Since 2002

Investigating the Relationship between COVID-19 and Depression on Faculty and Students of Qassim University

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Abstract

AIM: The aim of the study was to investigate impact of fear of COVID-19 on depression among students and faculty members at Qassim University.

METHODOLOGY: Survey approach is used. Population of the study was students and faculty members from public sector universities. Non-probability snow ball technique was used. Total 200 questionnaires were distributed and 165 completed received and used in the analysis. SPSS 25 is used for data treatment.

RESULTS: The findings revealed that there is a significant association between predictors and criterion. Moreover, fear of exposing to corona virus is held responsible for increasing depression among individuals.

CONCLUSIONS: Following ministry of health guidelines and getting vaccinate is only way to reduce the chance of exposing to COVID-19.

Introduction

Anxiety, depression and stress are a chronic disease which leads towards suicide [1]. Due to strict lockdown, measures give rise to fear, stress, anxiety, and depression among the population. Depression, anxiety, and stress are one of the important factors which bring mental disability among the population [2]. According to Zou *et al*., [3] exposure of upset events in life also causes anxiety, stress, and depression. Due to severe acute respiratory system coronavirus disease COVID-19, whole world is facing very critical situation and chronic diseases among population. In the current pandemic crisis, it would be of a great strategic value to study impact of fear of COVID-19 (FoC) on anxiety, depression, and stress which could help practitioners to handle this chronic disease in future. According to Rasheed [4] "new variants of novel corona virus are still being discovered." COVID-19 has impact on all aspects of life such social, health, and economic as well. The latest variant which was discovered in 2021 was omicron which spread very fast and it is an indication that individuals should take preventive measures to reduce the risk of spreading of COVID-19.

Number of studies shows that fear of COVID-19 has effects on well-being of population and it has created a large scale health crisis in all over the World [5]. The past studies have investigated the issue of impact of COVID-19 on depression, stress, and anxiety but those studies focus on those individuals who are infected by COVID-19 Duan and Zhu [6] but there was a gap overlooked in the literature and this study has focused on those who have fear of exposure to COVID-19 and its impact on depression. Disorder of mood, Low morale, sadness, and self-depreciation are the symptoms of depression [7]. Individuals suffering from depression have low self-esteem, no or less interest in life, and no vision for future state [8]. Clinicians and health practitioners have to control depression issues during and post-pandemic COVID-19 and must identify the factors which are associated with it [1]. Due to strict isolation and lockdown policies have lead individuals to develop symptoms of fear of COVID-19 such as how it is spread, what is the immunity level of patients, the absence of vaccine or fear of getting vaccination leads toward depression anxiety and stress [9]. The previous studies have investigated the relationship between fear of COVID-19 and depression, stress, and anxiety [10], [11], [12]. The relationship has also been reported

in the literature about depression, anxiety, stress, and fear of COVID-19 but to a lesser extent. There are models and theories verified using scientific methods available in the literature which supports the notion that there is still room available in the investigation of fear of COVID-19 and depression.

H₁: There is positive and significant relationship between fear of COVID-19 (FCV-19) and depression.

H₂: FCV-19 has positive impact on depression.

Methods

Participants and procedure

The existing study has used survey approach. Nature of data is cross-sectional which mean primary data, that is, first hand data are collected and analyzed in SPSS 25. Population of the study was faculty members and students. Total 200 questionnaires are distributed out of which 165 complete questionnaires are received back and used in the analysis. Non-probability convenience sampling technique is used for sampling and Krejcie and Morgan (1970) table is used for selecting exact sample size. Due to pandemic restrictions, data are collected online using Google forms. There were majority of male respondents, that is, 102 (61.81%) participated followed by female respondents, that is, 63 (38.18%), number of faculty members participated were 36 (21.81%) while a number of students taken part in survey are 129 (78.18%). As majority of the respondents are students so majority of the students' age lie between 17 and 25 years, that is, 129 while age ratio of faculty members varies such as three members have age of 30–40 years, that is, five have age between 41 and 50 years while 28 have age between 51 and 60 years. Out of 36 faculty members, 35 were holding doctoral degrees while one has master degree. Remaining 129 were students enrolled in bachelor programs in different colleges in different programs (Table 1 and Figure 1).

Instruments

Fear of COVID-19

FCV-19S scale was used in the study to measure FoC. It was originally developed and validated by Ahorsu et al. [13], and adapted form Chen et al. [14]. It has seven items and all items are measured on seven point Likert scale 1 – strongly disagree to 7 = strongly agree. FCV-19S has two attributes one is "fear thinking" three items and other is "physical response of fear" with four items.

