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COVID-19 and its psychological impact on working parents

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Abstract. **Introduction**: The control measures during COVID-19 taken by the Government such as curfew, lockdown, and social distancing had observed differences in controlling the spread of the disease around the Kingdom of Saudi Arabia which might contribute to psychological illnesses to working mothers. **Methods:** The present cross-sectional study experimentally investigated the psychological well-being of parents during the COVID-19 outbreak, by exploring parents' anxiety/depression, low social function and loss of confidence during pandemic, further examined that whether being female, married and working will effect on the mental status of the participants or not. Total number of participants (N=185) were assigned randomly in Saudi Arabia, 92 were males (49.73%) and 93 were females (50.27%). The 12-Item General Health Questionnaire (GHQ-12) (Goldberg & Williams, 1988), consists of 12 items were administered on the participants to find out their current mental status. **Results:** Result of the study revealed that females were high in poorer mental well-being, which in turn was associated with anxiety-depression, social dysfunction and lack of confidence due to their work being more heavily impacted by COVID-19 and the care burden at home. **Discussion:** Studies revealed that females were high in poorer mental well-being, which in turn was associated with anxiety-depression, social dysfunction and lack of confidence due to their work being more heavily impacted by COVID-19 and the care burden at home. Special supportive steps and measures should be implemented during and after the pandemic is over.

Keywords. COVID-19, psychological impact, working parents, marital status

Introduction

The coronavirus COVID-19 pandemic is the major global health crisis of this time and the greatest challenge we have faced since World War Two. Since its emergence in Asia in 2019, the virus has spread to every continent except Antarctica. The World Health Organization (WHO) has declared the coronavirus disease 2019 (COVID-19) a pandemic. Infectious disease outbreaks such as Coronavirus Disease 2019 (COVID-19) can cause emotional distress and various psychological disturbances.

The whole world is in the grip of COVID-19 pandemic. Governments, consequently, have been taken numerous measures to try and contain the spread and effects of the virus in their respective countries. The Kingdom of Saudi Arabia (KSA) is no exception. The first case of COVID-19 was reported in early March 2020 (The Saudi ministry of health, 2020). Even before this confirmation, several measures had already been taken by the authorities to try and contain the spread of the disease in the country. In particular, some specific measures have been implemented for social distancing including the cancelation or suspension of mass gatherings for sporting, religious and entertainment reasons. Other strict measures include the cancelation

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of the Umrah and closure, although temporary, of all levels and forms of educational institutions and mosques, deferment of non-crucial gatherings, and imposition of curfews. All these measures had a direct effect on controlling the spread of the disease around the Kingdom (Yezli and Khan, 2020); however, they contribute to psychological illnesses such as anxiety, depression, panic disorder, and distress.

The COVID-19 health crisis is strongly affecting the mental health of the general population (Mazza et al., 2020). Though some parents taken the current situation in a positive way (e.g., the opportunity to spend more time with their family and children), several features of the current emergency may increase the risk of trauma, including the loss of chance and probability in the known world, immobility, detachment or distancing from loved one, lack of security and lack of time. Moreover, there is evidence that parental psychopathology is related with parenting difficulties, including parents' lack of confidence in their parental role, high stress, too much or too little discipline in children, more frequent use of punishments, and verbal hostility (Beckmann, 2019; Crum & Moreland, 2017; Font & Cage, 2018).

Schools and daycare centers closed around the country in March 2020 due to the COVID-19 pandemic, and childcare needs risen. At the same time, orders from government to stay at home and social distancing recommendations have made it difficult, for relatives such as grandparents or other family members, to help the parents with child care responsibilities. In such condition, it has become challenging for parents who work from home as well as for those who continue working outside the house. Women, especially working mothers, may face the force of the negative impacts. Women already carried a heavier load and responsibilities then men in rearing the children and taking care of them before the crisis, and the situation becomes worse during pandemic. Mothers who continue their work have new burdens on their time during the pandemic, especially the mothers of small children (Calarco, Meanwell, Anderson & Knopf, 2020.

