

Original Research

COVID-19's Psychological Threats and Future Career Anxiety among University Students

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Abstract

The COVID-19 pandemic brought different intolerable and uncomfortable situations that ruined the students' academic performance, career opportunities, and social lives through depression, anxiety, fear, uncertainty, and mental illness. In this study, we examined the psychological threats of the COVID-19 among Egypt's public-sector university students. We employed quantitative methods in this study and used a questionnaire to collect cross-sectional data. The Structural Equation Modeling (SEM) results show that Fear of COVID-19 (FoC) has a positive effect of on Depression from COVID-19 (DfC), Future Career Anxiety (FCA) and Uncertainty of COVID-19 (UoC). In addition, DfC and UoC have positive effects on FCA. Finally, DfC and UoC positively mediate the association between FoC and FCA. This study's findings help policymakers and university authorities shape policies to reduce Egypt's public sector university students' psychological problems due to the COVID-19 pandemic. Moreover, this study's findings assist with the adjustments caused by the complex and rapidly changing pandemic situation.



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Keywords

Psychological problems; future career anxiety; social lives; depression from COVID-19; mental illness; fear of COVID-19; uncertainty of COVID-19

1. Introduction

COVID-19 has brought several complications and challenges that have affected the careers of individuals and businesses. This painful situation has increased Future Career Anxiety (FCA) [1]. Several constructs, such as Depression from COVID-19 (DfC), Uncertainty of COVID-19 (UoC), and Fear of COVID-19 (FoC), have increased university students' Future Career Anxiety (FAC) [2-5]. In the educational arena, these phenomena have positively affected the students since several problems including depression, anxiety, and stress, have confronted them. The UoC situation has proven to be a complex, unpredictable, and rapidly changing scenario, significantly hampered the students' creativity, innovation, and academic achievements [4]. Similarly, FoC has left them feeling more uncomfortable, fearful, and even struggling with sleep problems due to the COVID-19 pandemic [5]. Due to the COVID-19 pandemic's pervasive influence, individuals have faced the challenges of mustering the ingenuity to accomplish tasks [2, 3].

In the existing literature, there are numerous interconnected factors [6-14]. These include turnover intentions, risk perception, job insecurity, FCA, stress, DfC, depressive symptoms, UoC, employment anxiety, intolerance of uncertainty, FoC, career planning, inflexibility, loneliness, mental disorders, and complexities. However, the existing literature lacks empirical evidence about the ambulation of FoC, DfC, UoC, and FCA in an integrated way whereby, more explicitly in the context of Egypt's public sector university students, DfC and UoC play bridging roles between FoC and FCA.

Due to the COVID-19 pandemic, Egypt's public sector university students have faced several psychological challenges, such as stress, depression, and anxiety [15, 16]. In addition, from an academic standpoint, the COVID-19 pandemic has presented Egypt's public-sector university students with several barriers and tensions regarding technical issues, reduced social interactions, and academic uncertainties [17, 18]. Therefore, keeping these situations in mind, we gained in this study to answer the following questions:

RQ1: How do FoC, DfC, and UoC affect the development of FCA among Egypt's public sector university students?

RQ2: How do DfC and UoC mediate the connection between FoC and FCA among Egypt's public sector university students?

We believe this study's findings will help Egypt's university authorities take the necessary actions when any unforeseen disease arises. This study's findings would help Egypt's university authorities to reduce anxiety, stress, and depression among its public sector university students since their future careers may be affected. Moreover, this study's findings assist policymakers in overcoming different COVID-19-related challenges should they arise or return at any time. Finally, this study's findings contribute to the existing literature.

This paper is organized as follows. After the introduction in section 1, section 2 reviews the existing literature and develops this study's hypotheses. Section 3 explains the methods used in this study. Section 4 details this study's findings. Section 5 is the discussion. Finally, section 6 is the conclusion.

