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Women's Health during COVID-19 Pandemic

[1]Anupriya [2]Shikha Verma [3]Anjali Rani [4]Swaran Lata

The COVID-19 pandemic afflicted all aspects of humanity with skepticism. It is meaningful to study its impact on women who worked appreciably hard to protect the family by taking charge of all the household responsibilities along with immense psychological and domestic challenges. The present study investigates women's physical, mental, and reproductive health disturbances amid the second wave of the COVID-19 pandemic. 50 women between the ages of 21 and 50 were recruited from the Department of Obstetrics and Gynecology at the Sir Sunder Lal Hospital and the Institute of Medical Sciences at the BHU in Uttar Pradesh, India. The Physical Health Questionnaire (Schat, Aaron & Kelloway, Kevin & Desmarais, Serge, 2005), the General Health Questionnaire (Goldberg & Hillier, 1979), and the Reproductive Health Questionnaire (Eadie & Runtz, 2007) were used to measure physical health, mental health, and reproductive health, respectively. Overall, women experienced physical, mental, and reproductive health problems. The findings revealed significant differences in physical health between married and unmarried women, working and non-working women, and reproductive health differences between women in nuclear and joint families. Women's reproductive health significantly positively correlates with mental and physical health, and mental health also significantly positively correlates with physical health. The COVID-19 pandemic had a significant impact on women's health, irrespective of socio-economic strata. They faced greater health risks because they were responsible for both family and work. It deteriorated their overall health—physical, mental, and reproductive—while planning, managing, and handling the COVID-19 pandemic.

Key words: Physical Health, Mental Health, Reproductive Health, Women

Introduction

COVID-19 is an exceptionally contagious disease acquired by SARS-CoV-2, a novel coronavirus (Hu, B., et al., 2021). It spreads through respiratory droplets and close contact with an infected person. It was declared a global public health emergency by the World Health Organization (WHO) on January 30, 2020. The second wave of COVID-19 spread across India rapidly in April 2021 and hit the nation very hard. By the end of 2020, it had been discovered in Maharashtra for the first time. The B. 1.617 strain with key mutations E484Q and L453R was a variant of concern, as it was more transmissible than the first variant found in India. Most patients exhibited breathlessness, and black mould infection had become a massive threat. According to neuropsychiatrist Reddy (2021), "the mental health crisis began with the first wave, and as the cases decreased around October, people grew hopeful and thought things would return to normal." However, with the second wave catching us unaware, there is heightened trauma and grief this year, aggravating the

[1]*Research Scholar, Department of Psychology, Faculty of Social Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh, India.*

[2]*Assistant Professor, Department of Psychology, A.N.D.M.M, Harshnagar, Kanpur, Uttar Pradesh, India.*

[3]*Associate Professor, Department of Obstetrics and Gynecology, Sir Sunder Lal Hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh, India.*

[4]*Assistant Professor, Department of Psychology, Faculty of Social Sciences, Banaras Hindu University, Varanasi-221005, Uttar Pradesh, India.(Corresponding Author) Email-swaran80@gmail.com*

mental health crises. After battling the second wave, another variant of COVID-19, Omicron, came into action at the beginning of December 2021. Although Omicron was more infectious than the delta variant, the rate of hospitalization was lower.

The pandemic was not gender-biased and hard on every individual, but it put a hard-hitting responsibility on women. Neither a housewife nor a working woman was exempt from it. Women, being the pillar of the family, had to manage not only their regular chores but also the additional responsibility of keeping their family members healthy and safe. Working women faced a higher degree of stress by taking responsibility for both family and work. The responsibility of taking care of the whole family—at home caring and securing things—creates tension, stress, emotional imbalance, and frustration and deteriorates the health, and the same happened during the COVID-19 pandemic for women while planning, managing, and handling the pandemic.

Physical health is the proper and normal functioning of the body and is free from any type of sickness (Nishat, N., 2022). Mental health is inclusive of emotional, psychological, and social health. It influences our thoughts, feelings, actions, and stress management (Centers for Disease Control and Prevention, 2021). Reproductive health is the well-being related to the reproductive system throughout life (Kulier & Campana, 2004).

