

# Stress due to Travel Ban for Pandemic during Vacation among Expatriates of Saudi Arabia

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## Abstract

**Objectives:** The government of Saudi suspended international flights for an indefinite period temporarily to many countries after the World Health Organization announcement of Corona Virus Disease (COVID-19) as a pandemic. Saudi expatriates used to visit their native country during summer vacation. However, this pandemic crisis is generating stress to the expatriates. Hence, the study aimed to investigate the stress due to the travel ban in the pandemic crisis among expatriates of Saudi Arabia and associate the demographic variables with stress.

**Methods:** A cross-sectional study was conducted from May 2020 to August 2020 in the Al-Ahsa region of Saudi. Totally 264 expatriates, who met the inclusion criteria were selected by convenient sampling technique. The data collected through a structured questionnaire and ten points perceived stress scale (PSS) using the electronic method. The collected data were analysed by applying descriptive and inferential statistics using SPSS 20.0.

**Results:** Among 264 expatriates, 25(9.5%) were low stressed, 157(59.5%) were moderately stressed, and 82(31%) were severely stressed. The findings revealed that females faced higher stress than males ( $p < 0.01$ ) and married than unmarried ( $p < 0.001$ ). The expatriates felt more stressed ( $p < 0.001$ ) when their dependents stayed outside the kingdom. There was a significant association between age, occupation, nationality, and family type with the level of stress ( $P < 0.05$ ).

**Conclusion:** The level of stress was high among expatriates due to the travel ban. There is a need for psychological counselling and support. Pandemic control and safe international travel access can be the future solution to reduce stress.

**Keywords:** COVID-19; Expatriates; Pandemic; Stress; Travel ban

## Introduction

The coronavirus disease (COVID-19) is a serious pathogenic infection caused by the novel coronavirus in

human beings.<sup>1</sup> COVID-19 affected a large number of people who were exposed to an infected person. Most of the countries and territories around the world were in the sustained risk of further global spread.<sup>2</sup> The World Health Organization (WHO) on March 11, 2020, declared COVID-19 outbreak as a global pandemic.<sup>3</sup>

National responses towards the control and prevention of the COVID-19 pandemic were different and the actions *have* been varied. Most of the countries around the world have implemented major precautionary and protective measures like implementing state-wise

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or country-wise lockdowns, quarantines, and travel ban to control virus spread.<sup>4</sup>The government of Saudi suspended international travel for an indefinite period temporarily to many countries. Similarly, the other national countries of expatriates also suspended the flight landing.

In 2020, the total population of Saudi Arabia stands at 34.81 million according to the data provided by the World Bank in which approximately 10.4million people are expatriates from various countries such as Syria, India, Pakistan, Egypt, Yemen, Bangladesh, Sri Lanka, Philippine, Indonesia, Turkey, Jordan, Palestine and Westerns.<sup>5,6</sup>

A cross-sectional study conducted to investigate the immediate impact of mental health and its related lifestyle habits and quality of life among Chinese adults in mainland China due to the COVID-19 pandemic one week after Wuhan locked down and travel restrictions which were imposed by the Chinese government. The pandemic crisis was associated with mild stressful impact.<sup>7</sup> However, the results were not specific about the impact of the COVID-19 pandemic on the psychological responses among the general population. That may be due to the disease outbreak was not regarded as severe during the time that the study was conducted.<sup>8</sup>

Most of the expatriates of Saudi used to visit their native during the summer vacation. This will enhance the refreshment of mind and relaxing by spent with their relatives which increases family bonding<sup>9</sup>. Because of the travel ban in almost all countries, prevent the expatriates to go to meet their loved ones and relatives. However, this pandemic crisis may be generating stress<sup>10</sup> to the expatriates which may have impacts on their health and well-being<sup>11</sup>. There is inadequate information about psychological issues due to unavailable studies. Hence, the study aims to investigate the stress due to the travel ban in the pandemic crisis during summer vacation among expatriates of Saudi Arabia and associate the stress level with selected demographic variables.

## **Materials and Methods**

### **Study Design and Setting**

In the descriptive method, a cross-sectional study was conducted from May 2020 to July 2020 in the Al-

Ahsa region of the Kingdom of Saudi Arabia, which has around 293,179 total population. Approximately 10000 expatriates from various countries were residing in this area. Sample size calculation was done using open-source epidemiologic statistics for public health tools software. The sample size calculation was done on the target population size of 320 according to the estimated proportion of 0.3 with a specified level of confidence interval at 0.95 (95%) with significance at 0.05 (5%). Total number of 264 expatriates participated in this study with their willingness.

