


**Original Research**

## The Impact of Media Exposure on Anxiety in Kuwait during COVID-19 Outbreak

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### Abstract

**Objective:** Media influence plays major part in our life. In recent years, there is a 24-hour news cycle readily available in the palm of our hands allowing people to view stories from all over the world. Repeated and exaggerated media stories especially during crisis have remarkable effect on mental health, The purpose of this study is to assess media influence on mental health disorder, especially generalized anxiety disorder.

**Method and setting:** this study is a cross sectional conducted during COVID-19 pandemic in Kuwait. It included Kuwaiti citizens between age of 23-55years and excluded citizens who are under home or institutional quarantine, COVID-19 patients, doctors, nurses or pharmacists who work in the Ministry of Health in Kuwait, cancer, psychiatric disease, diabetes mellitus and hypertension patients and non-Kuwaiti citizens. An online questionnaire was developed including media exposure assessment and GAD-7 score questions. The survey distributed using snowball sampling technique. 1230 participants from all Kuwait governates took an online questionnaire after exclusion and inclusion criteria applied.

**Result:** All the data was statistically assessed by using SPSS 25.0 (Statistical Package for Social Sciences. the result showed that the highest proportions of anxiety were females (79.7%). On Chi-square analysis, there was significant association between anxiety and Gender (P-value < 0.001).

**Conclusion:** from this study we can understand that media exposure has an impact on mental health particularly generalized anxiety disorder during COVID19 pandemic. Therefore measures should be taken by the governments to fight misinformation and physician should pay more attention to mental health disease during this period.

**Keywords:** COVID-19, Media and Anxiety

### Introduction

The 2020 Coronavirus outbreak has changed lives around the world. The World Health Organization acknowledged COVID-19 as a pandemic on 11th March 2020[1] which led to the activation of a state of emergency around the world. The first known case of COVID-19 was reported in Kuwait on 24th February 2020 [2]. In response to this pandemic, strict preventative measures such as shelter in place and closure of shops, schools, and government institutions were implemented. Studies showed that social isolation, strict curfew measures, economic failure and the media led to increased psychological distress during pandemic [3].

One of the major drivers of psychological distress is the media throughout the health crisis. The public depended on the press to deliver precise and

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up to date information about COVID-19 pandemic in order to make well-versed decisions concerning their health and protective measures [4–6] as a primary link Social media is a chief part of the news coverage available to the public. Social media platforms act between people and the news sources, combining traditional and social media into one convenience channel. In Kuwait, social media is a powerful communication platform. In 2019, 3.9 million users (93% of the total population) were documented around the country [7]. During this pandemic, many users resorted to the social media to express their feelings. The aim of this study was to examine the media's influence on the mental health response, particularly anxiety, to the pandemic. As family physicians, we are faced with many vague symptoms that are diagnosed as anxiety during this health crisis. The aim of this study was to examine the media's influence on the mental health particularly anxiety during the pandemic.

## Material and Methods

The study is a cross-sectional data-based study conducted from 21st April 2020 to 15th May 2020 during the Covid-19 outbreak in Kuwait. Ethical committees approved this study in the Ministry of Health, Kuwait. An online partially (Survey monkey platform) one-time questionnaire was developed with a consent form attached to it. The survey included the following: demographic data: age, gender, marital status, educational level, employment, governorates and media exposure. Media exposure was measured by asking the following question: Over the last week, how many times have you followed covid19 news? We divide into: less, sometimes and frequently follow the news. For anxiety assessment, a GAD-7 score was adopted [8]. The questionnaire scores divided as either having anxiety or not having anxiety (Yes/No). Accordingly, a score from 4-9 was considered as having no anxiety and from 10-21 was considered as having anxiety. The questionnaire was pre-tried on a sample of 100 persons on the 14th of April 2020. The results of the pilot showed that 97% of the participants who follow the news have anxiety. In total, 3428 participants took part in the survey. The response rate was 97%. The inclusion criteria were Kuwaiti residents between the ages of 23-55 years. The exclusion criteria were citizens who are under home or institutional quarantine, COVID-19 patients, doctors, nurses or pharmacists who work in the Ministry of Health in Kuwait, cancer, psychiatric disease, diabetes mellitus and hypertension patients and non-Kuwaiti citizens. A snowball sampling technique was used. After excluding the participants who did not meet the criteria, 1230 participants from all the governorates in Kuwait were included in the study. All the data was statistically assessed by using SPSS 25.0 (Statistical Package for Social Sciences).

