

## Pregnant Women Reported Coping Practices during COVID -19 Pandemic



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### ABSTRACT

**Background:** Announcing coronavirus disease 2019 (COVID-19) as a global pandemic with high mortality and morbidity rate exaggerated high level of stress and anxiety for pregnant women. Pregnant women were considered a high-risk group for COVID-19 infection so many varieties of coping practices were utilized to decrease the stressful pandemic conditions. **Aim:** The study aimed to explore pregnant women reported coping practices during COVID -19 pandemic. **Method:** A Descriptive retrospective study was utilized. **Study subjects:** A convenient sample of 207 women who were pregnant during the pandemic COVID-19 and came to Health Care Office in Sherbin city, Dakahlia, Egypt, during the six wave of COVID-19 pandemic to vaccinate their infants. **Data collection tool:** A structured interview questionnaire was utilized. **Results:** Nearly two-thirds of studied mothers had their knowledge regarding coping practices either from mass media materials or from friends or family and around one-quarter of them did not follow preventive coping practices at all as avoiding overcrowded places, wearing mask outside the home, washing hands frequently with soap and water or alcohol-based sanitizers and staying at home except for medical reasons. In addition, the majority of the studied mothers were reading from the Quran or the Bible and praying for strength and courage to get through the pregnancy and around 50% of them did not practice coping practices regarding healthy diet and enough sleep hours. **Conclusion:** The majority of the studied mothers had unsatisfactory coping practices during COVID-19 pandemic. **Recommendation:** Designing nursing guidelines for pregnant women about different coping practices and their important role during the pandemic.

**Keywords:** COVID-19 Pandemic, Pregnant Women, Coping Practices.

### Introduction:

A new severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) had appeared and known as coronavirus disease 2019 (Ko et al., 2020). According to Centers for Disease Control and Prevention, COVID-19 had been spreading widely since it was first identified in Wuhan, China, in December 2019, ranging in severity from the symptoms of a common cold to serious respiratory illness and death (CDC, 2020). The pandemic's rapid and dangerous spread caused a global crisis unlike anything the world had experienced in the previous century. Globally, in an effort to stop the spread of the virus, millions of individuals were quarantined inside houses which affected the life of many individuals' especially pregnant women (Chasson, Taubman & Abu-Sharkia, 2021).

Pregnancy is one of the most joyful events in the life of most women. Unfortunately, with the onset of the COVID-19 pandemic, pregnancy and childbirth for women were taking place in completely new and unusual challenges and circumstances (Mortazavi, Ghardashi, 2021). Pregnant women are considered a special category

of population due to the unusual immune suppression induced by pregnancy (Qiao, 2020).

Numerous factors were contributed to increasing the health concerns about the pregnant women during COVID-19 pandemic. These factors include vulnerability to infection transmission, unsatisfactory prenatal care, inability of having predictable delivery schedules, difficulty in finding trustworthy information and social exclusion from social support. Additionally, the contrasting and often updating social media messages had greatly increased the levels of anxiety and confusion among expectant mothers (Sahin & Kabakci, 2021).

Standard preventive measures were settled by World Health Organization (WHO) to combat the virus and prevent the spread of infection. These preventive measures had a positive effect on reducing physical contact between people and limiting the spread of infection, but unfavorable pregnancy outcomes were contributed in a negative effect on decreasing the number of antenatal visits, counseling for antenatal proper nutrition, regular

exercise and adequate sleep hours (Kolker et al., 2021).

During the perinatal period, in response to the stressful challenging COVID-19 pandemic, the pregnant women may utilize passive or active coping practices. If the pregnant women engaged in passive coping practices such as increased screen time, comfort food consumption and social isolation, these are considered as negative coping practices which were linked to greater depression symptoms. In contrast, if the pregnant women responded to the stressful event by the planning and preparation, preventive and spiritual coping practices; these are considered as active coping practices with lower levels of perceived stress (Werchan et al., 2022).

