

# Assessment of the Mental, Social, and Educational Impact of the COVID-19 Quarantine and Predictors: A Survey-Based- Study from Saudi Parents

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**Background:** Quarantine has had a powerful effect on parents and children in Saudi Arabia in different aspects, namely, educational, mental, and social. Therefore, this study aimed to assess the mental, social, and educational impact of the COVID-19 Quarantine and its predictors among Saudi parents.

**Methods:** A cross-sectional study was carried out over 6 months in 2020 using structured questionnaires with 42 items, detailing pre-quarantine assistance with childcare, followed by mental, educational, and social challenges answered using a 5-point Likert scale and the factors affecting their children's learning at home during the COVID-19 quarantine. The data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 27.

**Results:** A response rate of 79.5% (n=831) was obtained. Mental challenges were experienced the most, and 68.1% of the parents worried about their children being infected with COVID-19. This was followed by the educational challenges related to their children's online learning, with 61.2% of the parents attributing it to their children's low motivation towards online learning. The mean score for the education domain was 31.14(±7.02). Similarly, the mean score for the mental impact and social impact was 33.13(±7.82) and 12.81 (±2.98). The results of the multiple linear regression analysis revealed participants' gender was found significantly associated with the mean score of the educational domain ( $p = 0.010$ ).

**Conclusion:** Social challenges were experienced the least, and parents confirmed that quarantine had helped them strengthen their family relations. Most participants agreed that they had fun spending time with both their partners and children. It is recommended to implement online remote activities and services that assist students and professionals in addressing pandemic concerns, such as virtual group exercise, virtual movie nights, and virtual office hours.

**Keywords:** quarantine, COVID-19, pandemic, economic impact, social impact, Saudi Arabia

## Introduction

There has been a flurry of interest in understanding coronavirus from different aspects, along with its impact on society, since it is perceived to be a new virus.<sup>1</sup> Contrary to this notion, however, different strains of the coronavirus have been identified since its discovery in 1960.<sup>1</sup> The first coronavirus outbreak occurred between 2002–2003, affecting many countries on different continents, including Asia, Europe, and North and South America. During 2010–15, it was shown to affect both animals and humans. At that time, although the virus was fatal, a vaccine for it had not been developed.<sup>1</sup> In December 2019, China recorded a series of cases, named “coronavirus disease 2019” (COVID-19), and a pandemic was declared. It spread quickly and extensively in the following months, having no specific treatment.<sup>2,3</sup>

The World Health Organisation (WHO) issued a warning regarding the global risk and rapid spread of the virus.<sup>4</sup> Subsequently, most countries began implementing precautions and initiating lockdowns in some sectors, and, as a result, quarantine forced the world's population to live under different stressful conditions, such as home isolation, social distancing, and intensive care units.<sup>5</sup> Quarantine<sup>7</sup> refers to the separation of people and restriction of their movement to determine if they have been infected by a contagious disease, thus reducing the risk of its spread.<sup>6</sup> This has impacted various systems worldwide, such as health, education, and the economy. It also negatively impacted people, as some were doubtful of its duration, and others feared infection; most experienced boredom and frustration because of the situation.<sup>6</sup> Quarantine affected both the health systems of various countries in addition to the mental social and educational impact of all members in the society.<sup>5</sup>

The education system was hardest hit by quarantine.<sup>1</sup> Most countries imposed lockdowns on all educational institutions to avoid the rapid spread of COVID-19, leading to a shift to online learning to save students time and smoothen the educational process.<sup>1</sup> Teachers in India used both online and offline methods for educating students during quarantine.<sup>7</sup> The latter involved recording lectures in a video format, using a webcam or a digital drawing table, that was then uploaded to YouTube. This method concerned some faculty members because they could not ensure that students viewed the videos. For online teaching, faculty members used common apps and programs, such as Zoom and Skype, to present their lectures. Due to limited internet connectivity, however, teachers might have been unable to clarify some questions raised by their students.