Table 1: Demographic information of respondents

Variables	n (%)
Male	102 (61.81)
Females	63 (38.18)
Students	129 (78.18)
Faculty members	36 (21.81)
Age (years)	
17–25	129 (78.18)
31–40	3 (1.81)
41–50	5 (3.03)
51 and above	28 (16.96)
Education PhD	35 (21.21)
Master	1 (0.606)
Bachelor (under study)	129 (78.18)

Depression

Beck Depression Inventory-II (BDI-II) is used to measure depression among students and faculty members. It was originally developed and validated by Beck et al. (1996) with 21 items with 0 means "symptoms not present" to 3 " symptoms strongly present" lower mean explained low level of depression and vice versa. Scale for this study is adapted from Chen et al.

Analysis tools and techniques

SPSS 25 is used for analysis of data. Descriptive statistics is used to investigate the demographic information of the respondents. While inferential statistics is used to test hypotheses. Correlation and regression analysis is used to tests hypotheses. Confidence interval was set at 95% and significance level at p < 0.050. Independent sample t-test and analysis of variance test, that is, ANOVA are also used to find the difference in the mean scores of variables on the basis of gender, group (student teacher) age, and education. t-test is used when there are two groups in the variables, that is, male female, while ANOVA is used when there are more than two categories present in the variables such as age and education.

Regression equation
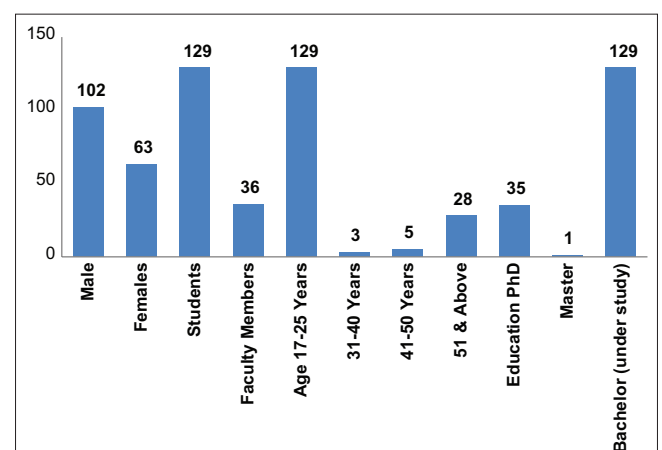
$$Y = \alpha_0 + \beta_1 X_1 + e \qquad (1)$$

Figure 1: Demographic information

$$\text{Depression} = \alpha_0 + \text{FC-19}X_1 + e \qquad (2)$$

Results

From Table 2, it is evident that male and female respondents both have fear of exposed to coronavirus as well as both have depression issues. From the findings, it is revealed that male respondents have high level of fear of exposing to COVID-19 as compared to their female counterparts M = 4.52, S.D = 0.46, M = 3.56, S.D = 0.40, due to which male respondents have high level of depression among them as compared to female respondents M = 4.91, S.D = 0.513, M = 3.84, S.D = 0.462, respectively. In addition, students have shown more concern for fear of COVID-19 as compared to faculty members M = 4.63, S.D = 0.58, M = 3.87, S.D = 0.43, due to which depression among students is high M = 4.68, S.D = 0.429, M = 3.93, S.D = 0.411. Age factor plays important role and it is identified by Table 2 that age group of 51 years and above has more fear of COVID-19 as compared to other age groups M = 4.9, S.D = 0.59, due to which high level of depression is found among respondents having age more than 51 years M = 5.21, S.D = 0.55 followed by age group of 17–25 years.

Table 2: Compare means

Variables	n	Fear COVID-19		Depression	
		Mean	SD	Mean	SD
Male	102	4.52	0.46	4.91	0.513
Females	63	3.56	0.40	3.84	0.462
Students	129	4.63	0.58	4.68	0.429
Faculty members	36	3.87	0.43	3.93	0.411
Age (years)					
17–25	129	4.23	0.47	4.57	0.401
31–40	3	3.10	0.401	3.23	0.399
41–50	5	3.62	0.49	3.55	0.405
51 and above	28	4.9	0.59	5.21	0.55
Education PhD	35	4.21	0.58	4.36	0.44
Master	1	3.00	0.31	3.01	0.35
Bachelor (under study)	129	4.59	0.483	4.6	0.456

SD: Standard deviation.

Respondents were also inquired about their education level; it is evident that respondents having bachelor degree have more fear of novel coronavirus COVID-19 M = 4.59, S.D = 0.483, followed by those having doctoral degrees M = 4.21, S.D = 0.58 due to which high level of depression is faced by those having bachelor degrees followed by those informants having doctoral degrees i.e. M = 4.6, S.D = 0.456, M = 4.36, S.D = 0.44, respectively.

Mean score of depression was found high M = 3.10, S.D = 0.421 while mean score of FCV-19 is M = 4.56, S.D = 0.469. Bivariate Pearson correlation is used to test hypotheses 1. It is found, there is positive and high relationship between predictor and criterion r = 0.762, p < 0.05 level. It implies increase in fear would increase the depression among individuals. Thus, H_1 is substantiated (Table 3).

