

Brief Report

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Psychoeconomic Impact of the Coronavirus Pandemic on the General Population in Saudi Arabia: A Cross-Sectional Study

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Abstract

Objective: To explore the psychological and economic effects of the COVID-19 epidemic and identify those at higher risk of suffering financial consequences.

Methods: A cross-sectional study using an online survey was conducted in Saudi Arabia between June 27 and September 27, 2020. Logistic regression was conducted to determine who was more likely to suffer financially from the COVID-19 epidemic.

Results: A total of 440 individual participated in this study, of whom, 86.8% were aged 19 – 49 years, and 60.0% were females. Around 57.0% reported that they have been affected economically by the pandemic. Around 11.0% of the participants reported that they feel anxious; around 18.0% reported feeling depressed or fearful because of COVID-19. Males were around twice (OR: 1.83; 95% CI: 1.24 – 2.72) as likely to be affected economically during the COVID-19 pandemic ($P < 0.01$). Saudis were 59.0% less likely to be affected (OR: 0.41; 95% CI: 0.27 – 0.60; $P < 0.001$).

Conclusions: The COVID-19 pandemic has affected the psychological and economic status of individuals in Saudi Arabia deeply. To prevent long-term psychological and economic deterioration and to hasten social recovery, mental, financial, supportive strategies, and programs to aid the entire community in coping with the pandemic are recommended.

Introduction

The first case of Coronavirus disease 2019 (COVID-19) was confirmed in the Kingdom of Saudi Arabia in March 2020 and, by September 10, 2022, it had caused 9309 deaths out of the 813986 patients who have been infected with this disease.¹ Since the announcement about COVID-19 outside the Kingdom of Saudi Arabia and even before the first confirmed case in the Kingdom, the Ministry of Health took the fatal outbreak seriously and enforced multiple precautionary measures; for example, it announced the temporary suspension of entry to Makkah and Madinah in February 2020.² After the first confirmed COVID-19 case, the Saudi Arabian government implemented a series of extreme measures to control the spread of the virus.² These exceptionally proactive measures taken to prevent the virus transmission provoked public fear, anxiety and/ or depression, aspects that are usually neglected during crisis, and pandemic management. COVID-19 is reported to have had a severe impact on the physical, social, and mental health of the public during the outbreak.³ In addition, due to the lockdown that was implemented in the majority of countries as a preventive measure to decrease the transmission of the virus, a large number of the workforce lost their jobs, which had a huge negative impact on their economic status as their income decreased and monthly spending increased.⁴ There are limited studies that have explored the psychological and economic impact of the COVID-19 pandemic on individuals in Saudi Arabia. Therefore, we aimed to examine the psychological and financial effects of the pandemic and to identify those who were most likely to suffer economic consequences.

Participants and methods

Study design

A cross-sectional study using an online survey was conducted in Saudi Arabia between June 27 and September 27, 2020.

Sampling strategy

The convenience sampling technique was used to invite eligible participants from the general population through social media platforms (Facebook and WhatsApp). The inclusion criteria

were participants aged 18 years and above, and currently living in Saudi Arabia. Participants were excluded if they were: (a) below 18 years of age, and (b) unable to understand the Arabic language.

Study tool

The study tool was developed based on an extensive literature review. It comprised 4 sections. The first section explored the participants' demographics (10 questions): asking about age, gender, nationality, and education level, as well as residential location, marital status, number of children for married participants, including employment status, and number of people living with the participant. Additionally, the participants were asked 'Has the coronavirus pandemic affected your monthly income/spending?' using a 5-point Likert scale that ranged from 'strongly agree' to 'strongly disagree.' Any participants who agreed with this statement by choosing the scale item 'agree' or 'strongly agree' were considered economically affected individuals. The second section asked the participants about their source of information and beliefs about COVID-19 (3 questions). The third section explored the participants' mental well-being (anxiety, depression, and fear) during the COVID-19 pandemic (5 questions). The fourth section explored the impact of the COVID-19 pandemic on employment status and social life (4 questions).