When shifting its education system from face-to-face to online learning, China encountered different challenges. Some teachers could not utilize the technology effectively, and digital equipment varied between homes.<sup>8</sup> In contrast, Pakistan closed all educational institutions for some time as their system was not prepared for epidemic.<sup>1</sup> On 6 March 2020, officials from the Ministry of Education (MOE) of the Kingdom of Saudi Arabia (KSA) were empowered to shut schools in any affected province to minimize COVID-19 spread. They shifted to distance education for all K–12 schools and universities on 8 March 2020.<sup>9–11</sup> The MOE provided a virtual kindergarten platform for the education of children aged three to seven years, under the supervision of their parents; it offered various learning elements, guidelines, and educational content through 11 units, according to a timeline that monitored progress and achievement.<sup>12</sup> An evaluation of children's skills was conducted towards the end. Public schools in the KSA depended on school closure, and the Internet Experiment Note (IEN) Satellite educational channels started broadcasting lessons to all students from 8 a.m. until 12 noon. These lessons were repeated continuously until those for the following day were broadcast.<sup>12</sup> Weekends were dedicated to rebroadcasts of the week's lessons. Private schools provided virtual classes using their institutions' blackboard platforms, or common apps such as Zoom, to deliver their lessons and contact their students.<sup>12</sup>

Parents and children's mental health has been severely impacted by the pandemic.<sup>13–15</sup> For instance, a recent systematic review found that the most prevalent mental health conditions among students and adolescents reported during COVID-19 were anxiety, sadness, loneliness, stress, fear, tension, rage, exhaustion, confusion, and worry.<sup>13,14</sup> In addition, literature shows that COVID-19 caused different mental behaviors among youngsters by worsening the child's mental health outcomes which was further reflected by the socioeconomic status of the family.<sup>15</sup> Furthermore, the COVID-19 pandemic had a greater negative impact on parents' mental health. This is because parents have pre-existing vulnerabilities, must manage their work and family commitments in addition to their jobs and household tasks, and require harmony.

However, social distancing from loved ones impacts mental health through increased feelings of restriction and boredom,<sup>6</sup> and stress, fear, frustration, anxiety, boredom, and depression have been rising in children and adults.<sup>16,17</sup> In Roy et al study in India, 72% of participants were worried about their health and the health of people close to them, with various impacts.<sup>18</sup> For example, some participants experienced a lack of sleep, while others reduced their social life by avoiding social gatherings. Most participants experienced panic due to the pandemic reports in the media.<sup>19</sup> In the UK, people experience depression or anxiety linked to various concerns, such as losing their jobs and future lack of income.<sup>19</sup> Australian families reported that quarantine had affected their mental health due to joblessness, while social distancing and isolation were the key issues that influenced their life.<sup>20</sup>

In addition, workplace stress can result in physical sickness, feelings of tired, fatigue, and mental anguish, and mental illness along with COVID-19 condition may worsen the mental situation of both child and parents.<sup>20,21</sup> The recent rise in work stress has been connected to global and national recessions, employment insecurity, and increased work intensity,

all of which contribute to increased workloads and interpersonal conflicts, and can influence children's mental health through interrupted parenting.<sup>21</sup> Therefore, the current study aimed to investigate the mental, social, and educational impact of the COVID-19 Quarantine and its predictors among Saudi Parents, as they unexpectedly had to work from home and simultaneously take care of their children.

## Methods

### Design, Setting, and Population

A cross-sectional study was conducted over 6 months from April 1st to September 21st 2020. In this study, we included individuals aged >18 years, a Saudi national, both genders, living in Saudi Arabia, working parents, able to provide informed consent, and others who do not match the inclusion criteria were excluded from the study. Furthermore, before conducting the research, the Institutional Review Board at King Saud University approved the study (reference number KSU-HE-20-240) and all ethical guidelines were followed. The study was performed by the ethical standards established in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. Participation in the study was voluntary, as each person provided written informed consent and was free to withdraw from the study at any time.