### 2.1 Significance of the study

Worldwide, more than 219 countries and territories across the world were affected by COVID-19 pandemic. By March 2021, an estimated 124,291,475 confirmed cases and around 2,735,205 deaths had been attributed to COVID-19 infection (Bahar Moni et al., 2021). According to CDC, pregnant COVID-19 diagnosed women were nearly twice as likely to die compared to non-pregnant COVID-19 diagnosed women (Qeadan, Mensah, Tingey & Stanford, 2021). Compared to non-pregnant SARS women, pregnant SARS women had greater rates of maternal mortality, a demand for oxygen therapy, the need for endotracheal intubation, an increased case-fatality rate and ICU admission. There have also been reports of further complications such as miscarriage, preterm delivery and newborns that are small for gestational age (Martinez - Portilla et al., 2021).

Pregnant women experienced extreme psychological discomfort, social isolation, changes in eating and sleeping habits, changes in attention, worsening of chronic illness, mental health dysfunction and anxiousness status about their own and their loved ones' health as a result of a pandemic. Therefore, pregnant women tried a variety of coping practices to deal with stressful pandemic conditions (Güner & Öztürk, 2022).

Pregnant women utilized a variety of coping practices to deal with stressful pandemic conditions. It can be classified into four categories including the planning and preparation, the preventive and the spiritual coping practices in addition to coping with social isolation related to COVID-19 pandemic (Barbosa-Leikeret al., 2021; El Mezayen, Elhossiny Elkazeh, 2020). Effective coping practices among the pregnant women can positively affect the mental health and

pregnancy outcomes. Therefore, it was important to explore reported coping practices among pregnant women during COVID-19 pandemic.

### 2.2 Study aim

The present study aimed to explore pregnant women reported coping practices during COVID-19 pandemic.

### 2.3 Research question

What are the pregnant women reported coping practices during COVID-19 pandemic?

## 3. Subjects and method

### 3.1 Study design

A descriptive retrospective study was utilized to explore pregnant women reported coping practices during COVID-19 pandemic.

### 3.2 Study setting

This study was conducted at Health Care Office in Sherbin city, Dakahlia, Egypt.

### 3.3 Subjects:

The study subjects included a convenient sample of 207 women who were pregnant during the pandemic COVID-19 and came to the Health Care Office to vaccinate their infants.

### 3.4 Sample size calculation:

Based on data from literature (Wheeler et al., 2021), to calculate sample size with considering level of significance of 5%, and power of study of 80%, and based on data from literature, the sample size can be calculated using the following formula:  $Sample\ size = [(Z_{1-\alpha/2})^2 \cdot SD^2] / d^2$ . Where,  $Z_{1-\alpha/2}$  is the standard normal variate, at 5% type I error it is 1.96, SD = standard deviation of variable and d = absolute error or precision. So,  $Sample\ size = [(1.96)^2 \cdot (3.3)^2] / (0.45)^2 = 206$ .

Based on the above formula, the sample size required for the study is 207.

### 3.5 Tool of data collection:

A structured interview questionnaire was developed by the researcher after reviewing the national and international relevant literatures (Barbosa-Leikeret et al., 2021; Metwally, MMAEM, 2020; El Mezayen, Elhossiny Elkazeh, 2020). It consisted of three parts to measure the following:

**Part (a) Demographic data;** such as age, educational level, residence, marital status, occupation, family income.....etc.

**Part (b) Obstetric history:** parity, number of living children and mode of last delivery.....etc.

**Part (c) Reported coping practices during COVID-19 pandemic:** it consisted of thirty-seven

items (6 of them for reported planning and preparation coping practices during pregnancy, 10 for reported preventive coping practices and 11 for reported spiritual coping practices, 10 for reported coping practices with social isolation during COVID-19 pandemic).

The total coping practices scores were assessed by three points scale (2=always, 1=sometimes, 0=never). The total reported coping practices scores were classified into two categories as follows (**Kamal Helmy & Said Abdelhady Garf, 2021**): satisfactory if the total percent scores were 80% or more and unsatisfactory if the total percent scores were less than 80%.

### 3.6 Validity & Reliability of the tool

Data collection tool was tested and juried for the content validity by three specialists in maternity nursing field and the recommended modifications were done. Some modifications were done to the structured interview questionnaire (i.e., changing in the ordering and sequences of some sentences and paraphrasing of some sentences) and the final form was utilized for data collection. The Cronbach's alpha value of the mothers' reported coping practices during COVID-19 pandemic was 0.874 that mean it was reliable.