Statistical analysis

Categorical data were reported as percentages (frequencies). Binary logistic regression was used to estimate odds ratios (ORs) with 95% confidence intervals (CIs) indicating individuals who have been economically affected by the pandemic. The dummy variable (dependent variable) for the logistic regression was defined based on the participants' answer to the question 'whether the pandemic has affected their monthly income/ spending.' The independent variables were age, gender, nationality, and marital status, as well as number of children for married participants, living status, number of people living with participants, including education level, and working status. A 2-sided $P < 0.05$ was considered statistically significant. The statistical analyses were carried out using SPSS (version 25) (IBM Corp., Armonk, New York, USA).

Results

A total of 440 participants were involved in this study. 55.2% were from the Eastern area. The majority (86.8%) were aged 19–49 years. 60.0% were females. Around 50% were Saudis (52.5%). The majority (70.9%) were married. Around a third (30.5%) reported that they had 3–4 children. The vast majority (91.6%) lived with their family, with 52.7% living with more than 5 family members. Around 66.6% had a bachelor's degree and the same percentage reported working within the healthcare sector (Table 1).

Around 45.0% reported that their monthly income had been affected to some extent (confirmed that the pandemic affected them by responding with agree or strongly agree to the applicable question) by the pandemic. Additionally, 51.6% of the participants reported that their monthly spending has been affected to some extent by the pandemic.

Table 1. Participants' baseline characteristics

Demographic variable	Frequency (%)
Residency area	
Northern area	9 (2.0)
Southern area	23 (5.2)
Western area	125 (28.4)
Eastern area	243 (55.2)
Central area	40 (9.1)
Age group	
19 – 49 years	382 (86.8)
50 – 59 years	36 (8.2)
60 years and above	22 (5.0)
Gender	
Female	267 (60.7)
Nationality	
Saudi	231 (52.5)
Marital status	
Single	108 (24.5)
Married	312 (70.9)
Divorced	11 (2.5)
Widowed	9 (2.0)
Number of children for married participants	
No children	157 (35.7)
1 – 2 children	87 (19.8)
3 – 4 children	134 (30.5)
5 children or more	62 (14.1)
Living status	
Living alone	27 (6.1)
Living with friends	10 (2.3)
Living with family	403 (91.6)
Number of people living with	
2 or below	75 (17.0)
3 – 4 people	133 (30.2)
5 or more	232 (52.7)
Education level	
Primary	3 (0.7)
Intermediate	28 (6.4)
Diploma	68 (15.5)
Bachelor's	293 (66.6)
Higher education	48 (10.9)
Working status	
Works outside healthcare sector	293 (66.6)
Works in healthcare sector	147 (33.4)
Has the coronavirus pandemic affected your monthly income?	
Strongly agree	81 (18.4)
Agree	117 (26.6)
Neutral	96 (21.8)
Disagree	112 (25.5)
Strongly disagree	34 (7.7)
Has the coronavirus pandemic affected your monthly spending?	
Strongly agree	87 (19.8)
Agree	140 (31.8)
Neutral	78 (17.7)
Disagree	107 (24.3)
Strongly disagree	28 (6.4)

Source of information and beliefs about COVID-19

When the participants were asked about their source of information about COVID-19, social media was the most reported source (64.3%), followed by World Health Organization (54.8%), and then the Ministry of Health (54.3%).

The most common belief about coronavirus was that it is a dangerous virus and a cause for concern (45.7%). The main reasons behind their belief were because it spreads quickly among people (46.6%), there is no treatment for it (21.4%), and it causes severe symptoms (18.2%).

Mental well-being during the COVID-19 pandemic

Around 25.0% of participants reported that they feel anxious during the day because of COVID-19. 11.6% reported feeling anxious at night. 18.0% reported feeling depressed during the day to an extent that affected interactions with others. 17.3% reported feeling fear during the day because of COVID-19. The main reason for feelings of anxiety, depression, and fear was the rapid spread of the disease (64.3%).