### Questionnaire Designing

The study tool was adopted from similar studies.<sup>1,17-19</sup> The online survey is composed of demographic data of the participants which includes, age, gender, educational status, working status, and marital status. The second part of the study deals with the pre-quarantine assistance with childcare, assessed on multiple choice answers. The third part of the study deals with mental and social challenges, with a total of 11- items. The fourth part of the study asks participants about the most common social challenges, with a total of 4-items. The fifth part of the study deals with the educational challenges with a total of 9 themes. All these domains were assessed on a five-point Likert scale, ranging from strongly agree to strongly disagree. The last part of the study is about the factors affecting their children's learning at home during the COVID-19 quarantine, which is composed of 11 items, measured on a binary scale. Informed consent was obtained from participants before starting the online survey. The first page of the survey contained a consent form, and participants could not continue without indicating their consent. At the end of the survey, there was a consent form for the phone interview. The mean score for each domain such as social (n=4 items), educational (n=9-items), and mental impact (n=11-items) of COVID-19 was prepared by combining each item response on a five-point Likert scale (1= "strongly disagree"; 5= "strongly agree"). The mean scores were computed by combining each item for each domain. After the initial draft of the questionnaires, a pilot study among randomly selected parents was carried out to check the flow of content and readability of the questionnaires. The reliability was determined for all domains of the study and it was 0.78 for the mental impact, 0.60 for the social impact, 0.82 for the educational impact of the survey.

### Sample Size Estimation

The required sample size was calculated using an online calculator,<sup>(<http://www.raosoft.com/samplesize.html>)</sup> similar to previous studies,<sup>22-32</sup> the sample size was calculated at 95% CI, and 5% of margin of error, by assuming the unknown population (n=20,000) the calculated sample size was 377 respondents. However, to avoid the response bias and to provide more value to the study we approached 1045 participants.

### Data Analysis

The data was analyzed using the Statistical Package for the Social Sciences (SPSS) (version 26 for Windows (SPSS Inc., Chicago, IL, USA). Descriptive statistics such as frequencies (n) and percentages (%) were used to summarize the demographic characteristics. Multiple linear regression analysis was used to investigate the components predicting the mental, social, and educational domains. All statistical tests were carried out with a significance threshold of 0.05.

## Results

A total of 1045 respondents were approached for the study, of which 214 were excluded because of insufficient requirement of being working parents. The included respondents were (n= 831), giving a response rate of (79.5%). Among them, more women 669(80.5%) participated in the study than men 162(19.5%), and most participants were married (93.4%). More than half 426(51.3%) of participants were in the age category 31–40 years, and 54.8% had a bachelor's degree. The detailed demographic characteristics are given in Table 1. With regards to help with child care

**Table 1** Demographic and Domestic Help Among Respondents (n=831)

| Variables   | Number | Percentage (%) |
|---|--------|----------------|
| <b>Gender</b>   |        |                |
| Men   | 162    | 19.5%          |
| Women   | 669    | 80.5%          |
| <b>Marital status</b>   |        |                |
| Married   | 776    | 93.4%          |
| Divorced  | 39     | 4.7%           |
| Widowed   | 16     | 1.9%           |
| <b>Age</b>  |        |                |
| 20–30 years   | 45     | 5.4%           |
| 31–40 years   | 426    | 51.3%          |
| 41–50 years   | 271    | 32.6%          |
| More than 50 years  | 89     | 10.7%          |
| <b>Education level</b>  |        |                |
| Secondary school or less  | 37     | 4.5%           |
| Diploma   | 54     | 6.5%           |
| Bachelor  | 455    | 54.8%          |
| Master's  | 180    | 21.7%          |
| Doctorates (PhD)  | 105    | 12.6%          |
| <b>People who helped with childcare before and during the quarantine period</b> |        |                |
| My mom/dad (grandma/granddad)   | 84     | 10.1%          |
| Domestic worker   | 360    | 43.3%          |
| Older brothers/sisters  | 70     | 8.4%           |
| No one  | 263    | 31.6%          |
| Nurses  | 7      | 0.8%           |
| Husband/wife  | 35     | 4.2%           |
| Children are old enough to help themselves                                      | 3      | 0.4%           |
| Others  | 8      | 1.0%           |
| Did not specify   | 1      | 0.1%           |

pre-quarantine, and during the quarantine 43.3% (n=360) reported help from domestic workers, followed by no one 31.6% (n=263), from grandparents 10.1% (n=84). The responses to pre-quarantine and during the quarantine, assistance with childcare are given in Table 1.

