviors like wearing face mask, hand washing, covering nose and mouth, cleaning and disinfecting and maintaining healthy diet, while maintaining social distance, avoiding public transport, avoiding crowd, exercising regularly and quitting tobacco and alcohol were the least
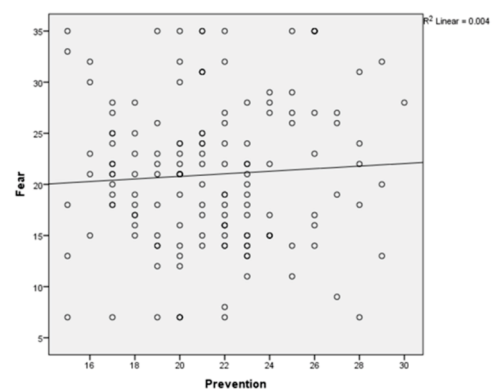

Figure 1. Correlation between perceived fear regarding COVID 19 and preventive behaviors

Figure 1 shows there is positive correlation between perceived fear and preventive behaviors (r = 0.060) though it was not

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proved significantly at 5% level of significance. Majority of the respondents also had other fears regarding death of mother and transfer to fetus during pregnancy, operation for delivery during labor, problem in breastfeeding and death of mother during postpartum and transfer to newborn which is not shown in the table.

DISCUSSION

The findings of the study showed that 52% of the respondents had high level of fear which is inconsistent with the study that showed 74.7% were afraid of contracting COVID-19.[14] This may be because women from disadvantaged backgrounds of illiteracy in contrast to our study where most of the women had secondary level of education (60%, N=40) have greater fear of contracting COVID-19 during institutional deliveries.

The findings of the study showed that large number of participants reported they frequently used face mask (mean 2.33, SD 0.692), washed hands frequently (mean 2.51, SD 0.642), covered nose and mouth (mean 2.28, SD 0.787), cleaned and disinfected the house (mean 2.34, SD 0.731), maintained healthy diet (mean 2.74, SD 0.484). Likewise, respondents reported less frequent engagement in social distancing (mean 2.07, SD 0.702), avoiding public transport (mean 2.15, SD 0.721) and avoiding crowded gatherings (mean 1.85, SD 0.727). Whereas, respondents reported they never exercised regularly (mean 1.37, SD 0.630) and did not think quitting tobacco and smoking could be healthy (mean 1.80, SD 0.983). The findings are consistent regarding washing hands (mean 4.31, SD 0.93), covering nose and mouth when sneezing and coughing (mean 4.35, SD 0.95) and cleaning frequently touched surfaces (mean 3.97, SD 1.09) but inconsistent regarding social distancing (mean 4.33, SD 0.87), avoiding crowded gathering (mean 4.17, SD 0.86) and avoiding public transportation (mean 4.49, SD 0.89).[15]

The findings of the study showed that there was a positive correlation (r = 0.060) between perceived fear regarding COVID-19 and preventive measures though it was not proved significant. This result is supported by a study that showed a positive correlation (r = 0.31, $p<0.001$) between perceived fear and behavior change. This implies those with higher fear scores were those who were engaging with more public health behaviors.[16]

The findings of the study showed during pregnancy, most of the respondents had fear about self-death and transfer of COVID-19 to fetus, whereas, least were concerned about isolation and ICU admission. Likewise, during delivery, the study also showed most of the respondents had fear about operation whereas, least were concerned about difficulty in breathing, problem in eating, hatred from family and problem in reaching to the hospital for delivery. Similarly, during

postpartum most of the respondents had fear about problem in breast feeding and self-death, whereas, least were concerned about problem in immunization and transfer to baby. Furthermore, the findings of the study revealed most of the respondents had fear about transfer of COVID-19 to newborn, whereas, least were concerned about baby being abnormal. These findings were consistent with the study which showed majority of women (n=194, 67.8%) perceived that COVID-19 can affect the pregnancy, felt afraid that something awful might happen in their pregnancy (n=242, 84.6%), virus can be transmitted to newborn baby (n=238, 83.2%) and can affect the child if mother is infected with the corona virus (n=242, 84.6%).[10]

The findings of the study might be useful as baseline information to other researchers to conduct further studies. However, our study has some limitations. Similar studies can be conducted with large sample size in multiple settings to increase the generalization of the study.

CONCLUSION

Our study showed that majority of the pregnant women perceived high level of COVID-19 fear and relatively lacked on its preventive behaviors such as social distancing, avoiding public transport and crowd, exercising regularly and quitting tobacco and alcohol. So, it is recommended to concerned authorities to conduct the awareness programs on these preventive measures of COVID-19 in pregnancy.

CONFLICT OF INTEREST

None

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