

Psychological Distress and Coping among Pregnant Women during the COVID 19 Pandemic

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ABSTRACT

Background: Mental health of pregnant individuals has been profoundly affected by the COVID-19 pandemic. Effective coping strategies are found to be associated with better psychological wellbeing during the COVID-19 pandemic. The objective of the present study is to assess psychological distress and coping among pregnant women during the COVID-19 pandemic.

Methods: A descriptive cross sectional study was conducted from May 2020 to July 2020 among 115 pregnant women attending obstetric unit of a tertiary care centre using convenience sampling technique. Ethical approval was obtained from the Institutional Review Committee of the Institute. Covid-19 Peritraumatic Distress Index and Brief COPE inventory was used to collect the data. Data entry was done in Microsoft Office Excel 2007 and analysed in SPSS version 16.

Results: Psychological distress was found in 2.6% of the participants. Psychological distress was significantly associated with occupation, fear of ANC visit, fear of visit to hospital for other health problems and fear of being alone or without help around delivery. Emotion focused coping was the most commonly used coping strategies among the pregnant women with the mean score of 21.37 ± 3.130 . Psychological distress and over all coping strategies had a positive correlation (<0.001).

Conclusions: Psychological distress was found to be low among the pregnant women in this study. Fear of being without help and fear of contacting the virus during the visit to the hospital during the Covid-19 pandemic were the likely reasons of the psychological distress in the pregnant women.

Keywords: Coping; pregnancy; Psychological distress.

INTRODUCTION

Disturbances in psychological health are common at the time of pregnancy which is likely to be intensified due to the negative effects of the COVID-19 pandemic.¹ COVID-19 related changes in the prenatal care, reduced access to maternal services, loss of supports from friends and families; fear of virus transmission to the foetus etc. has increased the risk of psychological distress in pregnant women.²

Previous studies have reported raised level of psychological distress among the pregnant women during the COVID-19 pandemic.³⁻⁶

Maternal psychological distress has been associated with variety of adverse physical and psychological health outcomes for the mother and baby.^{7, 8}

Coping is a primary component of an individual's response to stressful events.⁹ Several studies have shown that effective coping strategies are associated with better psychological wellbeing during the COVID-19 pandemic.^{10,11} The objective of the present study is to assess psychological distress and coping among the pregnant women during the COVID-19 pandemic.

METHODS

A descriptive cross-sectional study was conducted from May 2020 to July 2020 among pregnant women

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attending obstetrics unit of a tertiary care centre of eastern Nepal during the Covid-19 pandemic using convenience sampling technique. Pregnant women who were willing to participate were included in the study. The study was approved by Institutional Review Committee of the Institute on 15th May 2020 (Reference number: 365/076/077-IRC). Written informed consent was taken from each participants and confidentiality was maintained.

Sample size was calculated using the formula

$$\begin{aligned} \text{Sample size (n)} &= z^2 \sigma^2 / l^2 \\ &= (1.96)^2 \times (9.7)^2 / (1.86)^2 \\ &= 105 \end{aligned}$$

Where, z (at 95% CI) = 1.96

σ = Standard deviation

(Standard deviation is taken as 9.7 and mean is taken as 37.2 from a study done by Lee T.S. Dominic et al in Hong Kong)

l = 1.86 (5% of mean)

As there are chances of nonresponse the sample size was increased by 10% that is 10. Hence, Sample size is calculated to be 115

Data was collected by face to face interview in the antenatal wards of obstetric outpatient department in separate room maintaining confidentiality and comfort by the main author himself. The total time taken was around 30-40 minutes. All the pregnant women willing to participate were included in the study. The research instrument consisted of self-developed questionnaire to collect information on Obstetric profile, COVID-19 related safety measures and COVID-19 related experiences. Psychological distress of pregnant women was measured by Covid-19 Peritraumatic Distress Index (CPDI).¹² It consists of 24 questions. It is a five point likert scale and the score ranges from 0 to 96. A score between 28 and 51 indicates mild to moderate distress and a score ≥ 52 indicates severe distress. Coping was measured by Brief COPE inventory.¹³ This scale comprised of 14 subscale and 28 questionnaires items. In accordance with prior work,¹⁴ three Brief COPE subscales were created: dysfunctional coping problem-focused coping and emotion-focused coping.