Most 68.1% (n=566) parents were concerned about their children getting infected while 34.5% (n=287) reported that their children were afraid of being infected with COVID-19, affecting their mental status, while 30.1% worried about the mental and physical impact of quarantine (Table 2). From a social perspective, the quarantine helped strengthen family relations in the Saudi community, as most participants (52%) agreed that they had fun spending time with family, while 33.1% (n=275) agreed or strongly agreed that social media could be a good alternative for direct social interactions with the children's. Detailed responses regarding the social challenges among parents are given in Table 3.

Regarding educational challenges majority (74.1%; n=563) of the respondents agreed or strongly agreed that children's educational level became poor because of online learning during the quarantine, while 51.5% (n=391) of the parents agreed that children received sufficient support from their schools during online learning. In addition, 44.7% of the parents (n=339) agreed that they could handle their children's online learning and work from home, as shown in Table 4. Although low motivation towards online learning (61.2%), followed by their dependence on their parents in the online process as they were young (46.6%) most common factor affecting their children's learning at home during the COVID-19 quarantine was low motivation towards online learning (61.2%), followed by their dependence on their parents in the online process as they were young (46.6%) Table 5.

The mean score for the education domain was 31.14(SD=7.02). Similarly, the mean score for the mental impact and social impact was 33.13(SD=7.82) and 12.81(SD=2.98). To determine the relationship between the mental impact of COVID-19, on age, gender, education level, and who helped during the COVID-19, a multiple regression linear model was utilized in which age, gender, education level, and who helped during the COVID-19 was considered as explanatory

**Table 2** Participants Responses Towards Mental Challenges During Quarantine

| Variables   | Strongly agree n(%) | Agree n(%) | Neutral n(%) | Disagree n(%) | Strongly disagree n(%) |
|---|---------------------|------------|--------------|---------------|------------------------|
| I am worried that my children could be infected with COVID-19                     | 566(68.1%)          | 183(22.0%) | 56(6.7%)     | 23(2.8%)      | 3(0.4%)                |
| I feel that my children are afraid of being infected with COVID-19.               | 159(19.1%)          | 287(34.5%) | 184(22.1%)   | 154(18.5%)    | 47(5.7%)               |
| I am worried about my children's mental and physical states after the quarantine. | 220(26.5%)          | 250(30.1%) | 156(18.8%)   | 165(19.9%)    | 40(4.8%)               |
| I am worried about my children's educational level during the quarantine.         | 271(32.6%)          | 296(35.6%) | 120(14.4%)   | 117(14.1%)    | 27(3.2%)               |
| I am worried about my family's financial state under the COVID-19 pandemic.       | 273(32.9%)          | 212(25.5%) | 118(14.2%)   | 165(19.9%)    | 63(7.6%)               |
| I am worried about losing my job because of the COVID-19 pandemic.                | 118(14.2%)          | 81(9.7%)   | 160(19.3%)   | 284(34.2%)    | 188(22.6%)             |
| Working at home with my children around is so challenging.                        | 174(20.9%)          | 198(23.8%) | 190(22.9%)   | 199(23.9%)    | 70(8.4%)               |
| My children fight all the time during the quarantine.                             | 107(12.9%)          | 198(23.8%) | 173(20.8%)   | 274(33.0%)    | 79(9.5%)               |
| We have started fighting a lot (wife/husband) after quarantine.                   | 53(6.4%)            | 95(11.4%)  | 200(24.1%)   | 325(39.1%)    | 158(19.0%)             |
| During quarantine, I realised that my children have new hobbies and talents.      | 128(15.4%)          | 376(45.2%) | 223(26.8%)   | 92(11.1%)     | 12(1.4%)               |
| I fight a lot with my children during the quarantine.                             | 29(3.5%)            | 114(13.7%) | 163(19.6%)   | 347(41.8%)    | 178(21.4%)             |