In some other studies it has been found that pregnant mothers and those with young children are experiencing three- to five-times more self-reported anxiety and depression symptoms as compare to fathers (Li et al., 2020). Consequently, parents experiencing elevated levels of cumulative stress resulted in more rigid and abusive parenting behaviors (Hutchison, Feder, Abar, & Winsler, 2016; Liu & Merritt, 2018; Yang, 2015, Chung, Lanier, & Ju, 2020). Even for families who have not been directly exposed to the virus, they are likely to experience indirect effects of the COVID-19 pandemic (Van Bavel et al., 2020).

A major struggle for working women is the balance between work and family, and find difficulty in coping with this stress can lead to depression (Killien, Habermann & Jarrett, 2001; Nichols & Roux, 2004; Grice, Feda, McGovern, Alexander, McCaffrey & Ukestad, 2007; Grice, McGovern, Alexander, Ukestad & Hellerstedt, 2007). It is not easy for women when it comes to play the twin roles of a professional and that of a mother. It puts stress on their mental and physical health (Finn, 2000; Chatterji and Markowitz, 2012; Beuchert et al., 2016; Butikofer et al., 2017).

The present study wants to shed light on parent's psychological well-being during the COVID-19 outbreak, by exploring parents' anxiety/depression, low social function and loss of confidence during pandemic. We expected that implications of the COVID-19 outbreak might increase parents' psychological difficulties and specially mother's mental health and related factors as this situation is very challenging and difficult for them to manage in both way either at home or their work. (Belsky, 1984; Abidin, 1992; Madigan et al., 2018; Martin et al., 2019; Dalton et al., 2020).

Thus, the objectives of the present study are:

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1. To find out if there is a relationship between gender and psychological impact of COVID-19.
2. To find out if there is a relationship between marital status and psychological impact of COVID-19.
3. Is there a difference between working and nonworking parents in reference to the psychological impact of COVID-19.
4. To find out effect of COVID-19 on anxiety/depression, social function and loss of confidence of parents.

The findings of the present study will help in understanding the possible causes of anxiety/depression, low social function and loss of confidence in working parents and whether or not there is difference between male and female perception of situation in this pandemic.

Methodology

Participants and study design

This is a cross sectional study conducted in Saudi Arabia from July to December 2020. We used an online-based questionnaire distributed through social media apps, like WhatsApp and Twitter, participants were encouraged to participate in the survey. Physical distribution was not feasible due to the virus spreading. The convenience sample technique was used to collect data. Participants whose age from 20-50 were participated in this study.

Study Procedures

As mentioned earlier, the questionnaire was distributed during a period when CORONA cases were higher in number in most of the countries so by practicing social (physical) distancing we followed an online data collection technique. The survey was done online by using a common platform, google survey (Google LLC, Mountain View, California, USA). All participants were informed about the purpose of study and they provided informed consent. Data were kept confidential and were not disclosed unless for study purposes.

Measures

Sociodemographic variables of participants included gender, age, education, marital status, employment status if they are working or not, parental status was included for the general information of the participants. To assess the psychological impact of COVID-19, the 12-Item General Health Questionnaire (GHQ-12) (Goldberg & Williams, 1988) consists of 12 items, each one assessing the severity of a mental problem over the past few weeks using a 4-point Likert-type scale (from 0 to 3) was implemented. The score was used to generate a total score ranging from 0 to 36. The positive items were corrected from 0 (always) to 3 (never) and the negative ones from 3 (always) to 0 (never). High scores indicate worse health.

Statistical Analysis

Sociodemographic characteristics of the study population

The sample consisted of 185 people, 92 were males (49.73%) and 93 were females (50.27%). Out of 92 males 32 (17.30%) were married and 60 (32.43%) were unmarried. For females 79 (42.70%) were married and 14 (7.57%) were unmarried. Male populations who were married and nonworking 4 (2.16%) and 28 (15.14%) were married and working. Males who were unmarried and nonworking were 36 (19.46) and 24 (12.96%) were unmarried but working. For female's population married and nonworking were 32 (17.30%) and working were 47 (25.41%) out of 79 sample. Females who were unmarried and nonworking were 8 (4.32%) and