The Cronbach's alpha of CPDI is 0.95.¹² The Cronbach's alpha for the original subscales of Brief COPE inventory ranged from 0.50 (venting) to 0.90 (substance use).¹³ CPDI and Brief COPE inventory were both translated into Nepali by an independent translator and again backward translation was done by an independent translator who was blind to the original questionnaire format. Content validation was done in consultation with the subject experts. Pretesting of tools were done by administering the tool to 10% of the total sample.

Data entry was done in Microsoft Office Excel 2007 and analyzed in SPSS version 16. Descriptive (frequency, percentage, median, interquartile range, mean and Standard Deviation and) and inferential statistics (Mann-Whitney U test) were used to analyze the data. Mean rank was calculated from Mann-Whitney test to find the association between psychological distress and other independent variables. Pearson correlation coefficient test was applied to find out the relationship between psychological distress and coping of the pregnant women.

RESULTS

Majority of the women (73%) had planned pregnancy. Most (60%) of the pregnant women were multigravida. Most of the women (67%) were in 3rd trimester of their pregnancy.

Psychological distress was found in 2.6% of the participants (Table 1). Majority (87.8%) of the pregnant women were home bound during the COVID-19 pandemic. Around 44.3% of the pregnant women reported fear of being alone or without help around delivery (Table 2). Psychological distress was significantly associated with occupation, fear of ANC visit, fear of visit to hospital for other health problems and fear of being alone/ without help around delivery (Table 3). Majority of the women reported following public COVID-19 hygiene behaviors (e.g., face mask wearing, washing hands) Table 4.

Emotion focused coping was the most common used coping by the pregnant women with the mean score of 21.37 ± 3.130 (Table 5). The mean score of each domain of brief cope is shown in Table 6. There was a positive relationship between psychological distress and overall coping strategies among pregnant women (Table 7).

Table 1. Psychological Distress among Pregnant Women during COVID-19 Pandemic. (n=115)

Characteristics	Category	Number of respondents	Percentage
Psychological Distress	No distress	112	97.4
	Mild to moderate distress	2	1.7
	Severe distress	1	0.9
	Median (IQR) = 11 (6-16)		

Table 2. Covid-19 related Experiences by the Pregnant Women (n=115).

Characteristics	Category	Number of respondents	Percentage
Visit outside of home	Nearly or totally home bound	101	87.8
	Less than usual	13	11.3
	Same as usual	1	0.9
Fear of health check-up	Yes	90	78.3
	No	25	21.8
Fear of ANC visit	Yes	89	77.4
	No	26	22.6
Fear of delivery at home	Yes	51	44.3
	No	64	55.7
Fear of going to hospital for other illness	Yes	13	11.3
	No	8	7
	I did not have such problems	94	81.7
Feeling alone/without help around delivery	Most or all the times	15	13
	Sometimes	36	31.3
	Never	64	55.7

Table 3. Association of Psychological Distress with Socio-demographic Variables and other related factors (n=115).

Characteristics	Category	n	Mean Rank	p-value
Age	<30	81	60.5	0.197
	≥30	34	51.8	
Education	Secondary and above	97	59.2	0.357
	Others	18	51.3	
Occupation	Homemaker	74	52.8	0.025*
	Others(job, business, farming)	41	67.3	
Duration of marriage	≤5	60	61.08	0.301
	>5	55	54.6	
Income	≤30000	48	52.6	0.144
	>30000	67	61.8	
Type of family	Nuclear	51	59.9	0.567
	Joint	64	56.4	
Substance use	Yes	15	58.7	0.924
	No	100	57.8	
Pregnancy	Planned	84	60.4	0.203
	Unplanned	31	51.5	
Trimester	1 st and 2 nd	38	56.8	0.786
	3 rd	77	58.5	
Gravida	Primi	46	58.7	0.850
	Multi	69	57.5	
Husband	With self	85	58.7	0.702
	Abroad/away from home	30	56.0	
Fear of ANC	Yes	89	63.2	0.002*
	No	26	39.9	
Fear to visit hospital for other health problems	Yes	90	62.6	0.004*
	No	25	41.2	
Fear of delivery at home	Yes	51	57.8	0.995
	No	64	58.1	
Fear of being alone/without help around delivery	Most of the times/sometimes	51	72.2	<0.001*
	Never	64	46.6	

Table 4. COVID-19 related Safety Measures used by the Pregnant Women (n=115).