Review of Literature

Suka et al. (2021) found that the worsening of general health status was due to an unmanageable work style and the amplified burden of housework. Sharma & Vaish (2020) reported that 34.3% of respondents complained of an increase in corporeal load due to ordinary household jobs during lockdown. 45.81% of participants reported neck and back pain, while 36.31% reported occasional eye strain.537 women working from home as well as working for themselves witnessed musculoskeletal problems as well.

Lai et al. (2020) found a massive prevalence of mental health symptoms like depression, anxiety, and insomnia, and more than 70% of Chinese health care workers treating patients with COVID-19 reported psychological distress. Garg, Pandey, & Lindow (2021) found that there was a prominence of anxiety, stress, distress, and a lack of certainty about the future among women during COVID-19. Lockdown made women subjected to depression and isolation, inadequate OPD services, aborticide and birth-control services, menstrual and intimate health counseling, services related to fertility, effective functioning, etc. In a study done by Sediri, S., et al. (2020), it was found that about 85% of the women reported anxiety, depressive symptoms, and stress. Nearly 50% of the respondents had evidence of profound severity for the three axes of the DASS-21 scale. Liu et al. (2020) have also noted the dominance of depression, anxiety scores, and PTSD symptoms among women during the pandemic. Burn, et al., (2022), found that signs of depression were more prevalent among women working from home compared to travelling to a workplace. Salari et al. (2020) provided evidence that vulnerability for depression, stress, and PTSD has surfaced more in women than in men.

Phelan et al. (2021) investigated how the menstrual cycle was disrupted, such as an increase in missed periods, heavy and painful periods, and worsening premenstrual syndrome (PMS) symptoms in women. Marquini et al. (2022) reported that women faced menstrual irregularities, effects on contraception, alterations in steroid hormones, changes in urogynecological care, mental health issues, and the damaging results of violence against women in the COVID-19 pandemic. Madjunkov, Dviri and Librach (2020) discovered that during a pandemic, gynaecological health can deteriorate, causing serious mental and physical suffering and enormous consequences for females' overall health. Li et al. (2021) reported that patients with coexisting conditions such as diabetes, liver disease, and life-threatening malignancy, as well as critical cases of chronic COVID-19 (34% versus 8% of mild or asymptomatic cases), had serious menstrual disruption, mainly lengthened cycles or weakened volume. Krishna (2021) found that sexual and reproductive health services faced a 10% decline due to COVID-19 and 15.4 million unplanned pregnancies, over 3.3 million unsafe abortions, and 28,000 maternal deaths. Due to degraded maternal health services, 258 women died between March 2020 and June 2021 due to increased maternal deaths, in contrast with 51 maternal deaths in the year before COVID-19 in Nepal (Ghouaibi, World Economic Forum, September 2021).

Against this background and to examine these concerns in an Indian context, the following objectives were framed:

METHOD

Objectives

1. To assess the physical health, mental health, and reproductive health of women.

2. To assess differences in physical health on the basis of socio-demographic information (e.g., working and non-working women, urban and rural, married and unmarried women, and nuclear and joint family type women).

3. To assess differences in mental health based on socio-demographic information (e.g., working and non-working women, urban and rural, married and unmarried women, and women from nuclear and joint families).

4. To assess differences in reproductive health based on socio-demographic information (e.g., working and non-working women, urban and rural, married and unmarried women, and women with nuclear or joint families).

5. Examine the relationship between the physical health, mental health, and reproductive health of women.

Hypotheses

H_1 There would be significant difference in physical health on the basis of socio-demographics information (e.g. working and non-working women, urban and rural, married and unmarried women and nuclear and joint family type women).

H_2 There would be significant difference in mental health on the basis of socio-demographics information (e.g. working and non-working women, urban and rural, married and unmarried women and nuclear and joint family type women).

H_3 There would be significant difference in reproductive health on the basis of socio-demographics information (e.g. working and non-working women, urban and rural, married and unmarried women and nuclear and joint family type women).

H_4 There will be positive correlation between physical health, mental health and reproductive health.