### **Sampling**

The other nationality people aged from 20 years and above including both male and female gender residing in the Al-Ahsa region and who showed a willingness to participate in the study were selected by using a convenient sampling technique.

### **Measurement tool**

A well-structured questionnaire was developed concerning the research topic. Based on the objectives of the research, the tool was created and made easy to understand by reading in the English language commonly. The tool was validated by 3 experts in the medical field for getting the proper results. The instrument consisted of 3 parts. The first part has 9 questions related to demographic information consists of age, gender, education, occupation, marital status, nationality, family type, and duration of living in Saudi. The second part has 8 questions which are related to travel information of native visits during summer and the third part includes ten points perceived stress scale (PSS). This is one of the precise measures of a tool to assess the psychological stress among people. This was developed in the year 1983 originally, and it is a good classic instrument for stress assessment<sup>12</sup>. It helps to understand the various situations that may affect the feelings and emotions. The questions on this scale usually ask about the thoughts and feelings that happened during the last month and that will indicate how often the people felt or thought in a certain way. However, the tool used here to determine the thoughts and feelings that happened in the samples from the period of April 2020 to June 2020 during the travel ban to visit their native place by the way to determine the perception of stress. For each question the options were given with score as follows: 0 – never; 1

- almost never; 2 – sometimes; 3 – fairly-often; 4 - very often. But, the scores reversed for questions 4, 5, 7, and 8 {0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0}. Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress. The score can be determined by the directions of scores ranging from 0-13 would be considered low stress, scores ranging from 14-26 would be considered moderate stress, and scores ranging from 27-40 would be considered high perceived stress.

### Data collection

The data was collected from the expatriates residing in the Al-Ahsa region of Saudi Arabia from May 2020 to August 2020. The written consent was obtained from all participants who were willing to participate in the study. The structured questionnaire was administered through Whats-app or email or face-book electronically as a link privately by using google form which is an online survey tool. This survey tool was created by the principal investigator and the responses were kept confidential.

All the participants were very familiar with handling this online method of survey.

### Analysis Method

The frequency and percentage distribution of expatriate's demographic information analyzed using descriptive statistics. According to the PSS score interpretation, the level of stress was categorized into none, mild stress, moderate stress, and severe stress which was analyzed by descriptive and inferential statistics. The chi-square analysis was used to associate the stress level with selected demographic variables. All analyses were performed using the Statistical Package for the Social Sciences. For the normality test, the level of significance equal to .05 was calculated for all statistical analyses.

### Results

A total of 264 expatriates completed and submitted the structured questionnaires.

**Table 1: Frequency and percentage distribution of demographic variables of expatriates**

Demographic variables (n=264)		F (%)
Age in years	20 - 30 years	16 (6.1)
	31 - 40 years	96 (36.3)
	41 - 50 years	136 (51.5)
	51 - 60 years	16 (6.1)
Gender	Male	121 (45.8)
	Female	143 (54.2)
Education	Higher secondary	26 (9.8)
	College & others	238 (90.2)
Occupation	Dependent	65 (24.6)
	Government employee	87 (33.0)
	Private employee	112 (42.4)
Nationality	Indian	143 (54.2)
	Philippine	47 (17.8)
	Egyptian	51 (19.3)
	Pakistan	14 (5.3)
	Others	9 (3.4)

**Cont... Table 1: Frequency and percentage distribution of demographic variables of expatriates**

Marital status	Unmarried	12 (4.5)
	Married	252 (95.5)
Family Type	Bachelor	19 (7.2)
	Husband & Wife	32 (12.1)
	Spouse with Children	213 (80.7)
Duration of living in Saudi	< 1 year	24 (9.1)
	1-5 years	86 (32.5)
	6-10 years	91 (34.5)
	>10 years	63 (23.9)
Chronic Health Illness	DM	23 (8.7)
	HT	19 (7.2)
	Others	31 (11.7)
	None	191 (72.4)

The frequency and percentage distribution of demographic variables of expatriates are shown in (Table 1). The majority of the participants 136 (51.5%) were aged between 41 to 50 years. The mean age was 40.8 ( $\pm 2.4$ ) years. Among them 143 (54.2%) were females and 238 (90.2%) were graduates. Regarding occupation, 112 (42.4%) were in private and 87 (33%) were in government organizations. There were 143

(54.2%) Indians and the remaining were from Pakistan, Philippine, Egypt, and few 9 (3.4%) from Sudan, Bangladesh, and Syria. The majority of the expatriates 252 (95.5%) were married and 213 (80.7%) were living with their spouse and children. About the duration of living in Saudi, 91 (34.5%) were staying around 6-10 years. Mostly, 191 (72.4%) were not having any chronic health illnesses.