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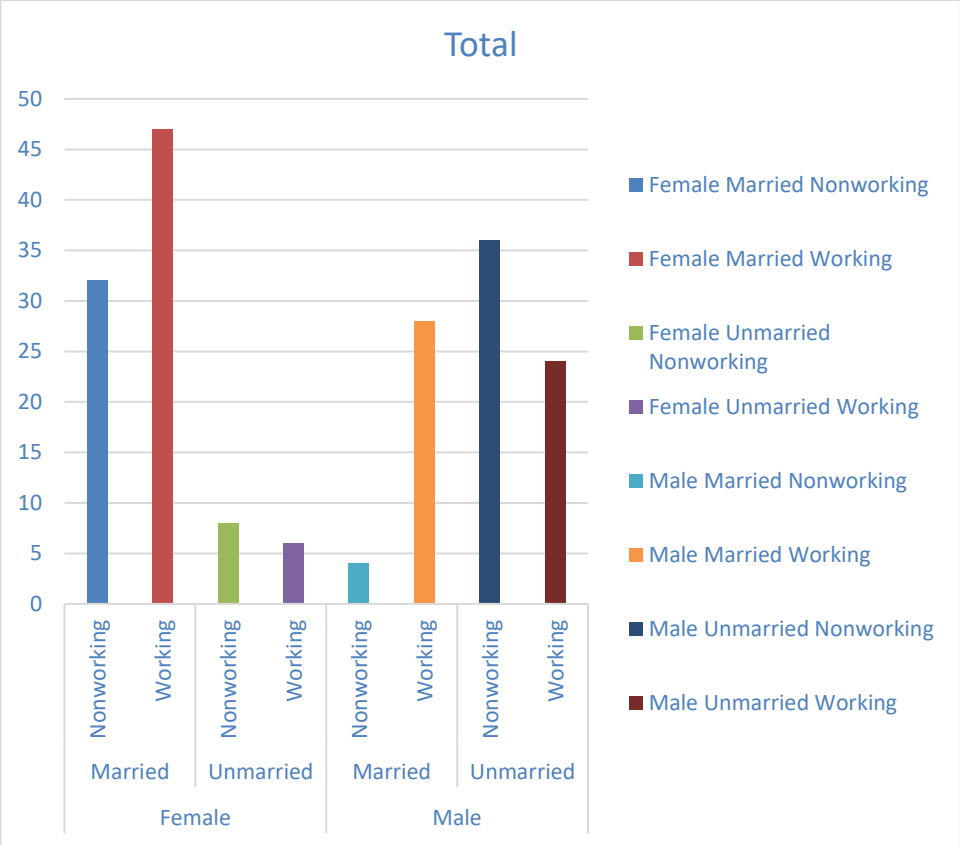
6 (3.24%) were unmarried and working at the time of data collection. The graphical representation of the demographical variables has been presented in the figure-1.

Table-1 Sociodemographic characteristics of the study sample (N=185)

Row Labels	Count of Gender (N)	%
Males	92	49.73%
Married	32	17.30%
Nonworking	4	2.16%
Working	28	15.14%
Unmarried	60	32.43%
Nonworking	36	19.46%
Working	24	12.96%
Females	93	50.27%
Married	79	42.70%
Nonworking	32	17.30%
Working	47	25.41%
Unmarried	14	7.57%
Nonworking	8	4.32%
Working	6	3.24%



(Figure-1 Sociodemographic characteristics of the study sample, N=185)

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The female group (*N*=93) was associated with the high score on general health questionnaire *M* = 9.87 (*SD* = 4.21). By comparing this group with the male group (*N* = 92) was associated with the less score on general health questionnaire *M* = 8.21 (*SD* = 4.00). To test the hypothesis that COVID-19 has a psychological impact on working parents in terms of male and female, an independent sample t-test perform. As can be seen in Table1, the males and females distribution were sufficiently normal for the purpose of conducting a t-test (i.e., skew <2.0 and kurtosis < 9.0; Schmider, Ziegler, Danay, Beyer, & Buhner, 2010). Additionally, the assumption of homogeneity of variances was tested and satisfied via Levene's *F* test, *F* (185) = .402, *p* = .527. The independent sample t-test (Table-2) was associated with a statistically significant effect, *t* (185) = -2.73, *p* = .007. So, in this way we can say that females are statistically significantly having more psychological effect of COVID-19 as comparison to males group.