### 3.7 Pilot study

The pilot study was conducted prior to data collection on 10% of women (21) to evaluate the clarity and applicability of this tool.

### 3.8 Field work

- This study was conducted for 3 months from the beginning of September 2022 until the end of November 2022.
- An official permission was obtained from the director of the Health Care Unit in Sherbin City to conduct the study to explore reported coping practices among pregnant women during COVID -19 pandemic. The researcher attended three days a week in the previously mentioned setting till the predetermined sample size was obtained.
- The researcher distributed the questionnaire to the studied mothers to fill in its contents.
- The researcher was available for any clarification and checked each sheet after filling for its completion.

### 3.9 Data analysis

All statistical analyses were performed using SPSS for windows version 20.0 (SPSS, Chicago, IL). Continuous data were normally distributed and were expressed in mean  $\pm$ standard

deviation (SD). Categorical data were expressed in number and percentage. Chi-square test (or fisher's exact test when applicable) was used for comparison of variables with categorical data. The reliability (internal consistency) test for the questionnaires used in the study was calculated. Statistical significance was set at  $p < 0.05$ .

### 3.10 Ethical Considerations:

- An official permission letter was taken from the Ethics Committee of the Faculty of Nursing, Mansoura University to conduct the study. The purpose of the study was clarified to the study subjects and written consent was obtained from the studied newly mothers to participate in the study.
- The study's participation was entirely voluntary, and each participant had the ability to withdraw at any time. Throughout the study, anonymity, privacy, safety, and confidentiality were all guaranteed. The study participants were informed that the result will be used as an element of the necessary research for the Master study as well as for publication and education.

## 4. Results

**Table (1)** Reveals that the mean age of the studied mothers was  $28.3 \pm 7.5$ . (74.4%) of them were married and (57%) were housewives, (52.2 %) were urban residence. In addition, (36.2%) of them had secondary education.

**Table (2)** Displays that three-quarters of the studied mothers were asking doctors about coping practices during pregnancy and around two-thirds of them had their knowledge regarding coping practices either from mass media materials or from friends or family. Furthermore, around three-fifths of the studied mothers were talking to mothers who just had a baby during covid-19 pandemic.

**Table (3)** Reveals that (41.5%) of the studied mothers did not maintain at least 1 meter distance between self and others and (37.7%) of them did not avoid touching eyes, nose and mouth with hands. In addition, around one-quarter of the studied mothers did not follow preventive coping practices at all as avoiding overcrowded places, wearing mask outside the home, washing hands frequently with soap and water or alcohol-based sanitizers and staying at home except for medical reasons.

**Table (4)** Presents that the majority of the studied mothers were reading from the Quran or the Bible and praying for strength and courage to get through the pregnancy. In addition, (66.6%) of the studied mothers had support from husband and

family and (59%) of them were helping others or supporting others by advice and information.

**Table (5)** Presents that (48.3%) of the studied mothers did not have healthy diet or well-balanced meal, (45.9%) of them did not pay attention to self-care-activities as meditation or

taking deep breath, stretching, (44.4%) did not have enough sleep hours and (38.2%) did not practice regular exercise.

**Figure1.** Shows that (84.1%) of the studied mothers had unsatisfactory total practices scores.

**Table1.** General characteristics of studied mothers (N=207)

Variables	No.	%
<b>Age (Years)</b>		
≤ 20	48	23.2
>20 – 25	62	30.0
>25 – 30	57	27.5
>30	40	19.3
<b>Mean ±SD</b>	28.3 ±7.5	
<b>Educational level</b>		
read and write	21	10.1
Basic education	38	18.4
Secondary education	75	36.2
University or higher education	73	35.3
<b>Marital Status</b>		
Married	154	74.4
Divorced	30	14.5
Widowed	23	11.1
<b>Occupation</b>		
House wife	118	57.0
Working	89	43.0
<b>Residence</b>		
Rural	99	47.8
Urban	108	52.2

