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Naznin Memon
Department of Nutrition and Dietetics, Parul Institute of Applied Sciences, Parul University, Vadodara, Gujarat, India

Jenny Patel
Department of Nutrition and Dietetics, Parul Institute of Applied Sciences, Parul University, Vadodara, Gujarat, India

The physical and mental impact of COVID-19 pandemics on working and non-working women of India

Naznin Memon and Jenny Patel

Abstract
The aim of the study to know about the status of working women and non-working women's physical health and mental health throughout the COVID-19 pandemic and the impact of corona pandemic disease on working and non-working women have greater effect on their life. the study objectives were to compare the various challenges faced by working women and non-working women before COVID-19 and after COVID-19 in India and try to collect their physical health, dietary pattern & food habit, nutritional status, mental health and sleeping pattern status and to find out the factors underlying their challenges and coping strategies. This studies about the pandemic's influence on India's working and non-working women (25-45 yrs) during the corona pandemic period. A cross-sectional observational study was done on various working and non-working women of India using online Google form questionnaire survey. The database for research was collected from a Google form questionnaire link shared on social media networking. 140 workingwomen and non-working women were included in this study among this 70 working women and 70 non-working women were participate and fill up the online Google form questionnaire for data collection. The data collection was conducted from 05th Nov 2020 to 24th Jan 2021 for the study survey. In this study survey shows that working women are more affected than non-working women. Both groups are suffered from physical issues and mental disorder in COVID-19 pandemics disease.

Keywords: COVID-19, India, working and non-working women, physical health and activities, dietary pattern, nutritional status, mental health, sleeping pattern

1. Introduction
In 2020 a significant threat to humankind, i.e., COVID-19 pandemic, by the coronavirus, which has a clinical impact on a severe acute respiratory syndrome (SARS-CoV-2). COVID-19 has affected more than 6 million confirmed cases and 0.39 million human deaths till July 2020. (Malik *et al*., 2020) [1]. The recent spread of COVID-19 infection in the human population worldwide impacts the mental health and physical health of the human in all over the world. This outbreak has led to additional health problems such as depression, phobia, anxiety, stress, anger, irritability, insomnia, delirium, fear, and many more mental disorders worldwide. Due to mental health and physical health disorders, governments have to pay more attention to the population's mental health problems for better public health. (WHO, 2020) The COVID-19 pandemic period has changed our daily lives, career, and sense of safety, which has increased the stress and increased risk for COVID-19 complications in both mental health and physical health. (Alonzi *et al*., 2020) [3].
This pandemic led to lockdown from March 2020, causing significant loss of the professional and financial conditions that affected people's psychological and physical health. It also affects the social life of the population. Restriction of physical movement to avoid the active transmission of the coronavirus impacts the economic crisis in Gujarat and other states. (Ettman *et al*., 2020) [4].
Lockdown in this pandemic has changed the population's life all over the world. (Bullinger *et al*., 2020) [5] The effect of the COVID-19 period on mental health and physical wealth of women have a severe psychological disorder like anxiety, phobia, depression, irritabilities, psychological disorder increase in the lockdown period of pandemic disease because of the social isolation and breakdown of the economy of the family play a vital role.

Corresponding Author:
Naznin Memon
Department of Nutrition and Dietetics, Parul Institute of Applied Sciences, Parul University, Vadodara, Gujarat, India

Many women have psychological disorders because of the increased burden of work and other factors like unemployment and poor economy; social media also affects women's mental health. (White & Van Der Boor, 2020) [6].

Social media and day to day news regarding COVID-19 and its effect on human beings, like a war on the population which affects the psychological health of the women which leads to various mental conditions like depression, anxiety, irritabilities, fear, phobia, different criminal activities also seen during the COVID period. Preventive measures for COVID-19 infection also affect the population's mental status and various viewpoints regarding vaccination of coronavirus, which has excellent impressions on people's minds. (Madison *et al*., 2021) [7].

Therefore, our present study aims to correlate the impact of the COVID-19 pandemic with physical health and mental health among Indian working and non-working women during the corona pandemic period to conserve the community's physical health and mental health wellbeing, particularly with its expansion India.

2. Material and methods
2.1 Study design
The online Google questionnaire data survey of the physical health and mental health status of working and non-working women of India, due to impact of the corona pandemic disease. It is a cross-sectional study to find out various factors which were responsible for various adverse physical health and mental health disorders. The online Google questionnaire was shared on various social media platforms to collect the data of study. The data collection, conducted from 05th Nov 2020 to 24th Jan 2021.

