



Prevalence and Factors of Anxiety During the Coronavirus-2019 (COVID-19) Pandemic among Teachers in Saudi Arabia

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INTRODUCTION

Formal education is an integrated system, relying upon systematic and structural approaches provided in educational facilities⁽¹⁾. Through teachers, the learning process of formal education is intended to provide students with essential knowledge and skills required to achieve their desired goals.

Therefore, regular in-person attendance for teachers and students is mandatory in most educational environments⁽²⁾. However, many of the standard approaches have been suspended due to the COVID-19 pandemic.

Teachers experienced a significant shift to online learning in many countries. The additional burdens of developing and deploying new teaching methods while potentially being exposed to a novel pathogen in-person led to a cumulative impact on the stress and anxiety among teachers.

One study showed increased anxiety levels among teachers during the COVID-19 pandemic. Other studies have assessed the incidence of anxiety among different occupations, finding teachers the most impacted among other occupations. Although, studies shown positive association between media exposure and anxiety level⁽²⁴⁾.

OBJECTIVES

Primary objective is to assess the prevalence of a state of anxiety among teachers in Saudi Arabia.

Secondary objective is to explore characteristics of Saudi teachers and their association with anxiety level during the period of lockdown.

METHODS

Study design:

An across sectional study was carried out by utilizing an anonymous online survey to assess the anxiety among Saudis' teachers during the period of COVID-19 pandemic. The survey was conducted for 3 months.

Study questionnaires:

The questionnaire consists of **three sections**, The **first section** including demographics data (i.e., age, gender, educational level, type of 219 school, school location, and income), in addition to sources for gaining information about COVID-19. The **second section** included the behavioral status and commitment of teachers to the health policy restricted regulations toward COVID-19. All behavioral questions such as wearing mask, increased hand washing, social distancing, and limited family gatherings were categorized into three levels: high (if all answers were correct), moderate (with some correct answers), and low/none (with incorrect answers for all questions). The **final section** was the Generalized Anxiety Disorder instrument (GAD-7) of an Arabic version and was used after the permission of the author was obtained. The three sections were validated with **Cronbach's alpha** (the result experts). It was assessed by scores of 0, 1, 2, and 3 to answers options of (never, several days, more than half the days and nearly every day). The total score ranged from 0 to 4 indicated no anxiety, scores of 5–9 indicated mild anxiety, scores of 10 to 14 showed moderate anxiety and scores of 15–21 showed severe anxiety.

Data analysis:

The degree of statistical significance was set based on near or far from a *P*-value of = 0.05 with very high, high, medium, low, and very low significance to a *P*-value of = 0.05. Analysis was performed using Statistical Package for the Social Sciences 24 (IBM-SPSS-24).

RESULTS

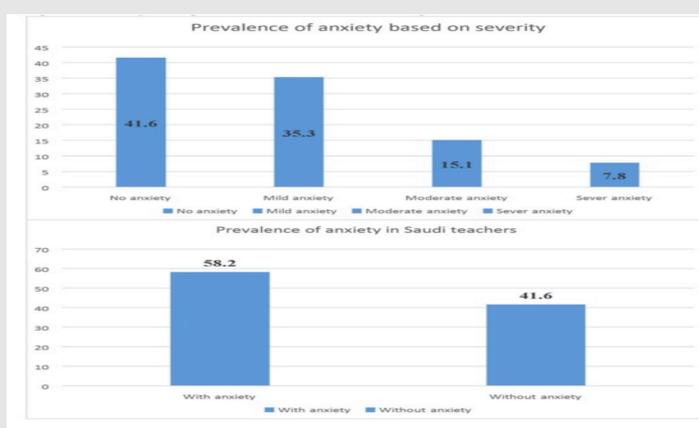


FIGURE 1 | Anxiety among teachers in Saudi Arabia during COVID-19 pandemic.

A total of 742 respondents completed the survey. Most respondents (64.6%) were women. According to an Arabic version of GAD-7 survey, the prevalence of anxiety among Saudi teachers was 58.2%. Of these respondents, 42% had no anxiety, 35% had mild anxiety, 15% had moderate anxiety, and 8% had severe anxiety as shown in **Figure 1**.

RESULTS

Table 1 presents the features of respondents by anxiety vs. non-anxiety status with only medium degree of statistically significant differences identified as marital status ($p = 0.046$).