## Data Analysis

Pearson Chi-Square test was used to determine the association between the different sociodemographic variables and anxiety levels (Yes/No). The anxiety score divided from 4-9 had no anxiety and from 10-21 had anxiety. Chi-Square test for trend was used for the variables that had multiple groups to assess for a trend. Univariate logistic regression model was used to measure the magnitude of association between the sociodemographic variables with anxiety levels (Yes/No). The variables that were significant on the univariate logistic regression analyses ( $p$ -value < 0.05) were subjected to a multivariate logistic regression analysis to adjust for potential confounders and obtain the adjusted odds ratios.

## Results

### Sociodemographic characteristics

From the 1231 participants, 76% were female and 25% were male as it shown in Table 1. Among these, 61% of the respondents have a bachelor's degree, 18% have a diploma, while 1% have less than high school. Further, it can be seen that this study has covered six major governorates of Kuwait, Capital (41%), Hawali (26%), Mubarak Al Kabeer (12%), Ahmadi (10%), Farwaniya (9%) and al-Jahra (3%). Furthermore 73% of the respondents in the survey were married. By considering the age factor, it was found that 41% of the respondents were between age 34-44, 30% were between age 23-33 and 29% were between age 45-55. It can also be observed that more than half of the respondents were government employees (61%) while only 2% of the participants were students.

### The association between sociodemographic factors and anxiety

According to table (1), out of the total participants 53.5% had anxiety. The groups which had the highest proportions of anxiety were females (79.7%), single (72.5%), and between the ages 34-44 (44.5%) and have Bachelor degree (63.2%) as well as those who lived in the Capital (40.5%). Anxiety has been found also in participants who are working as government employees (62.6%). Moreover, the highest percentages of anxiety were also found for participants following the news of the spread of the virus (95.4%) and frequently following COVID-19 news (Social media exposure) (53.0%). On Chi-square analysis, the only factors which had a significant ( $p$ -value < 0.05) association with anxiety were Gender ( $P$ -value < 0.001), following the news of the spread of the virus ( $P$ -value < 0.001) and media exposure with  $P$ -value < 0.001. Finally, on Chi-Square test for trend, educational level had a significant association with anxiety ( $p$ -value = 0.011).