2. Literature Review and the Development of the Hypotheses

2.1 Fear of COVID-19 (FoC)

Fear of COVID-19 (FoC) shows the uncomfortableness and fear that individuals feel due to the dangerous situation of the COVID-19 pandemic [5]. By significantly limiting and forcing individuals to stay at home, this situation hinders individuals' different activities, such as educational life, and reduces entrepreneurial and business activities [19]. FoC severely affects mental health conditions and generates challenging situations such as stress, anxiety, and depression [20, 21]. FoC positively predicts DfC among university students [22, 23]. It also gives rise to different complexities relating to educational, socioeconomic, and demographic factors [11-13]. FoC is also a negative predictor of future career opportunities due to the massive creation of FCA [24, 25]. According to [26], the stress of the COVID-19 pandemic has increased final-year students' career anxieties. Positive and significant connections exist between factors such as UoC, DfC and FoC [8, 10]. Likewise, the constructs, such as depression, stress, anxiety, and fear, substantially contribute to developing UoC [27-30]. In the context of Bangladesh, the COVID-19 pandemic has had an impact on undergraduate students' mental health because they are seriously affected by the digital divide and limited access to digital resources. Therefore, emergency online learning has further increased the students' stress, anxiety, and depression [31, 32]. Likewise, the adult population has been confronted by widespread mental health issues such as heightened anxiety, depression, and stress [33].

2.2 Depression from COVID-19 (DfC)

Depression is the negative feeling or situation that individuals experience due to the COVID-19 pandemic [2, 3]. DfC contributes to greater FCA and less business success. During the COVID-19 pandemic, psychological constructs, such as inflexibility and loneliness, are mediators between healthcare students' and early-career professionals' anxiety, depression, and stress [7]. FoC is a negative factor that creates psychological problems such as depression, anxiety, and stress, and ultimately, these issues hinder future careers [12]. FoC and DfC positively affect FCA [34]. Among employees, depression and anxiety are predicted through COVID-19-related job insecurity, which increases uncertainties and mental health problems [35]. According to [36], stress and depression create more issues in relation to university students' perceptions of their future careers [9]. [8]'s findings demonstrate that DfC positively affects FoC and FCA among Chinese undergraduate students.

2.3 Uncertainty of COVID-19 (UoC)

In the context of the COVID-19 pandemic, individuals perceive uncertainty of COVID-19 (UoC) as a very complex, unpredictable, and rapidly changing situation [4]. It creates different risks and threats to business and enterprise development [37]. UoC positively increases FCA and is connected to employment anxiety and diminished career planning [38]. Intolerance of uncertainty has a

positive effect on FCA [14]. Likewise, FCA is affected by factors such as anxiety, stress, depression, and psychological inflexibility [7]. In [8]’s and [9]’s assessment, DfC and FoC can create FCA. In the same notion, [6] meaningfully investigated the effect of the unexpected crisis of the COVID-19 pandemic on final-year students' FCA. A lack of confidence in employability was observed among students due to their perceived career anxiety and distress [39].

2.4 Future Career Anxiety (FCA)

Future Career Anxiety (FCA) shows individuals' apprehensions and worries about their future employment [1]. FCA is affected by several constructs, such as stress, DfC, UoC, and FoC [25, 40]. [8]’s findings show FoC’s and DfC’s predictive effects in developing UoC and FCA. Depressive symptoms develop an association between FoC prolongation and FCA [24].

Consequently, there are positive connections between constructs such as FCA, stress, DfC, depressive symptoms, UoC, employment anxiety, FoC, career planning, inflexibility, loneliness, mental disorders, complexity, intolerance of uncertainty, turnover intentions, risk perception, and job insecurity [6-14]. However, there are still gaps in the existing literature. For example, it lacks an integrated model, which may add constructs such as FoC, DfC, UoC, and FCA. Moreover, the mediating roles of the DfC and UoC between FoC and FCA still have to be explored. There is no such evidence in the context of Egypt’s public university students who are concerned about their FCA. The COVID-19 pandemic complications have hindered them from taking proper education or career paths. Therefore, based on the need to fill these gaps, we devised the model (see Figure 1) to confirm the position among students of Egypt’s different public sector universities.

