

# Level of Fear among the General Population During the COVID-19 Pandemic in Al-Ahsa, Saudi Arabia

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**Abstract:** Epidemics or natural disasters increases long-term levels of fear and depression in populations. Fear of COVID-19 is negatively associated with life satisfaction. Aim of the study is to determine the level of fear among the general population and factors affecting fear level during the COVID-19 pandemic in Al-Ahsa, Saudi Arabia. Cross sectional study design was utilized. The online survey was administered by Google Forms to ensure a broad reach and easy access. After agreeing to complete the survey, participants filled demographic information and completed the FCV-19S questionnaire. The participants were chosen via non-probability convenience sample technique. In total, 1007 respondents given consent to join in the study. . Data collection done in November 2020. Participation is voluntary joined. Results showed that more than half of the participants (57.9%) had stress feelings. Near to quarter of the participants (23.8%) experience isolation or quarantine because of travelling or suspicious or because of contact with positive cases. Extremely fear appeared in 27.1% of the participants. While, more than half of the participants had normal feelings. Among the demographic characteristics age, gender and work career were significant at a 0.05 level. Among the pandemic and influencing factors feeling of stress, number of quarantines during the corona pandemic, and suffering from psychological disorder were significant at a 0.05 level. In conclusion this research results found that due to the pandemic of COVID-19 participants feelings significantly stuck with different adverse attributes. Consequently, the fear level in more than quarter of the population appeared to be in a high level.

**Keywords:** Al Ahsa, COVID-19, Fear, Pandemic, Survey.

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## 1. INTRODUCTION

The spread of COVID-19 started in December 2019, like a viral outbreak in Wuhan city of central Hubei province of China (Holshue et al., 2020). Over a few weeks, the COVID-19 virus spread across the globe at a rapid pace, even in Saudi Arabia. Until 7th October, the number of coronaviruses cases in Saudi Arabia reached high and uncontrol level. Therefore, the world health organization declared COVID-19 as public health Emergency on 30th January 2020, a month after the outbreak of the virus in Wuhan, China (WHO, 2020).

The key to slow the spread of COVID-19 is to follow protecting measures such as lock-down and quarantine. However, the state of lock-down and quarantining contributes largely to developing a high level of fear in many parts of the world (Szcześniak et al., 2020). Besides, Social isolation and spending a long time watching COVID-19 related news and social media all considered associated risk factors to fear (Gao, et al., 2020). Fear is one of the extremely influential feelings. It has an intense impact on physiological and psychological function of the body. Fear can produce powerful signals of reaction in case of urgent situation (Mental Health Foundation, 2021). Fear and anxiety had significant effects in extreme cases. Fear can lead to suicidal behaviors (Hayes,2020).

Epidemics or natural disasters increases long-term levels of fear and depression in populations (Morganstein and Ursano, 2020). Facing distressing events in life which affect in coping with it consider predictors of fear and anxiety (Zou et al., 2018). The situation of the population in some countries which have been severely affected by the epidemic and have little ability to cope, as what is occurring in a number of Latino nations, is mainly disturbing. The psychological effect of isolation was expressed in Chinese university students where about 24.9% of the students questioned suffered from anxiety linked to the COVID-19 outbreak (Cao, W., et al., 2020). In Italy, dysfunctional personality, along with negative affectivity and indifference, emotional problems and myths beliefs resulted to be relevant risk factors for reduced emotional well-being during the COVID-19 lockdown (Somma, A., et al., 2020). Fear of COVID-19 is negatively associated with life satisfaction (Alyami et al., 2020).

### Significance of the Study

In the current epidemic crisis, studying the causes of fear in vulnerable situations can be of great strategic consequence in helping relieve this challenge and avoid it in the upcoming. Knowledge and understanding of the factors affecting the level of fear will minimize the effect on the mental well-being.

### Objectives: -

- 1-To determine the level of fear among the general population during the COVID-19 pandemic in Al-Ahsa, Saudi Arabia.
- 2-To identify the factors affecting fear level.

### Question:

- 1-What is the level of fear among the general population during the COVID-19 pandemic in Al-Ahsa, Saudi Arabia.
- 2-What are the factors affecting the fear level.