Impact of COVID-19 on employment status and social life

When the participants were asked about whether their employment status has been affected due to the COVID-19 pandemic, 54.1% reported that their employment has been affected to some extent because of the pandemic. A similar proportion of the participants (55.6%) reported that their social life has been affected by the COVID-19 pandemic. The most commonly reported unfavorable effect of the pandemic was weight gain (56.4%). Around 42.2% of the participants described their interaction with others as abnormal (unstable, nervous, or isolated) to some extent. When the participants were asked about what they do to avoid the state of anxiety or fear due to the COVID-19 pandemic, the most reported practice was praying, which was reported by 73.4%.

Factors affecting the economic status of the participants

A total of 57.0% of the study participants reported that they have been affected economically by the COVID-19 pandemic. Using logistic regression, we found that males were around twice (OR: 1.83; 95% CI: 1.24 – 2.72) as likely to be affected economically during the COVID-19 pandemic ($P < 0.01$). On the other hand, Saudis were 59.0% less likely to be affected (OR: 0.41; 95% CI: 0.27 – 0.60; $P < 0.001$). Refer to [Table 2](#).

Discussion

The key findings are: (1) approximately 11.0% of the participants reported that they feel anxious because of COVID-19 and 18.0% reported feeling depressed or fearful because of COVID-19; (2) more than 50% of the participants reported that their employment and social life have been affected to some extent because of the pandemic; and 3) around 50% of the participants reported that their monthly income/ spending has been affected to some extent by the pandemic.

The COVID-19 pandemic has affected communities worldwide in multiple dimensions, including their physical, social, and mental well-being.^{3,5,6} This has been reported in different studies, in low-, middle-, and high-income countries throughout different community populations, including the general population, healthcare

Table 2. Factors affecting the economic status of the participants

Variable	Odds ratio (95% CI)
Age group	
19 – 49 years (Reference category)	1.00
50 – 59 years	0.78 (0.46 – 1.34)
60 years and above	1.79 (0.86 – 3.74)
Gender	
Female (Reference category)	1.00
Male	1.83 (1.24 – 2.72)**
Nationality	
Non-Saudi (Reference category)	1.00
Saudi	0.41 (0.27 – 0.60)***
Marital status	
Single (Reference category)	1.00
Married	1.37 (0.91 – 2.07)
Divorced	0.62 (0.19 – 2.06)
Widowed	2.68 (0.55 – 13.06)
Number of children for married participants	
No children (Reference category)	1.00
1 – 2 children	1.08 (0.67 – 1.74)
3 – 4 children	1.22 (0.81 – 1.85)
5 children or more	1.33 (0.76 – 2.31)
Living status	
Living alone (Reference category)	1.00
Living with friends	0.45 (0.11 – 1.89)
Living with family	0.79 (0.40 – 1.59)
Number of people living with	
2 or below (Reference category)	1.00
3 – 4 people	1.01 (0.67 – 1.52)
5 or more	0.85 (0.58 – 1.24)
Education level	
Primary (Reference category)	1.00
Intermediate	0.74 (0.34 – 1.59)
Diploma	0.74 (0.49 – 1.11)
Bachelor's	1.46 (0.85 – 2.50)
Higher education	1.58 (0.84 – 2.97)
Working status	
Works outside healthcare sector (Reference category)	1.00
Works in healthcare sector	0.69 (0.47 – 1.03)

** $P < 0.01$, *** $P < 0.001$.

providers, and university students.^{3,5-7} Our study reported a higher prevalence of anxiety and depression (between 11.6% and 18.0%) compared to a previous study conducted in Saudi Arabia that reported a lower prevalence (between 7.3% and 9.4%).⁵ This could be attributed to various reasons, including the timing of the study, because the previous Saudi study was conducted at the beginning of the pandemic (March – April 2020) while the data collection in our study took place between June and September, 2020, when we believe the mental pressure of the pandemic increased due to the high prevalence of the disease and the new strains. Another reason is the different tools used in measuring the mental impact of the pandemic. The previous study used previously validated tools (PHQ-9 and GAD-7 scales) to explore the prevalence and severity

of mental conditions (anxiety and depression) among the study population, while our study used MCQs to ask the participants directly whether the pandemic has caused anxiety, depression, or fear. Additionally, different study populations (students, health-care professionals, and the general public) were studied.