Hand washing	More than usual	108	93.9
	No change	7	6.1
Use of mask	Most or all of the time	17	14.8
	Always while going out	98	85.2
	Rarely or not used	0	0
Use of hand gloves	Most or all of the time	1	0.1
	Always while going out	23	20
	Rarely or not used	91	79.1
Use of sanitizer	Most or all of the time	46	40
	Sometimes	41	44.3
	Rarely or never	18	15.7
Maintaining physical distance	Always while going out	75	65.2
	Sometimes while going out	37	32.2
	Rarely	3	2.6

Table 5. Coping Strategies Adopted by the Pregnant Women (n=115)

Category	Mean	Standard deviation
Dysfunctional coping	20.17	3.047
Problem focused	14.59	3.089
Emotion focused	21.37	3.130

Table 6. Mean Score of each Domain of Brief Coping

Coping strategies	Mean	Standard deviation
Problem focused strategies		
Using instrumental support	6.06	1.179
Active coping	4.80	1.763
Planning	3.73	1.718
Dysfunctional coping		
Self-distraction	4.89	1.599
Venting	5.94	1.764
Behavioral disengagement	2.36	0.966
Denial	2.38	0.960
Self-blame	2.58	0.936
Substance use	2.03	0.280
Emotion focused strategies		
Using emotional support	6.49	1.353
Positive reframing	2.03	0.280
Humor	2.22	0.770
Acceptance	5.61	1.710
Religion	5.03	1.757

Table 7. Co-relation between Psychological Distress and Coping among the Pregnant Women (n=115)

Correlation between	Coping	
	r value	p value
Dysfunctional coping	0.196	0.035
Problem focused	0.371	<0.001
Emotion focused	0.226	0.015
Overall coping	0.375	<0.001

DISCUSSION

In this study, most (44.3%) of the women reported fear such as of being alone or without help around delivery. The lockdown initiated due to the COVID-19 pandemic led to decreased extended family support and social support for the pregnant women which might have resulted in the fear of being alone or without help around delivery. Similarly, majority (77.4%) of women had fear of visiting the hospital for antenatal check-up or for other medical conditions (78.3%) due to the fear of contacting the infection of COVID-19. This finding is consistent with findings of other studies.^{15, 16} One of the most common worries was COVID-19 causing changes to the delivery plan in a study done in 64 countries around the world among the pregnant women and post natal mother.¹⁵ Most (44.3%) of the pregnant women in this study also had fear of having delivery at home.

Majority of the women reported following public COVID-19 hygiene behaviours (e.g., face mask wearing, washing hands) which is similar to a study done in 64 countries around the world among the pregnant women and post natal mother.¹⁵

Psychological distress was seen only in 2.6% of the pregnant women in this study. Psychological distress was found to be minimal (1.1%) in a study done in Nepal which is similar to the findings of this study.¹⁷

A study done among pregnant women and post natal mother in 64 countries around the world found 43% of women with post-traumatic stress disorder due to the impact of Covid-19 pandemic.¹⁵ A study done in Italy showed that COVID-19 outbreak had a moderate to severe psychological impact on pregnant women.⁴ The results of a study in Ethiopia showed that the current pandemic has imposed severe psychological distress among pregnant women.³ A study done among Chinese pregnant women reported moderate-to-severe stressful impact.¹⁸ Most of the mothers and pregnant women had moderate (34.7%) to high (39%) levels of psychological distress during the COVID-19 pandemic outbreak in a study done in Saudi Arabia.⁵ Psychological distress was found to be 31.7% in a sample of high

risk pregnant women in Iran.⁶ Psychological distress was not associated with trimester of pregnancy in this study which is inconsistent with a study done in China where the psychological impact of the COVID-19 outbreak was severe in women in the first trimester of pregnancy.⁴ The inconsistency might be because most of the women (67%) in this study were in third trimester of their pregnancy. Psychological distress was significantly associated with fear of ANC visit, fear of visit to hospital for other health problems and fear of being alone or without help around delivery. The psychological distress was more in pregnant women in their third trimester though it was not significantly associated possibly due to the increased concern of labour, delivery, fear of transmission of virus to the foetus during the pandemic.