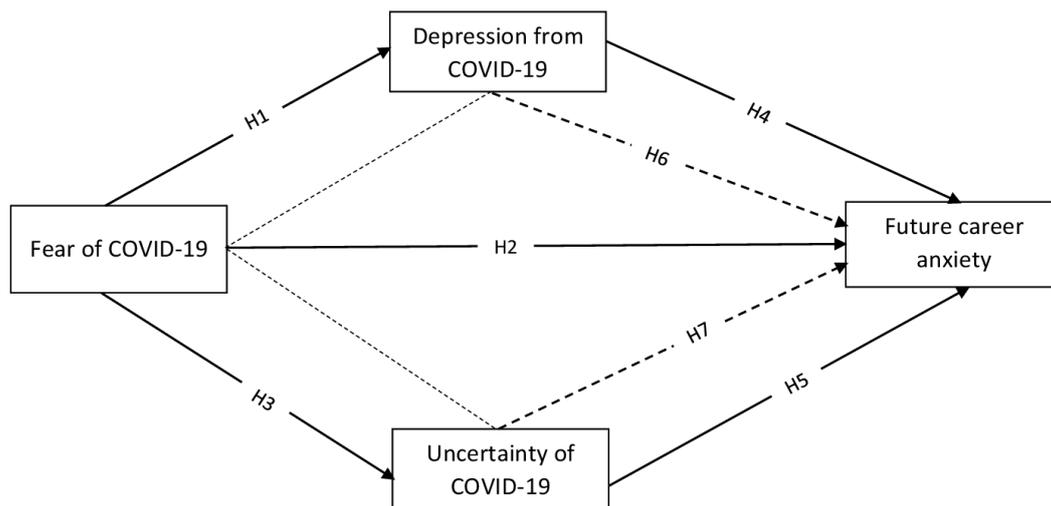


Figure 1 Model of the study. Source: Developed by the researchers.

2.5 Fear of COVID-19 (FoC), Depression from COVID-19 (DfC), Future Career Anxiety (FCA) and Uncertainty of COVID-19 (UoC)

FoC has severe consequences for mental health since it positively triggers DfC [41]. As shown by the investigation of the dynamics of fear, depression, and COVID-19 exposure among adult twins [21], there is a direct link between fear, depression, and exposure to the coronavirus. FoC is

positively connected to FCA through DfC as a mediator [42]. In Bangladesh, there is a positive association between FoC and DfC among healthcare professionals and the general population [22]. Similarly, [23]'s findings demonstrate FoC's predictive effect on DfC, stress and anxiety among university students. The findings of other notable studies by [28, 43, 44] also recognize FoC's meaningful and substantial effect in developing uncertainty, risk, DfC, and mental disorders. More recently, [11]'s, [12]'s, and [13]'s findings have added another layer of complexity by considering the demographic, socioeconomic, and educational factors that affect FoC and its association with depression and anxiety.

FoC has a negative effect on the individual's future career [24] since it activates FCA through the mediation of depression [38]. Among students during the COVID-19 pandemic, FCA, FoC, and UoC were the massive challenges that hindered their career perceptions [9]. Also, during the pandemic, stress negatively and significantly impacted final-year students' FCA [26]. With the support of mediation of FoC and depression [8], there is a positive relationship between unbearable uncertainty and FCA among Chinese undergraduate students. FoC can positively reinforce the turnover intentions and FCA [10]. Among nurses, FoC's relationships are with turnover intentions, work satisfaction, and psychological distress [45]. The findings of [46]'s empirical study show that COVID-19-related fear and anxiety have had substantial effects on entrepreneurial behaviors. Likewise, [36]'s findings show that, among university students during the COVID-19 pandemic, there was a positive association between depression, stress, and future careers. Among Chinese international high school students, FoC and career maturity are connected through unbearable uncertainty [47]. The findings of scholars, such as [34, 48], recognize FoC's impact on career anxiety and mental health among hospitality and tourism students and non-managerial employees, respectively.