Table-1 **Tests of Normality**

Skewness	.163	
Kurtosis	.763	
Leven's Test for Equality of Variances	**(F)** .402	**(Sig.)** .527

Table-2 **Showing t-test score of Male & Female on GHQ (general health questionnaire)**

Total GHQ	**Gender**	**N**	**Mean**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
	Male	92	8.21	4.00	-2.73	**.007**
	Female	93	9.87	4.21		
*p<0.05, **p<0.01, ***p<0.001						

The married group (*N*=111) scored high on general health questionnaire *M*=10.06 (*SD*=4.09). By comparing this mean with unmarried group (*N*=74) was associated with less score on general health questionnaire *M*=7.64 (3.91). Further to test that COVID-19 has psychological effect on married person more than unmarried group of people t-test has been performed. The independent sample t-test (Table-3) was associated with a statistically significant effect, *t* (185) = 4.058, *p* = <.001. So, in this way we can say that married people are statistically significantly having more psychological effect of COVID-19 as comparison to unmarried group of people.

Table-3 **Showing t-test score of Married & Unmarried on GHQ (general health questionnaire)**

Total GHQ	**Gender**	**N**	**Mean**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
	Married	111	10.06	4.09	4.058	**<.001**
	Unmarried	74	7.64	3.91		
*p<0.05, **p<0.01, ***p<0.001						

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The working group (*N*=105) scored high on general health questionnaire *M*=9.68 (*SD*=4.25). When comparing this mean with nonworking group of people (*N*=80) was associated with less score on general health questionnaire *M*=8.23(3.96). Additionally, to test that COVID-19 has more impact on working person than nonworking group of people t-test has been performed. The independent sample t-test (Table-4) was associated with a statistically significant effect, *t* (185) = 2.361, *p* = <.01. So, in this respect we can say that working people are statistically significantly having more psychological effect of COVID-19 as comparison to nonworking group of people.

Table-4 **T-test score of Working & Nonworking on GHQ (general health questionnaire)**

	Gender	**N**	**Mean**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Total GHQ	Working	105	9.68	4.25	2.361	**.01**
	Nonworking	80	8.23	3.96		
*p<0.05, **p<0.01, ***p<0.001						

A one-way ANOVA was performed to compare the effect of COVID-19 on parents according to GHQ dimensions. Participants were divided into two groups as per their gender (male & female). There was a statistically significant difference in social disfunction score for the both group (F=185) = 7.253, p= .008). Which means female are having more social dysfunction as comparison to males during COVID-19. For anxiety and depression there was no significant difference between both the group (F=185) = 3.655, p= .057) so we can assure that there was no gender difference in respect to anxiety and depression. Further from the table-5 we can assure that both group (males and females) were statistically significantly differ in respect to loss of confidence (F=185) = 19.595, p= <.001) which means female suffering from more lack of confidence as comparison to males.

Table-5 **One-way ANOVA comparing Gender difference according to GHQ dimensions**

Variables	Source of variance	Sum of squares	df	Mean Square	F-value	Sig. Level
Social Dysfunction	Between Groups	20.864	1	20.864	7.253	**.008**
	Within Groups	526.401	184	2.877		
	Total	547.265	185			
Anxiety and depression	Between Groups	12.491	1	12.491	3.655	**.057**
	Within Groups	625.422	184	3.418		
	Total	637.914	185			
Loss of Confidence	Between Groups	40.241	1	40.241	19.595	**<.001**
	Within Groups	375.813	184	2.054		
	Total	416.054	185			
*p<0.05, **p<0.01, ***p<0.001						

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Discussion

Research has consistently shown that major life changes can lead to severe and sometimes chronic psychological stress (Xiong, Lipsitz & Nasri, 2020). With more than 2.1 million cases confirmed worldwide, and over 140,000 reported deaths at the time of this study, the COVID-19 pandemic constitutes a pervasive source of potential stress on a global scale. Indeed, with many countries swiftly instituting strict control measures, normal routines were drastically disrupted with the closing of businesses, industries, schools and day care. Such behavioral changes, whether mandatory or not, can be expected to negatively impact individuals' mental health and/or emotional well-being.