**Table 3** Participants' Agreement Regarding the Social Challenges During Quarantine

| Variables   | Strongly Agree n(%) | Agree n(%)  | Neutral n(%) | Disagree n(%) | Strongly Disagree n(%) |
|---|---------------------|-------------|--------------|---------------|------------------------|
| I feel that my children are lonely because of social distancing.                                    | 131 (15.8%)         | 260 (31.3%) | 147 (17.7%)  | 248 (29.8%)   | 45 (5.4%)              |
| Social media is a good alternative for us as parents to directly and socially interact with people. | 51 (6.1%)           | 172 (20.7%) | 185 (22.3%)  | 302 (36.3%)   | 121 (14.6%)            |
| Social media could be a good alternative for direct social interaction for my children.             | 55 (6.6%)           | 220 (26.5%) | 153 (18.4%)  | 287 (34.5%)   | 116 (14.0%)            |
| Quarantine helped me spend and enjoy more time with my family.                                      | 218 (26.2%)         | 432 (52.0%) | 139 (16.7%)  | 35 (4.2%)     | 7 (0.8%)               |

**Table 4** Participants responses towards educational challenges

| Statement   | Strongly Agree n(%) | Agree n(%) | Neutral n(%) | Disagree n(%) | Strongly Disagree n(%) |
|---|---------------------|------------|--------------|---------------|------------------------|
| My children's educational level became poor because of online learning during the quarantine.                   | 253(33.3%)          | 310(40.8%) | 118(15.5%)   | 64(8.4%)      | 15(2.0%)               |
| My children's transition to online learning was smooth.   | 62(8.2%)            | 239(31.4%) | 189(24.9%)   | 203(26.7%)    | 67(8.8%)               |
| My children received sufficient support from their schools during online learning.                              | 113(14.9%)          | 278(36.6%) | 166(21.8%)   | 155(20.4%)    | 48(6.3%)               |
| My experience with virtual applications was poor, and it affected the quality of my children's online learning. | 35(4.6%)            | 98(12.9%)  | 148(19.5%)   | 307(40.4%)    | 172(22.6%)             |
| I can handle my children's online learning and my work from home.   | 65(8.6%)            | 274(36.1%) | 185(24.3%)   | 179(23.6%)    | 57(7.5%)               |
| My children's online learning is a burden for us as parents.  | 223(29.3%)          | 301(39.6%) | 112(14.7%)   | 103(13.6%)    | 21(2.8%)               |
| During the quarantine, I succeeded in balancing my professional and familial responsibilities.                  | 117(15.4%)          | 376(49.5%) | 161(21.2%)   | 90(11.8%)     | 16(2.1%)               |
| I am satisfied with my experience of working from home.   | 127(16.7%)          | 283(37.2%) | 196(25.8%)   | 127(16.7%)    | 27(3.6%)               |
| I am satisfied with my children's online learning experience.   | 39(5.1%)            | 162(21.3%) | 199(26.2%)   | 255(33.6%)    | 105(13.8%)             |

**Table 5** Factors affecting their children's learning at home during the COVID-19 quarantine (n=831)

| Factors  | Number | Percentage (%) |
|--|--------|----------------|
| Lack of the technical support from the school                  | 259    | 34.1%          |
| Poor motivation of the children for virtual learning           | 465    | 61.2%          |
| The number of computers at home is less than that of the users | 158    | 20.8%          |
| Weak internet network  | 224    | 29.5%          |
| Lack of time as parents due to work commitment                 | 284    | 37.4%          |
| Teachers are not cooperative                                   | 99     | 13.0%          |
| Teachers are not well-trained for virtual learning             | 218    | 28.7%          |
| Changing some of the classes' schedules to evening time        | 147    | 19.3%          |

(Continued)

**Table 5** (Continued).

| Factors  | Number | Percentage (%) |
|--|--------|----------------|
| Our children depend on us as parents for online learning as they are young | 354    | 46.6%          |
| They are not affected negatively   | 8      | 1.1%           |
| Does not apply/ children are young   | 9      | 1.2%           |
| Others   | 65     | 8.6%           |

variables and mental impact of COVID-19 as the dependent variable. However, there was no association between the mental impact of COVID-19 and the demographic features of participants, as shown in Table 6. A similar concept was applied in the case of the educational impact of COVID-19 with some demographic features of participants using regression analysis. These results revealed that the gender of the participants was a significant predictor of the educational impact ( $p = 0.010$ ) respectively, as shown in Table 7. All other variables were not significantly associated with the educational impact of COVID-19 as shown in Table 6. Similarly, the social impact is not significantly associated with gender ( $B = -0.438$ ;  $SE = 0.266$ ;  $t = -1.644$  ( $p = 0.101$ ), Age ( $B = -0.134$ ;  $SE = 0.137$ ;  $t = -0.977$ ;  $p = 0.329$ ), educational level ( $B = -0.055$ ;  $SE = 0.061$ ;  $t = -0.899$  ( $p = 0.369$ ) as shown in Table 8.