FoC is also a positive enabler of UoC. [49]'s serial mediation model confirms the positive association between mental well-being and intolerance of uncertainty through FoC. With the support of FoC, there is a positive connection between depression, anxiety, and stress [44]. The levels of fear enhance uncertainty among university students [50]. There are positive connections between factors such as precautionary adherence, anxiety, and fear, and these enhance the uncertainties and psychological distress [51]. The findings of well-known studies by [27-30] show the positive roles played by factors such as stress, anxiety, fear, and depression in developing uncertainty during the COVID-19 pandemic. According to [52, 53], FoC and risk perception affect identity change, uncertainty, and mistrust. More recently, [11]'s findings show that the COVID-19 pandemic-related uncertainties have substantially affected mental health and well-being and, more particularly, in the context of job insecurity, depression, and anxiety.

Consequently, the existing literature shows the direct effect of FoC in developing DfC, FCA, and UoC. However, there is a need to confirm these connections further in the context of Egypt's public-sector university students. Therefore, we formulated the following hypotheses:

H1. FoC positively enhances DfC among Egypt's public sector university students.

H2. FoC positively enhances FCA among Egypt's public sector university students.

H3. FoC positively enhances UoC among Egypt's public sector university students.

2.6 Depression from COVID-19 (DfC) and Future Career Anxiety (FCA)

Depression from COVID-19 (DfC) plays an influential role in hindering FCA. FCA is positively affected by pandemic-induced stress, depression, and concerns about future career prospects [26, 34]. During the COVID-19 pandemic, depression, stress, and specific anxieties affected Egypt's public sector university students' perceptions of their future careers [9, 36]. Intolerance of uncertainty and its contribution to FCA among Chinese undergraduate students underline the facilitating contributions of FoC and depression [8]. Depression and anxiety are predicted through COVID-19-related job insecurity; ultimately, these create economic uncertainties and mental health problems among employees in the United States of America (USA) [35]. Psychological factors, such as inflexibility and loneliness, are mediators between stress, anxiety, and depression among healthcare students and early-career professionals during the COVID-19 pandemic [17]. More recently, [12]'s findings confirm that FoC is a dangerous and damaging construct that positively increases psychological problems such as depression, anxiety, and stress. Ultimately, these factors hinder future careers.

Consequently, DfC is confirmed as the substantial and positive predictor of UoC. However, more specifically among Egypt's public sector university students, establishing these connections in the presence of other constructs, such as FoC and FCA, is further needed. Therefore, we formulated the following hypothesis:

H4. DfC positively increases UoC among Egypt's public sector university students.

2.7 Uncertainty of COVID-19 (UoC) and Future Career Anxiety (FCA)

UoC is a robust factor that positively contributes to the development of FCA. The findings of [38]'s empirical assessment confirm the positive connection between employment anxiety and intolerance of Uncertainty of COVID-19 (UoC) among graduates through moderation of career planning. Among Chinese undergraduate students, FoC and DfC are positively associated with each other through FCA [8]. [9]'s findings show that multiple psychological factors, such as fear, anxiety, and stress, affected students' FCA during the Covid-19 pandemic. Similarly, [6] precisely examined the influence of the unforeseen COVID-19 crisis on final-year students' career anxiety. During the COVID-19 pandemic, it was noteworthy that perceived distress and career anxiety meant students experienced a lack of confidence about their employability [39].

The findings of a multinational study demonstrate COVID-19's impact on emerging adults, where intolerance of uncertainty mediates the association between COVID-19's complications and FCA [14]. Among early-career professionals and healthcare students, psychological inflexibility, loneliness, stress, anxiety, and depression severely affect their FCA [7].

Consequently, outside Egypt, the findings of the literature mentioned above confirm that UoC is a positive predictor of FCA. Therefore, we formulated the following hypothesis to verify the position among Egypt's public sector university students:

H5. UoC positively increases FCA among Egypt's public sector university students.