2.2 Sample selection
The present study was carried out for India's working and non-working women to study various physical health and mental health status challenges before and after the COVID pandemic era. Due to the current pandemic, to maintain the protocol of COVID-19, the study was designed online-based survey by Google form in both languages is English and Hindi, and Google meet/telephonic conversation for data collection. The main reason for online questionnaires in both languages, like English and Hindi, for data collection is to know about the various challenges and factors faced by working and non-working women in the corona pandemic era that affected the both physical health and mental health conditions. The data obtained for the research study with written consent/permission from all participants by choosing the working and non-working women randomly.

2.3 Data collection and analytical methods
140 (25-45 yrs age) working and non-working women in India were selected for the data collection to study the various physical health and mental health conditions, which affect working and non-working women's physical health and mental health during the corona pandemic period. All the samples collected were with the consent of the subjects.

In this study quantitative aspects of data collection and analysis has been taken into consideration. The methodology followed was Google online questionnaire form based survey among the working women and non-working women from India. In addition to telephonic conversation with participants were also included in data collection of this study.

The semi structured Google online questionnaire form (open ended and close ended questions) was developed to meet the objectives of the study to assess the background information, daily routine, food pattern/dietary habit, physical activities and mental health of working women and non-working women before COVID-19 and after COVID-19 in India related questions included in this study.

1) Background information
This section includes the general information regarding name, age, Date of birth, marital status, working/non-working, city, number of family, number of children, weight, height, any other health problem etc.

2) Daily routine before and after COVID-19
In this the data was collected regarding daily routine of the working and non-working married women, Nature of work, routine activities of pre-lunch period, lunch & post lunch period, evening till bed time period, children's related work, overall household work, any help for household or taking care of children from anybody, care of elderly people, sleeping pattern before COVID-19 and after COVID-19.

3) Food/Dietary pattern
FFQs (Food Frequency Questionnaires) was a method of data collection regarding dietary patterns with frequency of that particular diet and estimated the usual diet of the working and non-working married women and to know about the relationship between diet and health of the women.

4) Physical activities
Physical activities data gave us to know about the daily physical activities of the working and non-working women before COVID-19 and after COVID-19 and understand the overall health status of the women and which type of changes occurs before COVID-19 and after COVID-19.

5) Your feeling of well being and feeling ok
In this section the collection of the mental health related data which gave us the idea about the mental health status of the working and non-working women of the India and what were the challenges and factors faced by the women and what were the coping strategies of that particular challenges faced by women and which type of drastically change in mental health occurs in COVID period.

2.4 Data analysis
The data from the Google online questionnaire form was entered by Microsoft excel and analyzed as percent responses and further presented into tabular form and graphical form and relevant statistics was applied for final analysis of data of this study.

3. Result and discussion

Table 1: Physical impact before COVID-19 and after COVID-19 periods of the sample (n=140)

Parameters	Working Women (N=70)		Non-working Women (N=70)	
	Before COVID-19 N (%)	After COVID-19 N (%)	Before COVID-19 N (%)	After COVID-19 N (%)
Overall household work that you do	10 (14)	65 (93)	26 (37)	68 (97)
Any help for household work/care of children	62 (89)	66 (94)	45 (64)	58 (83)
Duration of exercise				
15 min	26 (37)	44 (63)	21 (30)	43 (61)
30 min	32 (46)	19 (27)	43 (61)	22 (31)
45 min	12 (17)	07 (10)	06 (09)	05 (07)
Indoor /leisure time activities	58 (83)	11 (16)	47 (67)	28 (40)

Table 1 reveals that after COVID-19 93% working women and 97% non-working women had increase overall household work. There were no any change in house hold work help and child care before COVID-19 and after COVID-19 that was before COVID-19 89% working women and 64% non-working women while 94% working women and 83% non-working women. The findings of the duration of exercise shows that 37 % before COVID and 63 % after COVID working women doing exercise for 15 min. While 46% before COVID and 27% after COVID working women doing 30 min exercise. Less ratio seen in 45 min only 17 % before COVID-19 and 10 % after COVID-19. 30 % before COVID-19 and 61 % after COVID-19 non working women doing exercise for 15 min. While 61% before COVID-19 and 31% after COVID non working women doing 30 min exercise. Less ratio seen in 45 min only 09 % before COVID-19 and 07 % after COVID-19. Before COVID-19 83% working women and 63% non-working women were having enough time to play indoor /leisure activities and after COVID-19 there were significant changes in indoor activities in 16% working women and 40% non-working women because of lack of time.