**Table 1:** The association between sociodemographic factors and anxiety

Characteristics	n (%)	Anxiety		P-value
		No	Yes	
		n (%)	n (%)	
Overall	1231 (100.0)	572 (46.5)	659 (53.5)	
Gender				<b>&lt;0.001*</b>
Male	301 (24.5)	167 (29.2)	134 (20.3)	
Female	930 (75.5)	405 (70.8)	525 (79.7)	
Educational level				<b>0.011**</b>
Less than high school	15 (1.2)	8 (1.4)	7 (1.1)	
High school degree or equivalent	66 (5.4)	41 (7.2)	25 (3.8)	
Diploma	226 (18.4)	111 (19.4)	115 (17.5)	
Bachelor degree	756 (61.3)	339 (59.2)	417 (63.2)	
Graduate degree	168 (13.7)	73 (12.8)	95 (14.4)	
Governorate				0.657*
Capital	500 (40.6)	234 (41.0)	266 (40.5)	
Hawalli	318 (25.9)	137 (24.0)	181 (27.5)	
Jahra	39 (3.2)	17 (3.0)	22 (3.3)	
Farwanyia	109 (8.9)	51 (8.9)	58 (8.8)	
Ahmadi	118 (9.6)	61 (10.7)	57 (8.7)	
Mubark al kabeer	145 (11.8)	71 (12.4)	74 (11.2)	
Marital status				0.865*
Single	236 (19.2)	416 (72.7)	478 (72.5)	
Married	894 (72.6)	108 (18.9)	128 (19.4)	
Divorced	89 (7.2)	41 (7.2)	48 (7.3)	
Widowed	12 (1.0)	7 (1.2)	5 (0.8)	
Age				0.227**
23-33	374 (30.4)	177 (30.9)	197 (29.9)	
34-44	505 (41.0)	212 (31.1)	293 (44.5)	
45-55	352 (28.6)	183 (32.0)	169 (25.6)	
Employment status				0.517*
Government employees	747 (60.8)	334 (58.4)	413 (62.6)	
Private employees	174 (14.1)	85 (14.9)	89 (13.5)	
Private business	57 (4.6)	26 (4.5)	31 (4.7)	
Retired	154 (12.5)	81 (14.2)	73 (11.1)	
Not employed	74 (6.0)	36 (6.3)	38 (5.8)	
Students	25 (2.0)	10 (1.7)	15 (2.3)	
Following the news of the spread of the virus				<b>&lt;0.001*</b>
Yes	1137 (90.4)	508 (88.8)	629 (95.4)	
No	94 (7.6)	64 (11.2)	30 (4.6)	
Media exposure				<b>&lt;0.001**</b>
Less	386 (31.4)	234 (41.0)	152 (23.1)	
Sometimes	289 (23.5)	132 (23.1)	157 (23.9)	
Frequently	554 (45.1)	205 (35.9)	349 (53.0)	

\*Pearson Chi-Square.

\*\*Chi-Square test for trend.

**Table 2:** Univariable and multivariable logistic regression analyses of the association between sociodemographic factors and anxiety.

Descriptive status	Crude Odds Ratio of Anxiety		Adjusted Odds Ratio of Anxiety	
	OR [95% CI*]	P-value	AOR [95% CI]	P-value
Gender		<b>&lt;0.001</b>		<b>0.001</b>
Male	1.0 [Ref]		1.0 [Ref]	
Female	1.6 [1.2-2.01]		1.6 [1.2-2.12]	
Educational level		0.071		
Less than high school	1.0 [Ref]			
High school degree or equivalent	0.7 [0.2-2.2]			
Diploma	1.2 [0.4-3.4]			
Bachelor degree	1.4 [0.5-3.9]			
Graduate degree	0.9 [0.5-4.3]			
Governorate		0.658		
Capital	1.0 [Ref]			
Hawalli	1.2 [0.9-1.5]			
Jahra	1.1 [0.6-2.2]			
Farwanyia	1.0 [0.7-1.5]			
Ahmadi	0.8 [0.6-1.2]			
Mubark al kabeer	0.9 [0.6-1.3]			
Marital status		0.868		
Single	1.0 [Ref]			
Married	1.0 [0.8-1.4]			
Divorced	1.0 [0.7-1.6]			
Widowed	0.6 [0.2-1.9]			
Age		<b>0.014</b>		<b>0.006</b>
23-33	1.0 [Ref]		1.0 [Ref]	
34-44	1.2 [0.9-1.6]		1.1 [0.8-1.5]	
45-55	0.8 [0.6-1.1]		0.7 [0.5-0.9]	
Employment status		0.519		
Government employees	0.8 [0.4-1.9]			
Private employees	0.7 [0.3-1.6]			
Private business	0.8 [0.3-2.1]			
Retired	0.6 [0.3-1.4]			
Not employed	0.7 [0.3-1.8]			
Students	1.0 [Ref]			
following the news of the spread of the virus		<b>&lt;0.001</b>		<b>0.017</b>
Yes	2.6 [1.7-4.1]		1.8 [1.1-2.9]	
No	1.0 [Ref]		1.0 [Ref]	
Media exposure		<b>&lt;0.001</b>		<b>0.002</b>
Less	1.0 [Ref]		1.0 [Ref]	
Sometimes	1.8 [1.3-2.5]		1.7 [1.2-2.3]	
Frequently	2.6 [2.0-3.4]		2.4 [1.8-3.1]	