Ethical Considerations

Participants in the study were given the option of remaining anonymous or volunteering their designation details for participation via a consent form.They were briefed about the study.

Research design

The present study is a between-group and correlational research design. To explore the existing relationships between each of the variables being studied—physical health, mental health, and reproductive health of women during COVID-19—correlational design was employed.

Sample

With the help of purposive sampling, a sample of 50 women aged 21–50 years from the Department of Obstetrics and Gynecology, Sir Sunder Lal Hospital, Institute of Medical Sciences, BHU, Uttar Pradesh, India, were recruited.

Inclusion criteria

The inclusion criteria for the subjects included (a) knowledge about COVID-19, (b) 21–50 years of age, (c) providing informed consent, (d) voluntarily participating in the study, and (f) visiting the Department of Obstetrics and Gynecology, Sir Sunder Lal Hospital, Institute of Medical Sciences, BHU, for treatment.

Exclusion criteria

The criteria to exclude were withholding informed written consent or being reluctant to spare time for the research.

Measures

The following measures were selected for collecting relevant data from women.

1. The Physical Health Questionnaire (PHQ) developed by Schat, Aaron, Kelloway, Kevin, and Desmarais, Serge (2005), was used as a measure of health to investigate physical health and was translated into Hindi by the researcher. The scale consisted of 14 items, related to sleep disturbances, headaches, respiratory infections, and gastrointestinal problems. Items were rated on a 7-point frequency scale from 1–11, ranging from 1 (not at all) to 7 (all of the time). Items 12–14 had different frequency-related response options. The overall scale reliability is above á = .80**.**

2. General Health Questionnaire-It was created in 1979 by Goldberg and Hillier and asks participants to rate their health using behavioural items on a 4-point scale, indicating their experiences as "not at all," "no more than usual," "rather more than usual," and "much more than usual." The questionnaire was

translated by the researcher into Hindi. Reliability was found to be 0.87.

3. Reproductive Health Questionnaire- A 40-item scale, designed by Eadie & Runtz (2007) for the purpose of assessing reproductive and sexual health concerns in women, was used. It is a self-report questionnaire asking people to mark how often they have experienced each of 40 symptoms or health concerns over the past 6 months by choosing the appropriate frequency category, ranging from never (1) to often (4). The total scale is the sum of scores across the 40 items. Nine items included "not applicable" (N/A) as a possible response category as these were all related to having experienced sexual intercourse, which may not be applicable to all respondents. The questionnaire was translated by the researcher into Hindi. The reliability of the scale was found to be 0.89.

Statistical Analysis

Statistical Program for the Social Sciences (SPSS version 20.0) was used for analysis of collected data. Descriptive statistics were applied for each of the variable. Correlation of coefficient was done to know the interrelation between predictor and criterion variables.

Results

Descriptive statistics

The socio-demographic characteristics of the participants are shown in Table 1. Table 1 shows that out of 50 women, 43 (86.0%) were 21–40 years of age, and 7 (14.0%) were older than 40. 25 (50%) women were working, and 25 (50%) were not working. 27 (54%) women belonged to the nuclear family type, whereas 23 (46%) belonged to the joint family type. Economic status was classified as low or middle class; 10 (20%) of the women reported having a low economic status, while 40 (80%) reported having a middle economic status. 43 (86.0%) women were from urban backgrounds, and 7 (14.0%) were from rural backgrounds.

Table 1
Socio-demographic characteristics of Women

Characteristics	Women	Percentage
Age	50	
Young Adult	43	86.00%
Old Adult	7	14.00%
Work status	50	
Working	25	50.00%
Non-working	25	50.00%
Family status	50	
Nuclear	27	54.00%
Joint	23	46.00%
Economic Status	50	
Low	10	20.00%
Middle	40	80.00%
Rural	7	14.00%
Urban	43	86.00%

Table 2
Descriptive statistics for the studied variables

Variables	N	Range	Minimum	Maximum	Mean	SD
Mental Health	50	58.00	129.00	87.00	55.84	14.70
Reproductive Health	50	101.00	4.00	105.00	60.36	20.15
Physical Health	50	77.00	.00	77.00	45.98	13.86

Overall, women in this study reported a high level of distress. The mean score for mental health was 55.84 (a possible range of 129 to 87). Higher GHQ-28 scores indicate higher levels of distress (Goldberg, 1991). Respondents' mean score on reproductive health is 60.36 with a possible score range of 4-105, which implies that the women had above-average reproductive health problems. The participant reported an above average level of physical health problems, which is observed from the mean score of 45.98 with a score range of 0-77.