Table 2: Dietary impact before COVID-19 and after COVID-19 periods of the sample (n=140)

Parameters	Working Women (N=70)		Non working Women (N=70)	
	Before COVID-19 N (%)	After COVID-19 N (%)	Before COVID-19 N (%)	After COVID-19 N (%)
Break fast				
Healthy food	63 (90)	42 (60)	66 (94)	58 (83)
Unhealthy food	07 (10)	28 (40)	04 (06)	12 (17)
Lunch				
Healthy food	60 (86)	62 (89)	64 (91)	61 (87)
Unhealthy food	10 (14)	08 (11)	06 (09)	09 (13)
Evening snakes				
Healthy food	34 (49)	23 (33)	37 (53)	28 (40)
Unhealthy food	36 (51)	47 (67)	33 (47)	42 (60)
Dinner				
Healthy food	16 (23)	11 (16)	58 (83)	45 (64)
Unhealthy food	54 (77)	59 (84)	12 (17)	25 (36)

Almost all 90% working women and 94% non-working women consumed healthy food in breakfast before COVID-19 but after COVID-19 consumption of unhealthy food increase in working women. Almost all 83% of non-working women consumed healthy food. Before COVID-19 86% working women and 91% non-working women were consume healthy food and 14% working women and 09% non-working women consumed unhealthy food in lunch before COVID-19.After COVID-19 all most all 89% working women and 87% non-working women consumed healthy food and 11% working women and 13% non-working women were consume unhealthy food. Working women consumed more unhealthy food at dinner time as compared to non-working women. Before COVID-19 only 23% working women and almost all 83% non-working women consumed healthy food at dinner time. After COVID-19 16% working women and 64% non-working women were consuming healthy food and almost all 84% working women and 36% non-working women consumed unhealthy food at dinner time.

Table 3: Mental impacts due to COVID-19 of the sample. (n=140)

Parameters	Working women (N=70) N (%)	Non-working women (N=70) N (%)
Frustration/stress due to COVID-19	63 (90)	37 (53)
Any anxiety related to COVID-19	60 (86)	58 (83)
Support from family during stressed/worried	59 (84)	31 (44)
Touch with friends	47 (67)	36 (51)
Coping strategies		
Positive thought	53 (76)	26 (37)
Listening music	11 (16)	21 (30)
Listening Motivational speakers	06 (09)	23 (33)
Religious	41 (59)	62 (89)
Reading spiritual books	43 (61)	53 (76)
Listen to motivational speakers	66 (94)	50 (71)
Any difficulties in sleep	62 (89)	42 (86)

Table 3 shows almost all 90 % working women and 53 % non working women faced stress during COVID period. 84% of working women and 44% of non-working women got family support during COVID-19. More than half 67% of working women and 51% non-working women were in touch with friends via various social media, Face book, and What's App during the COVID-19 period. Coping strategies for mental health challenges were more than half 76% working women and non-working women 37% were coping up the mental challenges with the help of positive thought 16% and 09% of working women and 30% and 33% of non-working women were coping with the mental challenges with the help of listening to music and listening to motivational speakers respectively. Almost half 59% of working women and 89% non-working women were religious. Non-working women 76% had a habit of reading spiritual books more as compared to working women 61%. Almost all 94% of working women and 71% of non-working women were reported to listen to motivational speakers on various media platforms. Almost all working 89 % and non working 89 % women's have faced difficulties in sleep.

4. Conclusion
In this study, we have concluded that there are more challenges faced by working women as compared to non-working women because working women have dual burden of inside home work and outside home work while non-working women have only inside home responsibilities which decrease the physical health and mental health issues during COVID-19 period. There is not much difference seen between working women and non-working women regarding dietary patterns. Working women have more awareness about nutritional status and physical health of her as well as family members as compared to non-working women because working women were more educated and more conscious about healthy life. Working women have more mental challenges with good coping strategies to tackle the mental health issue as compared to non-working women. Working women have less time to spend inside home because working women have professional work in their life while non-working women spend more time in household work.

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