**Table 6** Results of Mental Impact of COVID-19 with Demographic Features of Participants Using Regression Analysis

| Variables       | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.   | 95.0% Confidence Interval for B |             |
|-----------------|-----------------------------|------------|---------------------------|--------|--------|---------------------------------|-------------|
|                 | B                           | Std. Error | Beta                      |        |        | Lower Bound                     | Upper Bound |
| (Constant)      | 33.785                      | 1.788      |                           | 18.895 | <0.001 | 30.276                          | 37.295      |
| Gender          | -0.115                      | 0.700      | -0.006                    | -0.165 | 0.869  | -1.489                          | 1.258       |
| Age             | -0.011                      | 0.361      | -0.001                    | -0.031 | 0.975  | -0.720                          | 0.697       |
| Education level | -0.011                      | 0.161      | -0.002                    | -0.071 | 0.943  | -0.327                          | 0.304       |

**Table 7** Results of Educational Impact of COVID-19 with Some Demographic Features of Participants Using Regression Analysis

| Variables       | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.   | 95% Confidence Interval for B |             |
|-----------------|-----------------------------|------------|---------------------------|--------|--------|-------------------------------|-------------|
|                 | B                           | Std. Error | Beta                      |        |        | Lower Bound                   | Upper Bound |
| (Constant)      | 33.410                      | 1.598      |                           | 20.903 | <0.001 | 30.273                        | 36.547      |
| Gender          | -1.625                      | 0.625      | -0.092                    | -2.598 | 0.010  | -2.852                        | -0.397      |
| Age             | 0.183                       | 0.323      | 0.020                     | 0.567  | 0.571  | -0.450                        | 0.816       |
| Education level | 0.052                       | 0.144      | 0.013                     | 0.362  | 0.717  | -0.230                        | 0.334       |
| Who helped      | 0.007                       | 0.113      | 0.002                     | 0.063  | 0.950  | -0.214                        | 0.229       |

**Table 8** Results of Social Impact of COVID-19 with Some Demographic Features of Participants Using Regression Analysis

| Model           | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.   | 95.0% Confidence Interval for B |             |
|-----------------|-----------------------------|------------|---------------------------|--------|--------|---------------------------------|-------------|
|                 | B                           | Std. Error | Beta                      |        |        | Lower Bound                     | Upper Bound |
| (Constant)      | 14.267                      | 0.680      |                           | 20.973 | <0.001 | 12.932                          | 15.602      |
| Gender          | -0.438                      | 0.266      | -0.058                    | -1.644 | 0.101  | -0.960                          | 0.085       |
| Age             | -0.134                      | 0.137      | -0.034                    | -0.977 | 0.329  | -0.404                          | 0.135       |
| Education level | -0.055                      | 0.061      | -0.031                    | -0.899 | 0.369  | -0.175                          | 0.065       |
| Who helped      | -0.041                      | 0.048      | -0.030                    | -0.847 | 0.397  | -0.135                          | 0.054       |

## Discussion

Generally, it was well well-known fact that parents depended on grandparents to assist with their children's. This continued reliance affected the way children were managed, as indicated through certain actions, such as when mothers called to ensure that their children were awake and had joined online sessions, even when they were old enough to manage themselves.<sup>33</sup> When mothers were working from home, their families often depended on them for everything, and work-related meetings were constantly interrupted as they tended to their children's needs – one of the biggest challenges faced by parents. In terms of strategies employed to deal with this issue, 50% indicated that their children were allowed to use electronic devices for longer periods than usual. Some parents assigned home-based tasks and activities to their children, while others isolated themselves inside the home to attend meetings while allowing their children to carry out their daily activities elsewhere in the home. These results are consistent with Dong, Cao, and Li (2020), who found that Chinese parents were frustrated with their children's unrestricted digital use, not only for learning but also for other activities.<sup>34</sup> Quarantine and online learning confused Saudi families, and participants sought support from their parents or domestic workers. In this view, the current study reported that 31.6% of participants had no external help. However, the participants received help with childcare before and during quarantine, with domestic workers accounting for the highest percentage (43.3%), some participants highlighted their domestic workers' role in the house, while others feared losing them, as the workers were worried about their own families. Some believed the issues became more complicated between domestic workers and homemakers; however, participants did not want to face the fear of losing their domestic workers.