**Table2.** Reported planning and preparation coping practices among the studied mothers (N=207)

Variables	Never		Sometimes		Always	
	No.	%	No.	%	No.	%
Reading or watching mass media materials for coping practices during pregnancy	75	36.2	69	33.3	63	30.4
Asking doctors about coping practices during pregnancy	52	25.1	72	34.8	83	40.1
Talking to friends or family about helpful coping practices	67	32.4	80	38.6	60	29.0
Seeking information on how to do for the birth	57	27.5	82	39.6	68	32.9
Talking with mothers who just had a baby during covid-19 pandemic	83	40.1	71	34.3	53	25.6
Talking with family who will take care of the baby after birth	61	29.5	76	36.7	70	33.8

**Pregnant Women Reported Coping Practices during .....**

**Table3.** Reported preventive coping practices among the studied mothers (N=207)

Variables	Never		Sometimes		Always	
	No.	%	No.	%	No.	%
Staying at home except for medical reasons	50	24.2	75	36.2	82	39.6
Disinfecting surfaces inside the home	45	21.7	74	35.7	88	42.5
Covering mouth and nose during sneezing and coughing	50	24.2	91	44.0	66	31.9
Washing hands frequently with soap and water or alcohol-based sanitizers	51	24.6	70	33.8	86	41.5
Avoiding touching eyes, nose and mouth with hands	78	37.7	61	29.5	68	32.9
Avoiding overcrowded places	56	27.1	69	33.3	82	39.6
Wearing mask outside the home	53	25.6	79	38.2	75	36.2
Maintaining at least 1 meter distance between yourself and others	86	41.5	62	30.0	59	28.5
Using alcohol for hands outside home	48	23.2	70	33.8	89	43.0
Avoiding close contact with others with a cold or flu like symptoms	46	22.2	69	33.3	92	44.4

**Table4.** Reported spiritual coping practices among the studied mothers (N=207)

Variables	Never		Sometimes		Always	
	No.	%	No.	%	No.	%
Reading from the Quran or the Bible	37	17.9	58	28.0	112	54.1
Praying for strength and courage to get through the pregnancy	41	19.8	65	31.4	101	48.8
Praying that the birth will go well	46	22.2	54	26.1	107	51.7
Trying to focus on what is important in life such as family caring	48	23.2	81	39.1	78	37.7
Having support from husband and family	69	33.3	75	36.2	63	30.4
Having phone and video calls with friends and family	49	23.7	68	32.9	90	43.5
Spending time for relaxation and expression of their worries to family members	73	35.3	78	37.7	56	27.1
Watching TV shows and movies	63	30.4	80	38.6	64	30.9
Using social media to keep in touch with the surroundings	55	26.6	67	32.4	85	41.1
Performing activities and hobbies as video games, playing mobile games and drawing	70	33.8	76	36.7	61	29.5
Helping others or supporting others by advice and information	85	41.1	61	29.5	61	29.5

**Table5.** Reported coping practices with social isolation during COVID-19 pandemic (N=207)

Variables	Never		Sometimes		Always	
	No.	%	No.	%	No.	%
Paying attention to self-care-activities as meditation or taking deep breath, stretching	95	45.9	64	30.9	48	23.2
Having healthy diet and well-balanced meal	100	48.3	59	28.5	48	23.2
Practicing regular exercise	79	38.2	75	36.2	53	25.6
Having enough sleep hours	92	44.4	50	24.2	65	31.4
Increasing fluid intake	52	25.1	80	38.6	75	36.2
Avoiding any source of stress as watching, reading or listening to new stories about pandemic	56	27.1	64	30.9	87	42.0
Communicating with others, including talking with people you trust about your concerns and how you are feeling	59	28.5	79	38.2	69	33.3
Consulting medical advice when suffering any suspicious symptoms	51	24.6	75	36.2	81	39.1
Decreasing the number of antenatal care visits unless necessary	52	25.1	71	34.3	84	40.6
Using telemedicine for follow up during pregnancy	45	21.7	65	31.4	97	46.9