Table 3: Correlation matrix

Variables	Mean	SD	1	2
Fear of COVID-19	4.56	0.469	1	
Depression	3.10	0.421	0.762**	1

SD: Standard deviation, p<0.01

Moreover, effect of fear of COVID-19 was also investigated on depression. It was found that goodness of fit is found significant F = 214.621, p < 0.05, R^2 = 0.580 explained 58% variance on depression by FCV-19. Change in beta is β = 0.762, p < 0.05 explained that 1% change in fear of COVID-19 could bring 76.2% change in depression. Thus H_2 is also accepted (Table 4).

Table 4: Regression analysis

DV	IV	R	R^2	F	β	p
Depression	Constant	0.762	0.580	214.621		0.000
	FCV-19				0.762	0.000

DV: Dependent Variable, IV: Independent Variable, FCV-19: Fear of COVID-19

Results of t-test Table 5 presented that there is significant difference in the mean scores of fear of COVID-19 and depression is found on the basis of gender (male and female) and group (student and teachers), for gender fear of COVID-19 F = 3.966, p < 0.05, and for depression F = 10.247, p < 0.01, respectively. On the basis of group fear of COVID-19 F = 5.783, p < 0.01 for depression F = 6.840, p < 0.01, respectively.

Table 5: Independent sample t-test

Variables	Levene's F	P	Support
Gender (fear of COVID-19)	3.966	0.001	Yes
Group (fear of COVID-19)	5.783	0.000	Yes
Gender (depression)	10.247	0.000	Yes
Group (depression)	6.840	0.000	Yes

Group>students and faculty members.

Table 6 has presented the findings of analysis of variance test. It is found that there is a significant mean difference in fear of COVID-19 and depression on the basis of age, that is, F = 14.617, p < 0.01 F = 2.698, p < 0.05 while there is no difference in the mean score of FCV-19 and depression found on the basis of education F = 1.761, p > 0.05 while F = 1.86 p > 0.05, respectively. Thus, hypothesis for difference in the mean scores of FCV-19 and depression is rejected on the basis of education.

Table 6: Analysis of variance

Variables	Levene's F	p	Support
Age (fear of COVID-19)	14.617	0.000	Yes
Education (fear of COVID-19)	1.761	0.521	No
Age (depression)	2.698	0.003	Yes
Education (depression)	1.86	0.620	No

Discussion and Conclusions

The purpose of this study was to determine influence of fear of COVID-19 on depression. Fear of exposing to coronavirus increase mental health issues such as anxiety, stress, and depression. Therefore, data were collected from students and faculty members to know their opinion how much they fear about exposing

to corona and to what extent or level depression is prevailing among individuals. It was revealed form the finding that there is high relation among two variables, it means that increase in fear could possibly increase the depression among people. Moreover, social distancing and COVID-19 restrictions could play their significant role in increasing negative behaviors such as anxiety, stress, and depression. It is concluded that following strictly the COVID-19 guidelines and getting vaccination is the only way to reduce the fear of COVID-19. The past studies has claimed that there is significant impact of fear of COVID-19 on depression and it is held responsible for increasing depression, stress, and anxiety among the individuals. The findings of the present study are in line with the findings of the past studies which supported the findings of existing studies are Bakioglu *et al.* (2020) reported that increase in fear would increase in depression which directly negatively effects mental and psychological health of students as well as faculty members. Depression among individuals could be reduce by social support, resilience, awareness, counseling program, etc. Fear of exposing to COVID-19 could be possibly reduce by keeping distance, using mask when going outside, taking COVID vaccinations (Chen *et al.*, 2021). Moreover, social gathering, political gathering and marriage gathering should be avoided to reduce FoC and level of depression among individuals. Unnecessary traveling is also a factor in increasing the chances of exposure to COVID-19 and, in turn, increases depression level. Therefore, it is highly recommended that individuals should seriously take into account the above factors to keep the depression level at low. It is concluded that following the government guidelines strictly for coronavirus is the only way to keep one's self safe.

Policy implications

The existing study has some implications for practitioners as well as policy makers. Social and moral support along with resilience have implications in reducing fear and depression among individuals' especially elderly people. It also helps in preventing mental health issues among population after counseling with practitioner. Policy makers can raise awareness in seminars, workshops, conferences, symposiums, and group meetings to highlight the consequences of depression in human body. Therefore, one should get social support from practitioners as well as NGOs to handle fear of COVID-19 and depression effectively.

Future recommendations

Future studies can use more variables as mediators such as psychological empowerment, and moderators such as unethical climate, longitudinal studies could be helpful to have better understanding of subject matter. Big sample size would be better to cover big population.

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