In addition, most parents (68.1%) were concerned about children getting infected – a fear that may have dominated their lives.<sup>6</sup> Furthermore, 34.5% reported that their children were afraid of being infected with COVID-19, affecting their mental status, while 30.1% worried about the mental and physical impact of quarantine. Similar results were observed in India, where 72% of participants expressed concern for the well-being of individuals who were close to them.<sup>18</sup>

Furthermore, the quarantine had some advantages for Saudi households, such as fewer family conflicts. In contrast to previous findings<sup>33</sup> most participants (58.1%) disagreed or strongly disagreed with the statement about spousal conflict. This phenomenon is unusual for Saudi society and could be attributed to participants' relatively young ages. Husbands praised their wives for taking care of their children and educating them at home, especially in the case of stay-at-home mothers who greatly contributed to family stability, while fathers attempted to balance their work lives and paternal roles.

When asked about the fights between them as parents and their children, the former and the latter accounted for 41.8% and 33%, respectively. This cordial relationship allowed parents to discover their children's new talents—the agreement percentage was 45.2%—and siblings started playing together. Household chores were divided between parents and children in the absence of domestic workers, and some held family meetings with their older children to renegotiate household rules. Less than half of the participants admitted that it was hard to work from home while their children were there; however, only 23.9% disagreed with that statement.

Mothers were occasionally more stressed, especially because of their work and children's educational responsibilities, in addition to finding new ideas for meals and innovative activities for children. This is similar to Al Lily et al findings;

from the moral concepts of some university instructors, they were found to complain about lecturer preparations and mentioned that the effort required for delivering one lecture online was equal to that required for six traditional ones.<sup>35</sup>

From a social perspective, the quarantine helped strengthen family relations in the Saudi community, as most participants (52%) agreed that they had fun spending time with family. This could be because most were aged between 31 and 40; thus, it was an opportunity for them to grow closer to their partners and children, as going to work every day had previously restricted them from spending time together. We found that the Saudi community developed new positive habits during the quarantine, such as walking together. Online shopping has increased significantly, not only locally but also worldwide. The qualitative data illustrated broad societal cooperation, such as the development of bonds between neighbors. Al Lily et al considered these habits adopted by the Arabic society as positive gains and a protective response to COVID-19.<sup>35</sup>

Regarding the utilization of social media as an alternative for direct socialization with friends and relatives, 36.3% of participants disagreed that it could be beneficial for them or their children. When asked about the people that they missed the most in their lives, the most frequent answers were parents, siblings, friends, family, and relatives – indicative of the close connections between families in the Saudi community. Children reported missing their friends the most, followed by family in general (grandparents and families). This could explain why some parents (31.3%) felt their children may be experiencing loneliness because of social distancing; however, this was considered a low percentage as less than half of the participants agreed with it. This result is inconsistent with previous studies<sup>16,17,19,20</sup> revealed that social distancing was a major issue and a key factor for many negative feelings.

Of the sample, about half (49.5%) said they were able to manage both their work and parental responsibilities during the quarantine; of the working parents (72.6%), 37.2% were content to work from home. In general, 36.1% of parents said they could assist their kids with online education while working from home; nonetheless, 33.6% of parents were unhappy with the experience and claimed that their kids had suffered as a result of the online learning environment. This finding is consistent with another study that found Chinese parents thought internet education was ineffective and useless.<sup>34</sup> According to the current study, 40.8% of Saudi parents confirmed that there had been a significant decline in educational quality, while 39.6% of parents felt that online learning was a burden for them as parents. Though many other factors negatively influenced the learning process, parents' experience with virtual programs was generally positive, their children's adaption to the online learning process was suitable, and the school offered dependable assistance.