## 2. METHODOLOGY AND PROCEDURE

### Research design

Cross sectional study design with a mixed method was utilized.

### Data Collection Method

Participation was through an anonymous online survey. A web-page link was distributed via social media.

### Data Collection Instrument

The online survey was administered by Google Forms to ensure a broad reach and easy access. After agreeing to complete the survey, participants filled demographic information and completed the FCV-19S questionnaire, which adopted from Ahorsu et al., 2020. The questionnaire covers four sections. The **first section** contains demographic data as gender, level of education, marital status, work career. The **second section** includes data on pandemic and influencing factors. Data on pandemic and influencing factors will use to evaluate the influencing factors. It consists of 7 multi-choice questions. The **third section** measures the fear of COVID-19. The researchers adopted it from Ahorsu et al., 2020. The **fourth section** contains open questions which will help to gather information about the factors that influence the increased level of fear.

### Sample and sample size determination

The participants were selected through non-probability convenience sampling. This type of sampling helped the researcher in collecting the data from a group of easy people to contact or to reach via a self-report scale questionnaire (Jager, Putnick & Bornstein, 2020).

Participants were recruited through online platforms (e.g., LinkedIn, Facebook, Twitter, WhatsApp). In total, 1007 respondents given consent to join in the study.

Males and Females who is living in Al-Ahsa, city, and who is over 18years. Data collection done in November 2020. The minimal sample size was based on the formula of sample size calculator and should not less than (N=384 persons) with confidence interval 95%, and margin of error 5%. The researchers allowed a larger sample size because this would increase the statistical power for detecting smaller effects and strengthen the findings.

### Ethical considerations

Participation is voluntary joined, and since there is no risk of involvement in this study except for participant data confidentiality, only online consent was required. Kept data with no identity disclosure from participants and data secure and anonymous to ensure participants' privacy and confidentiality.

### 3. DATA ANALYSIS

The data was analyzed using the IBM Statistical Package for Social Sciences (SPSS) version 25. The researchers used the Arabic version of the FCV-19S translated by an independent professional medical translator fluent in English and Arabic to assess the severity of fear of COVID-19 among the Al-Ahsa population, Saudi Arabia. A total score will be calculated by summing all item scores with a possible total score ranging between 7 and 35.

If the scores 0-9 = No fear associated with increasing cases of COVID-19 in Alhasa, 10 -19= Normal fear related to rising cases of COVID-19 in Al-Ahsa ( can be handled), 19-25= extreme fear associated with increasing cases of COVID-19 in Al-hasa (Ahorsu et al., 2020).

### 4. RESULTS

An online survey questionnaire was collected from 1007 respondents. Table (1) illustrates that out of the 1007 participants, 253 (25.1%) were in the age group of 41-50, and majority of the participants 588 (58.4%) were less than 40 years old. 878 (87.2%) were females, and more than half of the participants 773 (76.8% ) had high education. More than half of the participants 612 (60.8%) were married, and 335 (33.3%) of the participants worked in educational carrier.

**Table (1) The demographic data of the participants**

Items	No.	%
<b>Age/ years</b>		
16-20	238	23.6
21-30	185	18.4
31-40	165	16.4
41-50	253	25.1
51-60	128	12.7
60 <	38	3.8
<b>Sex</b>		
Male	129	12.8
Female	878	87.2
<b>The level of education</b>		
Secondary	234	23.2
University or higher	773	76.8
<b>Marital status</b>		
Single	353	35.1
Married	612	60.8
Divorced	23	2.2
Widower	19	1.9
<b>Subject work</b>		
Student	315	31.3
Health worker	35	3.5
Education worker	335	33.3
Military / security agency	11	1.1
Job seeker	86	8.5
Retired	152	15.1
housewives	67	6.7
Free work	6	.5

Region		
Hofuf	785	78.0
Mubarraz	122	12.1
Al-oyon	14	1.4
Villages	86	8.5

Table (2) shows pandemic and influencing factors. In relation to stress feeling, more than half of the participants 583 (57.9%) had stress feelings. Near to quarter of the participants 240 (23.8%) experience isolation or quarantine because of travelling or suspicious or because of contact with positive cases. 36 (3.6%) of the participants diagnosed with mental disorder.