Table 3
Group Difference among the studied variables

Women (N=50)	Mental health			Physical health			Reproductive health		
	Mean	SD	Sig.	Mean	SD	Sig.	Mean	SD	Sig.
Working(n=25)	57.56	23.23	095	53.68	16.5	.034*	43.20	16.49	.082
Non-working (n=25)	63.16	16.51		58.00	12.56		48.76	10.20	
Urban (n=43)	59.46	21.03	.526	53.68	16.54	.255	45.18	13.98	.710
Rural (n=7)	65.85	13.30		54.42	13.84		50.85	12.92	
Married (n=27)	56.97	17.06	.725	56.85	13.64	.006*	45.81	10.60	.663
Unmarried (n=23)	49.87	23.68		55.09	16.31		46.63	17.43	
Nuclear family (n=27)	56.85	17.06	.345	56.85	13.64	.150	45.81	10.60	.032*
Joint Family (n=23)	54.65	23.68		55.09	16.31		46.17	17.17	

Table 3 shows a significant difference was found in the physical health of working women (mean of 53.68 and SD of 16.50) and non-working women (mean =58.00 and SD=12.56), married women (mean=56.85 and SD=13.64) and unmarried women (mean of 55.09 and SD of 16.31) at the 0.05 level. non-significant difference in urban (mean= 53.68 and SD=16.54) and rural women (mean= 54.42 and SD=13.84), and nuclear family type (mean= 56.85 and SD=13.64) and joint family type women (mean =55.09 and SD=16.31).

There was no significant difference in the mental health of working women (mean = 57.56 and SD = 23.23) and non-working women (mean = 53.68 and SD = 16.5), urban (mean = 59.46 and SD = 21.03) and rural women (mean = 65.85 and SD = 13.30), married (mean = 56.97 and SD = 17.06) and unmarried women (mean = 49.87 and SD = 23.68).

Non-significant group differences were found in the reproductive health of working women (mean of 43.20 and SD is 16.49) and non-working women (mean is 48.76 and SD is 10.20), urban women (mean= 45.18 and SD=13.98) and rural women (mean= 50.85 and SD=12.92), married (mean= 45.81 and SD =10.60), and unmarried women (mean= 46.63 and SD= 17.43). A significant difference was found at the 0.05 level between women of nuclear family type (mean= 45.81 and SD= 10.60) and women of the joint family type (mean= 46.17 and SD=17.17).

Table 4
Correlation matrix

	Physical Health	Mental Health	Reproductive Health
Physical Health	-	.419**	.481**
Mental Health		-	.596** -
Reproductive Health			

**p< 0.01 level

Table 4 brings into light the correlation analysis to find out the nature of relationship between Physical health and Mental and Reproductive health of women (r (50) = .419, .481 p<0.01), Mental health and Reproductive health (r (50) = .596, p<0.01). As formulated by the afore-mentioned data, the results

demonstrate that physical health and mental health, physical health and reproductive health are significantly positively correlated at 0.01 level and mental health and reproductive health are significantly positively correlated at 0.01 level.

Discussion

The present study explores the effect of the second wave of the COVID-19 pandemic on the physical health, mental health, and reproductive health of women.

The results reveal that during the COVID pandemic, participants reported physical health problems. They reported frequent headaches, gastrointestinal complaints, sleep disturbances, and respiratory infections. The increased responsibility of handling family, kids, and all household chores without domestic help provided them with an excess load and deteriorated their physical health. Carrying out daily household duties, childcare, and professional responsibilities simultaneously was a hard nut to crack for women. They had to perform their foremost duty of childcare and household work (Parlak et al., 2021).