**Table 2: Frequency and percentage distribution of travel information of expatriates**

Travel information(n=264)		F (%)
How often you used to go on vacation to your native country?	Yearly Once	202 (76.5)
	Twice yearly	28 (10.6)
	Two years once	12 (4.6)
	If necessary	22 (8.3)
Is anybody of your dependent outside Kingdom now?	Yes	196 (74.2)
	No	68 (25.8)
If yes – Who? (What was the relationship for You) (n=196)	Husband	24 (12.2)
	Wife	32 (16.3)
	Child	64 (32.7)
	Both life partner and Children	17 (8.7)
	Parents	59 (30.1)

**Cont... Table 2: Frequency and percentage distribution of travel information of expatriates**

When did you plan to go to native in this year 2020?	April	16 (6.1)
	May	113 (42.8)
	June	37 (4.0)
	July	98 (37.1)
How many months did you plan to stay in your native country?	1 month	27 (10.2)
	2 months	191 (72.4)
	3 months	46 (17.4)

The frequency and percentage distribution of travel information during the summer vacation of expatriates are shown in (Table 2). Most of the participants 202 (76.5%) answered yearly once visit their native country. Around 196 (74.2%) were stated that their dependents were in the outside of the kingdom. In that, 64 (32.7%) mentioned children, 59 (30.1%) told parents 17 (8.7%) answered both life partners and children, and the remaining told either husband or wife stayed outside of Saudi. Nearly 113 (42.8%) were planned to go to native this year 2020 and the majority 191 (72.4%) wanted to stay 2 months in their native country.

The PSS frequency and percentage distribution were indicated in (Table 3). For questions 1, 2, 3, 6, 9, and 10 the options were given with score as 0 for never,

1 for almost never, 2 for sometimes, 3 for fairly-often, and 4 for very often. But, for questions 4, 5, 7, and 8 the scores-were given reversely. The results showed that most of the people were mentioned sometimes which is (scored 2) for all the 10 questions asked in PSS. Some of them answered very often.

Among the total of 264 expatriates, 25 (9.5%) were low stressed with scores between 1-14, the majority of the participants 157 (59.5%) were moderately stressed, and 82 (31%) were severely stressed which was depicted in (Figure 1). The mean value and standard deviation for low stress were 10.44+2.063, for moderate stress 21.59+3.42, and high stress 31.06+3.42. The overall minimum score obtained was 5 and the maximum score was 39 in PSS which was shown in Table 4.

**Table 3: Frequency and percentage distribution of PSS as reported by expatriates:**

S. No.	Perceived Stress Scale Questions(n=264)	Never	Almost never	Sometimes	Fairly often	Very often
1.	How often have you been upset because of something that happened unexpectedly?	12 (4.5)	17 (6.4)	104 (39.4)	79 (29.9)	52 (19.8)
2.	How often have you felt that you were unable to control the important things in your life?	9 (3.4)	21 (8)	95 (36)	98 (37.1)	41 (15.5)
3.	How often have you felt nervous and stressed?	19 (7.2)	57 (21.6)	146 (55.3)	29 (11)	13 (4.9)
4. *	How often have you felt confident about your ability to handle your personal problems?	77 (29.2)	38 (14.4)	117 (44.3)	21 (8)	11 (4.1)
5. *	How often have you felt that things were going your way?	16 (6.1)	69 (26.1)	83 (31.4)	54 (20.5)	42 (15.9)
6.	How often have you found that you could not cope with all the things that you had to do?	14 (5.3)	29 (11)	95 (36)	73 (27.7)	53 (20)

Cont... Table 3: Frequency and percentage distribution of PSS as reported by expatriates:

7. *	How often have you been able to control irritations in your life?	23 (8.7)	68 (25.8)	128 (48.5)	28 (10.6)	17 (6.4)
8. *	How often have you felt that you were on top of things?	22 (8.3)	96 (36.4)	92 (34.8)	35 (13.3)	19 (7.2)
9.	How often have you been angered because of things that happened that were outside of your control?	12 (4.5)	34 (12.9)	76 (28.8)	91 (34.5)	51 (19.3)
10.	How often have you felt difficulties were piling up so high that you could not overcome them?	16 (6.1)	29 (11)	89 (33.7)	72 (27.3)	58 (21.9)

\*Score reversed (0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0).