Table (2): Pandemic and influencing factors

Items	No.	%
<b>Feel stress</b>		
Yes	583	57.9
No	424	42.1
<b>Experience isolation</b>		
Yes	240	23.8
No	767	76.2
<b>Receive psychological support</b>		
Yes, from the family	386	38.3
Yes, from the co-workers	8	.8
Yes, from the friends	58	5.8
Yes, from the competent authorities	34	3.4
Not received any psychological support	521	51.7
<b>Diagnosed with a mental disorder before or now</b>		
Yes	36	3.6
No	31	3.1
Prefer not to answer	940	93.3

Figure (1) Shows that extremely fear appeared in 27.1% of the participants. While, more than half of the participants had normal feelings.

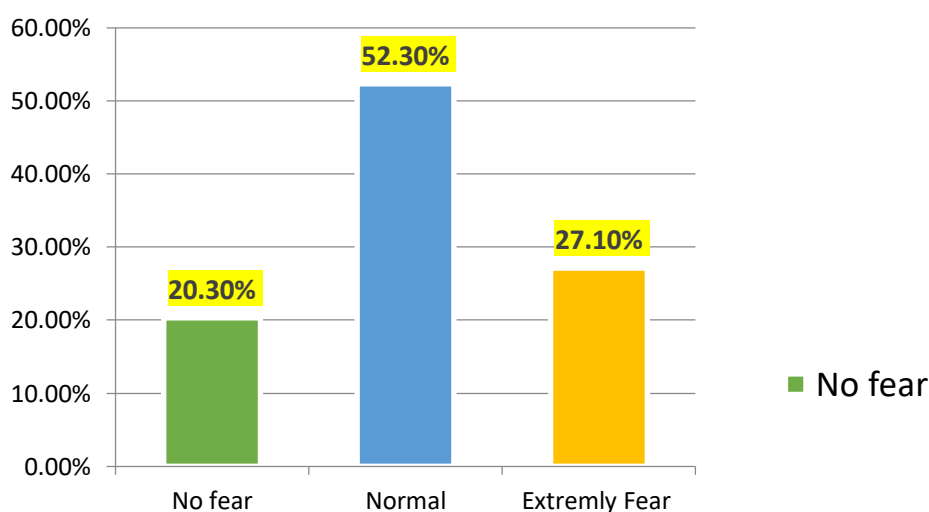


Figure (1): Percentage of fear level among the participants.

Table (3) illustrates demographic factors associated with fear. Chi-square and P-value tests were used to determine the relationships between participants' demographic data and fear levels. Among the demographic characteristics age, gender and work career were significant at a 0.05 level. The percentage of extremely fear was associated with age group between 30-50). The percentage of extremely fear was higher in female rather than male. High proportion of extremely fear participants were between health workers, educational workers, and retired participants. No significant related to educational level or marital status.

**Table (3): Demographic Factors Association with participants' Fear during the Pandemic**

Items	No.	No fear (n= 204)		Normal (n= 530)		Extremely Fear (n= 273)		Test of significance	
		No.	%	No.	%	No.	%	X <sup>2</sup>	P-Value
<b>Age/ years</b>									
16-20	238	51	21.4	132	55.5	55	23.1	31.731	.0001**
21-30	185	38	20.5	103	55.7	44	23.8		
31-40	165	42	25.5	60	36.4	63	38.2		
41-50	253	33	13.0	150	59.3	70	27.7		
51-60	128	31	24.2	67	52.3	30	23.4		
60 <	38	9	23.7	18	47.4	11	28.9		
<b>Gender</b>									
Male	129	37	28.7	68	52.7	24	18.6	9.131	.01*
Female	878	167	19.0	462	52.6	249	28.4		
<b>The level of education</b>									
Secondary	234	55	23.5	113	48.3	66	28.2	2.812	.245 NS
University or higher	773	149	19.3	417	53.9	207	26.8		
<b>Marital status</b>									
Single	353	74	21.0	189	53.5	90	25.5	3.696	.718 NS
Married	612	123	20.1	315	51.5	174	28.4		
Divorced	23	3	13.0	16	69.6	4	17.4		
Widower	19	4	21.1	10	52.6	5	26.3		
<b>Work career</b>									
Student	315	71	22.5	164	52.1	80	25.4	4.127	.004**
Health worker	35	7	20.0	18	51.4	10	28.6		
Education worker	335	64	19.1	175	52.2	96	28.7		
Military / security agency	11	6	54.5	3	27.3	2	18.2		
Job seeker	86	15	17.4	50	58.1	21	24.4		
Retired	152	28	18.4	78	51.3	46	30.3		
housewives	67	12	17.9	40	59.7	15	22.4		
Free work	6	1		2		3			
<b>Region</b>									
Hofuf	785	166	21.1	408	52.0	211	26.9	4.273	.640 NS
Mubarraz	122	19	15.6	71	58.2	32	26.2		
Al-oyon	14	2	14.2	6	42.9	6	42.9		
Villages	86	17	19.8	45	52.3	24	27.9		