Among the most significant contributing factors were the children's low motivation for online learning (61.2%) and their early reliance on their parents for online assistance (46.6%). Some parents charged that the educators and schools were not providing their kids with enough motivation, that the teachers were not creative or serious, and that the students were not being taught the right learning methodologies. This demonstrated how instructors were missing from their position as educators in online learning because they were unable to use technology-based tactics that were appropriate and comparable to the United States.<sup>36</sup> Al-Gamdi (2020) reported that the effectiveness of online teaching practices was mediocre and required improvements,<sup>37</sup> while Al Lily et al demonstrated the lack of experience of teachers and parents in taking advantage of online learning.<sup>35</sup> Nonetheless, Samuelsson et al reported that in the US, instructions explaining how to use Zoom classes for their children were sent to parents.<sup>38</sup> An issue faced by the parents at the beginning of the pandemic was neglecting the learning process, as they assumed that it would stop. Similarly, Al Lily et al found why online learning was not taken seriously by teachers, parents, and children.<sup>35</sup> One of the biggest challenges they experienced was the poor internet quality during the online learning process, which was also found in India by Varalakshmi and Arunachalam (2020).<sup>7</sup>

Another issue involved the lack of a learning environment, teachers, and friends that severely affected children's mood, as they had to stay at home for a long and could not go to their schools due to the quarantine. Some parents contacted their children's educators to talk to them and allow them to express their feelings of love and missing them. In Norway, preschool staff members talked to their students at least once during the six-week shutdown and made more frequent calls to those who required more contact.<sup>38</sup> In this study gender of the participants was a significant predictor of the educational impact ( $p = 0.010$ ), all other variables and mental and social impact were not found to have significant predictors. These findings were comparable to a previous study by Yu in 2021, which revealed that gender and personality traits were significant predictors of education.<sup>39</sup> Similarly Francis et al in 2021 evaluated the nature of religious coping and revealed that Positive coping was utilized more among female healthcare workers.<sup>40</sup> Furthermore,

with increasing incidence of COVID-19 cases worldwide the situation deteriorated day by day, but in Saudi Arabia, after the start of the pandemic, COVID-19 cases stabilized, and recovery rates increased.<sup>8,41</sup> The rising statistics of COVID-19 during the study period could have contributed to negative impact on an individual's mental, educational, and Mental outcomes. As a result, we recommend implementing online remote activities and services that assist students and professionals in addressing pandemic concerns, such as virtual group exercises, virtual movie nights, and virtual office hours. However, our study has some potential limitations. First of all, the data included herein were limited to only working parents second, the study was conducted in a single country in Saudi Arabia and used a convenience sampling approach so the results may not fully reflect the impact experienced by individuals across the globe. More research is needed to identify appropriate methods of providing such assistance and to assess the long-term effects of such interventions. The results of this type of assessment may enable policymakers to conduct a timely assessment of societal problems and make recommendations accordingly.

## Conclusion

We concluded that working parents in KSA missed their family's support during the quarantine period. The quarantine and the online learning process confused the Saudi households, thus requiring them to make certain changes in the house rules. This included asking their parents to move into their house, allowing domestic workers to help their children in online classes if they were busy, or allowing their children to use electronic devices for a longer time. The main mental and social challenges experienced were worrying about their children's physical and mental health and losing their jobs; however, the quarantine helped them strengthen their family relations as it was a great development stronger bonds with their partners and children. In terms of educational challenges, the Saudi parents were concerned about the quality of the learning process of their children as well as the loss of it. Surprisingly, a new challenge was identified from the interview results, namely, the economic one. The pandemic affected the financial level of the families, especially single mothers as they were the only ones responsible for their family income, while also managing other errands. However, this study's main finding was the Saudi community's cultural concept and significance of "family"; this can be explained with the following statement: "The quarantine helped in spending more quality time with the family".

## Data Sharing Statement

The data used to support the findings of this study is available from the corresponding author upon request.

## Ethical Approval

Furthermore, before conducting the research, the Institutional Review Board at King Saud University approved the study (reference number KSU-HE-20-240).

## Consent for Publication

Informed consent was obtained from participants, which confirmed that their data would be kept confidential and used exclusively for research purposes.

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## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

The authors have no competing interests in this work.

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