The present study aimed to find out effect of COVID-19 on working parents, mainly in relation to gender difference, marital differences and if the person is working or not. Our study result showed that working married females are having more psychological effects on their health as comparison to working married males. In our study females (*N*=93) are having more mental health issues *M*=9.87 in this COVID-19 pandemic as comparison to males (N=92) with *M*=8.21. The current crisis will affect mothers very disproportionately not only physically but mentally also. Our result was also supported by a study conducted by Yan, Xu, Stratton, Kavcic, Luo, Hou, Bi, Jiao, Song and Jiang in 2021 on Chinese people, in their study they have reported that females are having more psychological stress (*M*=4.0) as comparison to males (*M*=3.6). Similarly, females tended to be more vulnerable to develop the symptoms of various forms of mental disorders during the pandemic, including depression, anxiety, PTSD, and stress, as reported in our included studies (Ahmed et al., 2020; Gao et al., 2020; Lei et al., 2020).

Marital status was another factor related to high psychological impact on health – with study findings suggesting that married people (N=111) are having high impact of COVID on their health with M=10.06 as comparison to unmarried (N=74) who are having M=7.64. Similar result has been reported by another study that married participants had higher levels of anxiety when compared to unmarried participants (Gao et al., 2020). On the other hand, Lei et al. (2020) found that divorced/widowed participants developed more anxiety symptoms than single or married individuals. On the other hand, single individuals had better mental health outcomes than people who were unhappily married in another study (Holt-Lunstad, Birmingham and Jones, 2008), which corresponds to our results.

We hypothesized that working parents are having more psychological impact on their health as comparison to nonworking which is proved from our result. Working (*N*=105) are having more psychological disturbances during COVID with M=9.68 as comparison to non-working (*N*=80) with M=8.23. Similar result has been found by Catalyst survey in September, 2020, where they have reported that disruption of work-life balance has left many parents feeling guilty, whether when working (54%) because they're not attending to caregiving, or when caregiving (43%) because they're not attending to their work. Parallel result has been found by Cheng, Mendolia, Paloyo, Savage and Tani in 2021 that 64% working parents are in worse mental health and are less financially secure after COVID-19. Women especially working are managing worse under the pandemic was confirmed by other studies (Etheridge and Spantig 2020; Banks and Xu 2020; Andrew et al. 2020). Mothers tended to find childcare more stressful than fathers (Roeters and Gracia 2016).

Our findings showed that parents (gender wise difference) were statistically significantly differ on social disfunction and loss of confidence (dimensions of GHQ) which means that female are facing more social dysfunction and lack of confidence as comparison to males because of COVID situation. Another study conducted by Alkhamees, Alrasheed, Alzuaydi, Almohimeed and Aljohani (2020) in Saudi Arabia reported similar result that females scored higher on IES-R (revised impact of event scale) with B:5.46, 95% CI: 3.61 to 7.31 and

all three sub-scales of the DASS (depression, anxiety and stress scale) with odds of between 1.65 and 2.63 (Zamarro and Prados, 2021; De Pedraza et al., 2020; Asdaq, Alajlan, Mohzari, Asad, Alamer, Alrashed, Nayeem, and Nagaraja, 2020).

Conclusion

The current study found that the COVID-19 pandemic was associated with heightened levels of fear, anxiety and depression among Saudi parents. Increased fear of COVID-19 was directly associated with poorer mental well-being, which in turn was associated with anxiety-depression, social dysfunction and lack of confidence. Working parents especially women are at higher risk of developing psychological and mental health issues during the COVID-19 crisis. Special supportive steps and measures should be implemented during and after the pandemic is over. Further research on the risk and preventive factors should be considered in future. Designing proper mental health management guidelines during pandemics could be designed and executed.

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