Significant differences were found in the physical health of working and non-working women and married and unmarried women. Married, non-working women experienced more physical health problems as compared to their counterparts. The reasons can be the absence of childcare facilities, more cleaning and sanitization of occupied houses, and meal preparation (Augustus, 2021). Workstyle declination and excess responsibility were significantly associated with deterioration in women's health (Suka et al., 2021).

The present study revealed that there was an insignificant difference in mental health on the basis of socio-demographic information (e.g., working and non-working women, urban and rural, married and unmarried women, and nuclear and joint family type women). It means all women were facing mental health problems during the pandemic. Women reported suffering from somatic symptoms, insomnia, anxiety, depression, and social dysfunction. Due to the continuous surge of COVID cases, lockdown forced people to stay locked in their houses, which freed children and men from their work, but this very situation had an increased workload for women at home that effected their mental health adversely (Thibaut et al., 2020). Previous research by Guo et al. (2020), Lai et al. (2020), and Sharma and Vaish (2020) concluded that mental health negatively affected women during COVID-19, causing them to suffer from low mood, anxiety, poor sleep, significant stress, binge eating, poor concentration, loneliness, and poor appetite.Liu et al. (2020) have also disclosed elevations in depression and anxiety scores and PTSD symptoms in women during the pandemic.

The results reveal that during the COVID pandemic, participants reported reproductive health problems. All women, irrespective of their socio-demographics, experienced an above-average level of reproductive disturbances. They described a shift in their menstrual cycle, missed periods, and excessive bleeding, as well as pelvic and abdominal pain and fever during their periods.Its causes can be work overload, distress, and anxiety due to the pandemic and poor diet or nutrition. As few participants reported, due to the increased domestic household work, they could not take care of their diet and nutrition.

There were significant differences in reproductive health between women from nuclear and joint families.with the women belonging to joint families reporting higher reproductive health problems than women in the nuclear family. Women living in joint families have greater responsibilities and workloads. They deal with more stress by working long hours and managing a larger number of family members.They had increased psychological distress, which would have led to menstrual cycle disruption. Tension and psychological pressure can encourage menstrual dysfunction (Maher et al., 2022). Limitless working hours and poor diet are associated with disruption of the menstrual cycle (Phelan et al., 2021).

Correlational analysis reveals that a significant positive correlation was found between physical health, mental health, and reproductive health. Physical health is associated with mental and reproductive health. Workload and longer working hours, a lack of diet and nutrition, and a lack of care and rest deteriorated the physical health of women, making them experience headaches, gastrointestinal complaints, sleep disturbances, and respiratory infections. These somatic complaints adversely affected their mental health, making them experience psychological distress, anxiety, depression, poor sleep, and social isolation. Further, the surge in psychological distress and depressive and anxiety symptoms instigated menstrual cycle irregularities during the pandemic.

A significant positive correlation was found between mental health and reproductive health, too. Psychological disturbances due to the pandemic, like anxiety, depression, stress, frustration, and panic, jeopardised the reproductive health of the women. Several findings are consistent with previous research that psychological disturbances are associated with menstrual irregularities, such as dysmenorrhea, PMS symptoms, and excessive menstrual bleeding (Maher et al., 2022).

CONCLUSION

Women reported inconveniences related to reproductive health, physical health, and mental health concurrently. Increased domestic work responsibilities, childcare, increased cleanliness and hygiene, and special care for pandemic-specific diet and nutrition all significantly hampered women's physical health; non-working and married women were the most affected.The panic of the pandemic, along with the work overload, led to mental health problems in all women, like stress, depression, anxiety, and social isolation, and this further disturbed their reproductive health during the pandemic. This study reveals that women experienced significant physical, reproductive, and mental health problems throughout the COVID-19 pandemic.

Limitations and suggestions

Research is a continuous process of searching, planning, finding, growing, and revealing knowledge. The journey makes the researcher a bit more knowledgeable and experienced in that area of work, which makes them better able to evaluate their work and know its weaknesses and ways for improvement. The sample size of the study was limited. Future research may consider an extensive study with a wide sample over a considerable study period. The emphasis of the present study is only on the reproductive, mental, and physical health of women. Future research may consider gender differences between women and men in reproductive, mental, and physical health.

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