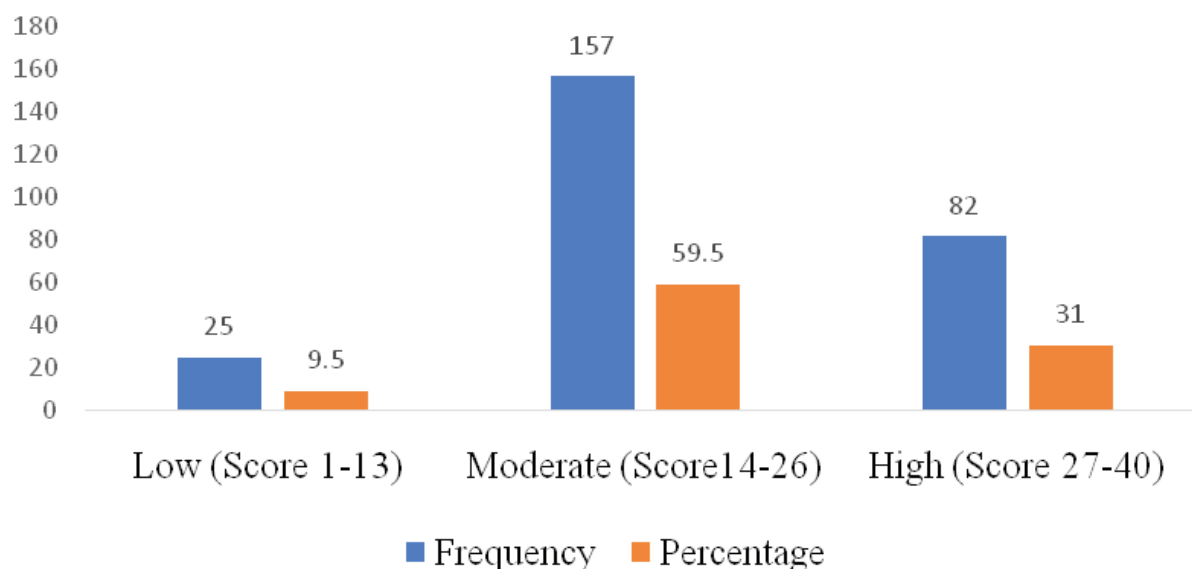


Figure.1 Frequency and percentage distribution of level of stress (n=264)

Table.4 Mean and standard deviation of level of stress (n=264)

Stress Level	Mean	SD	Minimum Score	Maximum Score
Low (1-13)	10.44	2.063	5	13
Moderate (14-26)	21.59	3.42	14	26
High (27-40)	31.06	3.42	27	39

Table.5 Association between demographic information and level of stress (n=264)

Demographic Information	Lowstress	Moderate stress	High stress	Chi-square test
Age in years				$\chi^2 = 18.1861$ P=0.005784*
20 - 30 years	3	11	2	
31 - 40 years	7	67	22	
41 - 50 years	11	70	55	
51 - 60 years	4	9	3	
Gender				$\chi^2 = 13.4742$ P=0.001186*
Male	12	85	24	
Female	13	72	58	
Education				$\chi^2 = 1.0738$ P=0.584553 (NS)
Higher secondary	3	13	10	
College & others	22	144	72	
Occupation				$\chi^2 = 41.8955$ P=0.00001*
Dependent	4	28	33	
Government employee	7	42	38	
Private employee	14	87	11	
Nationality				$\chi^2 = 20.9858$ P=0.007185*
Indian	12	75	56	
Philippine	5	38	4	
Egyptian	3	33	15	
Pakistan	3	7	4	
Others	2	4	3	
Marital status				$\chi^2 = 16.0421$ P=0.000328*
Unmarried	5	6	1	
Married	20	151	81	
Family Type				$\chi^2 = 60.5498$ P=0.00001*
Bachelor	11	6	2	
Husband & Wife	4	22	6	
Spouse with Children	10	129	74	
Duration of living in Saudi				$\chi^2 = 8.6016$ P=0.197255(NS)
< 1 year	2	18	4	
1-5 years	8	42	36	
6-10 years	9	58	24	
>10 years	6	39	18	

Cont... Table.5 Association between demographic information and level of stress (n=264)

<b>Chronic Health Illness</b>				$\chi^2 = 10.5591$ <b>P=0.102995(NS)</b>
<b>Diabetes Mellitus</b>	<b>3</b>	<b>14</b>	<b>6</b>	
Hypertension	4	8	7	
Others	6	18	7	
None	12	117	62	

\* *p-value* ≤ 0.05 considered statistically significant; NS considered Nonsignificant.