Our results showed that women had higher Anxiety (65.3%) than men (34.7%), But gender with anxiety was low degree of statistical significance compared with non-anxiety status ($p=0.697$).

TABLE 1 | Demographics of the teachers based on their anxiety status.

Demographics	All respondent (n = 742)	With anxiety (n = 432)	Without anxiety (n = 310)	P-value*
Sex				0.697
Male	263 (35.4%)	150 (34.7%)	112 (36.2%)	
Female	479 (64.6%)	282 (65.3%)	197 (63.8%)	
Marital status				0.046
Married	406 (54.7%)	233 (54.2%)	192 (63.4%)	
Single	271 (36.5%)	172 (40.1%)	99 (32.7%)	
Divorced	66 (8.9%)	24 (5.6%)	12 (4.0%)	
Type of teachers				0.051
Primary teachers	206 (27.8%)	108 (25%)	98 (31.7%)	
Secondary teachers	66 (11.9%)	61 (14.1%)	27 (8.7%)	
High teachers	239 (32.2%)	114 (26.3%)	95 (30.7%)	
University teachers	209 (28.2%)	119 (27.5%)	89 (28.8%)	
Information resources				0.061
Internet	261 (37.9%)	147 (34.3%)	133 (43.2%)	
Friends	2.8 (21.0)	13 (3.0)	8 (2.6)	
Social media	339 (44.3)	208 (48.6%)	121 (39.3%)	
TV	106 (14.3)	60 (14.0)	46 (14.9%)	
Teach online				0.003
Yes	217 (29.2)	145 (33.8%)	72 (23.8%)	
No	516 (69.5)	284 (66.2%)	231 (76.2%)	
COVID 19 infected				0.002
Yes	346 (46.6%)	223 (51.6%)	123 (39.8%)	
No	396 (53.4%)	209 (48.4%)	185 (60.2%)	

*P-value is calculated by Chi Square test.

Participant's responses were explored to look for an association using binary logistic regression with binary outcome of anxiety and without anxiety as shown in **Table 2**.

Male gender was found to have very low degree of a statistically significant association ($p = 0.36$). However, the odds of anxiety among middle teachers was twice ($OR = 2.01$) as high as the odds of anxiety among other levels of teacher ($p = 0.01$). Furthermore, teachers who used social media as source of pandemic information had increased of 1.6 times the odds of anxiety compared to persons not reporting pandemic related information from social media.

TABLE 2 | Association between participants responses with presence of anxiety.

Demographics	OR (95% CI)	p-value*
Gender		
Sex	Reference	-
Male	0.830 (0.556–1.240)	0.363
Marital status		
Married	Reference	-
Single	1.334 (0.835–2.130)	0.228
Divorced	1.543 (0.684–3.485)	0.296
Education level		
Primary/secondary school	0.957 (0.162–5.638)	0.961
High school	2.005 (0.944–4.262)	0.070
University	1.352 (0.767–2.384)	0.307
High education	Reference	-
Type of teachers		
Primary teachers	Reference	-
Secondary teachers	2.091 (2.091–1.169)	0.013
High teachers	1.128 (0.728–1.749)	0.590
University teachers	1.123 (0.664–1.901)	0.665
Information resources		
Internet	Reference	-
Friends	2.068 (0.713–5.998)	0.181
Social media	1.557 (1.063–2.237)	0.017
TV	1.315 (0.789–2.189)	0.293
Teach online		
No	Reference	-
Yes	1.936 (1.319–2.841)	0.001
COVID 19 infected		
No	Reference	-
Yes	1.739 (1.246–2.426)	0.001

OR, odds ratio; CI, confidence interval.

*Significant result at $\alpha = 0.05$.

CONCLUSIONS

This study identified that many teachers experienced anxiety during the lockdown. We found that most teachers (58.2%, $n = 432.5$) reported anxiety during the lockdown especially women and middle school teachers. Future studies should identify contributing factors and cofactors to estimate the magnitude of the exposure to anxiety between different types of teachers to help establish better preventive measures based on the workplace environment. In addition, our study showed a positive association between anxiety and social media exposure compared to other information resources. Future research should evaluate the difference between types of information shown in different types of media resources as well as how fast it can impact teachers' perspective.

REFERENCES