In this study, psychological distress was very low as compared with other studies of different parts of the world. This study was conducted when the first lockdown was initiated in Nepal due to the COVID-19 pandemic. Majority of them reported that they came out of their house only for hospital visit for their antenatal check-up. The major fear was contacting the virus while visiting the hospital for other health problems and for antenatal check-up. Hence, one of the main reasons for this finding might be because majorities (87.8%) of the pregnant women were home bound during that period and reported being safe in their home.

In this study, dysfunctional and emotion focused coping were found to be the most commonly used coping strategies among the pregnant women in comparison to problem focused coping. This result is similar to a study done in Canada among the pregnant women.¹⁹ This finding is also consistent with a study done in Australia among the pregnant women after exposure to a natural disaster.²⁰

This finding contradicts with a study done in Nepal among the pregnant women before the Covid-19 pandemic in which problem focused coping was found to be the most commonly used coping.²¹

Literatures suggests that problem-focused coping

may be best in controllable situations and emotion-focused coping may be most adaptive in uncontrollable events.^{9,22} Covid-19 being an uncontrollable event might be the reason for use of emotion-focused coping by the pregnant women in this study.

Seeking instrumental support, using emotional support, acceptance and religion was the commonly used coping among the pregnant women during the Covid-19 pandemic. A study done in Nepal before the COVID-19 pandemic also had similar findings.²¹ Evidences show that the effects of problem focused and emotion focused coping have been found to be varied, although these strategies has been found to have more positive outcomes in pregnant women.²³ One of the explanations for low psychological distress in this study can be the use of these coping strategies.

Moreover, a study done following a disaster found that emotion-focused coping strategies were more likely than problem-focused or dysfunctional strategies to reduce pregnant women's subjective distress.²⁰ This could be the another reason for lower distress in this study.

Religion was also one of the commonly used coping by the pregnant women in this study. This study is consistent with the study done among pregnant women in Turkey and America during the Covid-19 pandemic in which the most common used active coping where religion, god and spirituality.^{24, 25}

Connecting with others and trying to get advice or help from other people about their concerns were one of the commonly used methods to cope during the Covid-19 pandemic by a sample of perinatal women in United States which is also similar to the finding of this study.²⁶

The findings of the present study showed positive correlation between psychological distress and over all coping strategies among pregnant women. Moreover, this study also showed a positive correlation between dysfunctional coping and psychological distress. These findings are consistent with a study carried out among the pregnant women in eastern Nepal before the Covid-19 pandemic.²¹

Higher use of avoidance coping was associated with higher levels of perceived stress during ($r = 0.474$, $p < .01$) the pandemic in a study done among pregnant women in America.²⁵ This study also revealed that dysfunctional coping which also includes avoidance coping had a positive correlation with psychological distress.

The cross sectional nature of the study provides just the snap shot of the distress and coping of the pregnant

women. Moreover, this study being conducted at a single setting and participants being recruited through a convenience sampling technique, may limit the generalizability of the study.

CONCLUSIONS

Psychological distress was very low among the pregnant women in this study. Furthermore, most of the pregnant women had fears of visiting the hospital for antenatal check-up and for other health problems due to the fear of getting infected with COVID-19. Fear of ANC visit, fear of visit to hospital for other health problems and fear of being alone or without help around delivery was associated with psychological distress in this study. Positive relationship between psychological distress and over all coping strategies was found among the pregnant women. Hence, effective coping strategies can be taught to the pregnant women to alleviate the effects of different COVID-19 experiences on mental health in pregnancy.

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CONFLICT OF INTEREST

None

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