NS = not statistically significant differences \*\* Highly statistically significant differences

Table (4) represents pandemic and influencing factors associated with fear. Chi-square and P-value tests were used to determine the relationships between pandemic and influencing factors and fear levels. Among the pandemic and influencing factors feeling of stress, number of quarantine during the corona pandemic, and suffering from psychological disorder were significant at a 0.05 level.

**Table (4): Pandemic and influencing factors Association with Participants' Fear during the Pandemic**

Items	No.	No fear (n= 204)		Normal (n= 530)		Extremely Fear (n= 273)		Test of significance	
		No.	%	No.	%	No.	%	X <sup>2</sup>	P-Value
<b>Feel stress</b>	583	67	11.5	299	51.3	217	37.2	15.211	.0001**
<b>Experience isolation</b>	240	40	16.7	137	57.1	63	26.3	3.279	.194
<b>Number of quarantine during the Corona pandemic</b>								12.852	.045*
One time	137	19	13.9	84	61.3	34	24.8		
Twice	29	5	17.2	20	69.0	4	13.8		
More than twice	12	2	16.7	4	33.3	6	50.0		
Not once	829	178	21.5	422	50.9	229	27.6		
<b>Diagnosed with a mental disorder</b>	36	9	25.0	13	36.1	14	38.9	11.930	.018*

\*Statistically significant differences \*\* Highly statistically significant differences

### 5. DISCUSSION

The present report examined the level of fear of the coronavirus epidemic and its associated factors in an online survey study. The present study results replicate results from earlier studies. The present study found that extremely fear appeared in 27.1% of the participants. While, more than half of the participants had normal feelings. Many studies have demonstrated that fear has a considerable effect on decreasing the severity of a pandemic. Fear is clearly associated with increased individual spacing behavior and accepting additional safety measures. This research's primary objectives were to measure the levels of fear of COVID-19 among the general population during the COVID-19 pandemic in Al-Ahsa, Saudi Arabia, and the associated factors affecting fear level.

The present study showed that among the respondents socio-demographic characteristics, there were more females (87.2%) than males (12.8%). The baseline characteristics of subjects in comparative studies varied globally. Females responded more in studies in India, China, and Egypt, while males responded more in studies in the United States (Hossain et al., 2021). In the present study majority of the participants, (58.4%), were less than 40 years old. In study Indian, Chinese, and Egyptian studies had similar responses by age group and education, while the USA study reported a mean age higher than that (Hossain et al., 2021).

Our research found a high proportion of exceedingly fear participants were between health workers, educational workers, and retired participants. No significance is related to academic level or marital status. A study in China showed similar scores of fears by age and concerning knowledge and occupation (Zhong et al., 2021). Several similar articles discovered that more than half of respondents had "good knowledge" of COVID-19, with age and education. The pandemic and the influencing factors associated with fear are represented (Hossain et al., 2021).

Among the pandemic and influencing factors, feeling of stress, the number of quarantines during the corona pandemic, and suffering from a psychological disorder. According to one study, fear is caused by a more extended period of isolation, more movement restrictions, and greater reactivity to social media news and rumors.

### 6. CONCLUSION

This research results found that due to the pandemic of COVID-19 participants feelings significantly stuck with different adverse attributes. Consequently, the fear level in more than quarter of the population appeared to be in a high level.

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