Table.6 Association between travel information and level of stress (n=264)

Travel Information		Low stress	Moderate stress	High stress	Chi square test
How often you used to go on vacation to your native country?	Yearly Once	18	118	66	$\chi^2 = 4.7538$ <b>P=0.57575(NS)</b>
	Twice yearly	2	18	8	
	Two years once	3	6	3	
	If necessary	2	15	5	
Is anybody of your dependent outside Kingdom now?	Yes	6	109	81	$\chi^2 = 60.723$ <b>P=0.00001*</b>
	No	19	48	1	
If yes – Who? (What was the relationship for You) (n=196)	Husband	1	9	14	$\chi^2 = 6.42923$ <b>P=0.59926(NS)</b>
	Wife	1	22	9	
	Child	2	35	27	
	Life partner & Children	1	9	7	
	Parents	1	34	24	
When did you plan to go to native in this year 2020?	April	3	9	4	$\chi^2 = 20.8$ <b>P=0.001992*</b>
	May	12	79	22	
	June	4	23	10	
	July	6	46	46	
How many months did you plan to stay in your native country?	1 month	14	9	4	$\chi^2 = 81.6398$ <b>P=0.00001*</b>
	2 months	7	132	52	
	3 months	4	16	26	

\* *p-value* ≤ 0.05 considered statistically significant; NS considered Nonsignificant.

The findings revealed (Table 5 and 6) that females faced high stress than males ( $p < 0.01$ ) and married than unmarried ( $p < 0.001$ ). The expatriates felt more stressed ( $p < 0.001$ ) when their dependents stayed outside the kingdom. There was a significant association between age, occupation, nationality, and family type with the level of stress ( $P < 0.05$ ).

## Discussion

Stress is a feeling of physical or emotional tension and the reaction of the body to a demand comes from any thought or event which will make the people feel more frustrated, angry, or sometimes nervous<sup>13</sup>. COVID-19 pandemic causes people to be stressful<sup>14</sup>. In addition to this crisis, the travel ban makes the expatriates more stressed. The present study evidenced that among the total of 264 expatriates, 9.5% were low stressed, 59.5% were moderately stressed, and 31% were severely stressed. A cross-sectional study conducted on the psychological distress in Saudi<sup>15</sup>, in that the data was collected from the participants via an online self-reported questionnaire which is consistent with the current study. However, the results revealed that 40% of the population were distressed of whom approximately 33% were mildly distressed, while 7% were severely distressed. This result was compared by another study in which 7.5% were highly stressed<sup>16</sup>. Similarly, the study results reported that people had 24.5% mild stress, 39.6% moderate stress, and 18.9% high stress<sup>17</sup>.

The distress levels are particularly high amongst the females and private sector employees which is supporting the present study<sup>15</sup>. The mean stress score for healthcare workers<sup>18</sup> was  $13.70 \pm 10.68$  which was compared to our study the mean score of stress among the expatriates was  $23.48 \pm 6.87$ . The overall minimum score obtained was 5 and the maximum score was 39 in PSS.

Several variables such as age, gender, and history of contact with confirmed COVID-19 cases were significantly associated with higher DASS-21 scores<sup>18</sup>. Similarly, in this study, there was a significant association between age, occupation, nationality, and family type with the level of stress according to PSS scores ( $P < 0.05$ ).

Stress during such kind of pandemic crisis period affects not only the people psychologically and emotionally<sup>19</sup> but is also likely to identify the mental health problems in future years. Therefore, the relevant authorities take some initiatives to implement early identification and preventive measures to prevent further consequences in their health.

## Limitations of the study

The study was conducted to assess the stress level which was measured by a self-reported online questionnaire, in which there might be a chance for bias because of the expatriate's inaccurate responses.

## Conclusion

This study showed that there was a high level of stress among expatriates due to the travel ban. The pandemic of COVID-19 and due to that travel restrictions has had a significant impact on the mental health of the expatriate population. Since March 2020 onwards many expatriates were more stressed and unable to handle the crisis situation. However, there is a need for psychological counselling and support to the expatriates. Pandemic control and safe international travel access can be a future solution to reduce stress.

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**Ethical approval:** This study was approved by the Institutional Review Board of College of Applied Medical Science, King Faisal University.

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