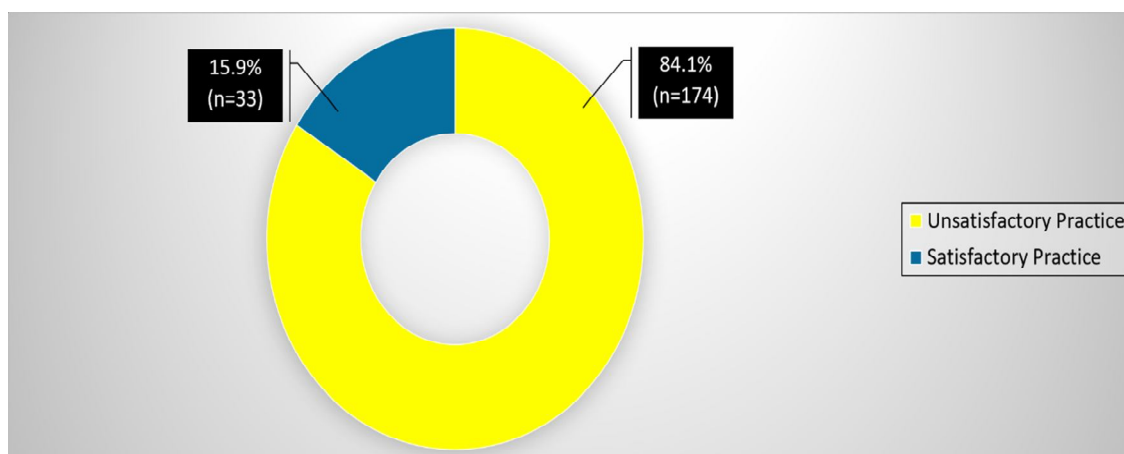


Figure1. Total practices scores among the studied mothers (N=207).

## 5. Discussion

Worldwide, coronavirus disease 2019 pandemic had become the single most important global concern due to its high contagiousness and rapid global prevalence. The present study aimed to explore reported coping practices among pregnant women during COVID -19 pandemic. The study aim was achieved by the present study findings which revealed that the majority of the studied mothers had unsatisfactory coping practices during COVID-19 pandemic. Therefore, the findings of the present study answered the research question.

Regarding the planning and preparation coping practices of the studied mothers, the present study findings revealed that around three-quarters of the studied mothers asked doctors about coping practices during pregnancy and two-thirds of them talked to friends or family about helpful coping practices. The present study findings were in agreement with a quasi-experimental study conducted at Beni-Suef Governorate on sixty pregnant women by **(Helmy, Abdelhady & Ibrahim, 2021)** to evaluate the effect of tele-health nursing program regarding Covid-19 among pregnant women who found that about three-quarters of participants had their source of coronavirus information from the health team and three-fifths of them had their source of coronavirus information from friends or family.

Concerning the preventive coping practices of the studied mothers, the present study findings revealed that around three-fifths of the studied mothers avoided touching eyes, nose and mouth with hands and kept at least 1 meter distance between self and others. The present study findings were congruent with a cross-sectional study conducted by **(Zelege & Bayeh, 2022)** on 549

Ethiopian pregnant women who found that nearly three-fifths of participants avoided touching the eyes and nose to prevent COVID-19 infection and around three-quarters of them were keeping a physical distance of at least two meters.

Regarding the spiritual coping practices, the present study findings revealed that more than four-fifths of the studied mothers were reading from the Quran or the Bible. The present study finding was in agreement with a qualitative study conducted by **(Dewi, Safaria, Supriyatningsih & Dewi, 2023)** who reported that the majority of pregnant women read the Qur'an to cope spiritually.

Regarding coping with social isolation during COVID-19 pandemic, the present study findings reported that more than half of the studied mothers had enough sleep hours. The present study finding was in the same line with a cross-sectional study conducted in Shenzhen, China by **Pan et al., (2020)** who found that two-thirds of the studied participants had good or excellent sleep quality. This study finding may be attributed to the long hours of being quarantined or isolated at home and limited hours of contact with the community.

The present study findings revealed that the majority of the studied mothers had unsatisfactory total level of coping practices during COVID-19 pandemic. The present study finding was in agreement with a cross sectional study was conducted in Zagazig City, Sharkia Governorate, Egypt by **(Metwally & MMAEM, 2020)** to assess knowledge, practice and attitudes of preventive measures against coronavirus infection among pregnant women who reported that the majority of women had unsatisfactory level of total practice of preventive measures of COVID-19 infection.

## 6. Conclusion

The majority of the studied mothers had unsatisfactory coping practices during COVID-19 pandemic.

## 7. Recommendations

- Designing nursing guidelines for pregnant women about different coping practices and their important role during the pandemic.

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