\*Adjusted Odds Ratio of Anxiety CI=Confidence interval

## Univariable and Multivariable logistic regression analyses of association between sociodemographic factors and anxiety

The sociodemographic variables were subjected to a univariable logistic regression analysis to quantify the magnitude of their association with anxiety (table 2) On this logistic regression analysis, the sociodemographic variables significantly ( $p$ -value  $< 0.05$ ) associated with anxiety were gender, age, following the news of the spread of the virus and Social media exposure. A final multivariable logistic regression model, adjusted for (gender, educational level, age, following the news of the spread of the virus and social media exposure was conducted (table 2). This model showed that the sociodemographic factors significantly ( $p$ -value  $< 0.05$ ) associated with anxiety were gender ( $p$ -value = 0.001), age ( $p$ -value = 0.006), following the news of the spread of the virus ( $p$ -value = 0.017) and social media exposure ( $p$ -value = 0.002). The model showed that the odds of having anxiety for female is 1.6 times the odds comparing to male (adjusted OR=1.6, 95% CI: [1.2-2.12]). The odds of anxiety were greater among those aged 34-44 with 1.1 times the odds from those aged 23-33 (adjusted OR=1.1, 95% CI: [0.8-1.5]). The odds of having anxiety for those who are following the news of the spread of the virus is 1.8 times the odds comparing to those who are not following the news. Moreover, the odds of having anxiety for those who has a frequently media exposure is 2.4 times comparing to those who has less media exposure (adjusted OR=2.4, 95% CI: [1.8-3.1]).

### Discussion

The results of the study exposed a statistically noteworthy association between media exposure and anxiety. It can be seen from the study results that participants who follow the news of the spread of the coronavirus frequently felt anxious compared to those who did not follow the news. These findings are consistent with previous studies that illustrated that media can cause mental health problems during crises, such as studies done on COVID-19 outbreak [9] and the Ebola epidemic [10].

During the COVID-19 outbreak, the news was framed in an upsetting tone. Stories focused mainly on severe health related issues and economic downfall. For example, some of the phrases used were “COVID-19 virus is a killer virus”, “there is no treatment for the virus”, and “the government can’t pay the salaries”. Many news outlets used professionals in the field of medicine and economy to portray these stories. These frames will result in amplified dread and panic among the public, leading to feelings of anxiety.

Social media also has a rule in driving anxiety through propagating sensitized information. Many Kuwaiti citizens saw the race for masks, toilet paper and hand sanitizers from

around the world. This led to panic in Kuwait and raiding of local supermarkets. Furthermore, many nationals expressed their negative feelings, such as fear, concern, nervousness, anxiety on social media, which are contagious on social [11]. Another outcome in this study revealed that anxiety is seen more in people who were often exposed to media, which was defined as all day exposure. This is parallel with another study that said that there is a high occurrence of mental health problems which is positively associated with frequent SME during the COVID-19 outbreak [9]

This study was limited by the paucity of information regarding the impact of media on mental health disease during crisis. In addition, Kuwait has been hit with previous crises, such as the Gulf War and the bombing of Al Sadiq mosque, which were not explored, and baseline data was not available as to the effect of media coverage of these disasters on anxiety and mental health. Another limitation is the lack of enough information from this questionnaire to calculate the prevalence of anxiety which might illuminate the current mental health status. For future study, we recommend exploring the causal relationship by cohort study design.

### Conclusion

In conclusion, measures should be taken to deal with unnecessary worry which is driven by sensitized media. We recommend that the government fight the misinformation by filtering the rumors or correct them through national platforms. These national platforms can also act as a help line where people can discuss their worries and fears anonymously with a medically trained professional. As family physicians, we need to collaborate with psychiatrists to develop national guidelines for anxiety screening and treatment during a crisis that focuses on media usage and recognizes its effect on mental health.

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