Our study found that 55.6% of the participants reported that their social life has been affected to some extent because of the pandemic. This confirmed the findings of a previous study in Jordan, which reported that social relationships have been affected to a high degree by the COVID-19 pandemic; about a third of the study population and 59.6% of respondents believed that social relationships had become weaker.⁶ Social life was affected deeply during the pandemic due to different factors such as the lockdown, and normal activities/ services being restricted, including public gatherings, fitness centers, cinemas, as well as retail shops, coffee shops, and restaurants. As a result of the lockdown, schools and universities closed and emergency remote learning commenced to enable students to complete their academic year.

In our study, 45.0% and 51.6% of the participants reported that their monthly income/ spending has been affected to some extent by the pandemic, respectively. These are alarming findings. The COVID-19 pandemic has affected the economy of all countries all over the world. Between April and June, 2020, the International Labor Organization estimated that an equivalent of 400 million full-time jobs were lost worldwide and income earned by workers globally fell by 10% in the first 9 months of 2020, equivalent to a loss of over US\$3.5 trillion.⁸ In the United States, a 4.8% decline in gross domestic product in the first 3 months of 2020 was reported, as well as more than 40 million unemployment claims in 10 weeks, with the unemployment rate close to 15%.⁹ Males were twice (OR: 1.83; (95% CI: 1.24 – 2.72)) as likely to be affected economically during the COVID-19 pandemic. On the other hand, Saudis were 59.0% less likely to be affected (OR: 0.41; (95% CI: 0.27 – 0.60)). In Saudi Arabia, males are mainly responsible for working and covering the whole family's living expenses. Due to the pandemic, many industries have tried to cut their expenses by shifting multiple job tasks online (from home). A salary decrease has accompanied this to cope with the economic impact of the pandemic on the industry and working companies. Non-Saudis have been economically affected to a higher degree compared to Saudis. This could be due to different factors, such as non-Saudis (except for people who have US, Canadian, or British nationality) having lower salaries compared to Saudis.¹⁰

Limitations

There are limited studies that have explored the economic impact of the COVID-19 pandemic on the society, worldwide and in the Middle East specifically, therefore, we interpreted our study findings in the context of other countries' experiences. Hence, our findings should be interpreted carefully. We did not examine the impact of time on mental health and economic status due to the cross-sectional nature of this study. Further studies are necessary. Finally, we used an online survey for data collection and therefore, we may have missed some of the targeted population. However, we tackled this by distributing the survey among different populations and using social media widely, which could have minimized the impact of this methodological deficit.

Conclusions

The COVID-19 pandemic has had a significant impact on people's psychological and economic wellbeing in Saudi Arabia. To assist the community in coping with the epidemic, decision-makers are encouraged to establish supportive methods and programs. Over time, this will prevent long-term psychological and economic decline and accelerate societal recovery. Future studies should identify high-risk groups that are more likely to be financially and mentally impacted by the pandemic and offer the necessary support to them. Future studies should also look at how governments handled the pandemic and how that affected the psychological and financial wellbeing of the community.

Supplementary material. To view supplementary material for this article, please visit <https://doi.org/10.1017/dmp.2022.303>

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Ethical standards. Ethical approval for the present study was obtained from the Research Ethics Committee at King Faisal University (HAPO-05-HS- 003/59735). The authors asked the individuals to declare whether they agreed to participate in the study. The confidentiality of the personal information of the participants was protected in this study.

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