2.8 Depression from COVID-19 (DfC) and Uncertainty of COVID-19 (UoC) as Mediators

DfC and UoC are direct and indirect factors that mediate the different associations. For instance,

[25] confirms that DfC mediates the positive association between FoC and FCA. Likewise, FoC and DfC are the potential mediators that develop the association between UoC and FCA [8]. Also, there is depressive symptoms' mediating role between FoC prolongation and FCA [24]. Although [9]'s study does not directly address depression as a mediator, the findings on students' FCA during the COVID-19 pandemic add to the broader context. During the COVID-19 pandemic, self-esteem buffered the impact of loneliness and fear on anxiety and depression [54].

Likewise, many previous studies' findings confirm UoC's mediating impact on the association between FoC and FCA psychological well-being and career-related outcomes. Individuals who have a heightened FoC often exhibit lower levels of tolerance for uncertainty; these can contribute to increased anxiety levels [55]. According to [56], among Turkish university students, FoC leads to procrastination and intolerance of uncertainty as a mediating contributor. FoC contributes to stress, depression, and anxiety and is partially mediated by intolerance of uncertainty [28]. From exploring this line of inquiry regarding Chinese international high school students' career maturity [47], findings show that FoC's impact is partially mediated by intolerance of uncertainty.

The above-mentioned literature recognizes DfC's and UoC's mediating effects in developing an association between FoC and FCA. Therefore, based on the consistency of the associations and the lack of empirical evidence about these constructs in the context of Egypt's public sector university students, we formulated the following hypotheses:

H6. DfC mediates the connection between FoC and FCA among Egypt's public sector university students.

H7. UoC mediates the connection between FoC and FCA among Egypt's public sector university students.

3. Methods

3.1 Research Approach

We employed quantitative methods in this study and collected cross-sectional data using a questionnaire, allowing the respondents to make different choices. The quantitative approach best deals with investigating problems based on numbers and graphs. Therefore, it is easy to understand the facts [57]. We followed numerous scholars, like [6-14], by applying the same strategy to explore the phenomena of FoC, UoC, DfC, and FCA, and, more specifically the impacts of COVID-19 psychological threats on Egypt's public sector university students' FCA.

3.2 Respondents and Survey Tools

The respondents of the study are Egypt's public-sector university students. We targeted these students as this study's respondents because significant psychological challenges during the COVID-19 pandemic had confronted them. During the time of COVID-19, high levels of stress, depression and anxiety were commonly observed among individuals [15, 16]. Among Egypt's public sector university students, these issues had arisen due to factors such as technical problems and social distance lockdowns. [17, 18, 58, 59].

3.3 Data Collection and Sample Size

We used a questionnaire as a significant tool to collect this study's cross-sectional data. We used English for the questionnaire and conducted this study from June to November 2022, which was soon after the COVID-19 pandemic. We used a convenience sampling technique to identify the respondents and both online and offline modes to contact them. We collected the online data by sending a link to the questionnaire electronically through emails, WhatsApp, and Facebook groups. Similarly, we visited Egypt's public sector universities to obtain the respondents' completed questionnaires. We contacted the universities' deans and directors and received their help in entering the classrooms. We informed the students about this study's aim and objectives and that they could withdraw without giving a reason. We assured them about the confidentiality and privacy of their responses and that these would be protected and used only for academic study purposes and would not be disclosed at any cost. By asking the students to sign an informed consent form before completing the questionnaire, we obtained their permission to contribute to this study voluntarily. We also ensured that we correctly followed their ethical values, and before distributing the questionnaire, we guided them in completing it. We assured the students that we would use the collected demographic information on an anonymized basis. Consequently, we succeeded in collecting 338 completed questionnaires at the initial stage. After cleaning the data (detecting missing values and outliers), we excluded four invalid questionnaires. Finally, we based this study's findings on 334 valid samples. We applied G*Power, a statistical program, to determine the minimum sample size. As per G*Power, this study's minimum number of participants should be 92. We applied a maximum number of predictors of 5, a statistical significance level of 0.05, an effect size f^2 of 0.15, and a statistical power of 0.95. Therefore, the total number of samples collected provides the necessary power to disprove the null hypotheses [60]. This study's 334 sample size is adequate because the minimal energy required for a social science management study is 0.80 [61, 62].

3.4 Measures

We used all the items from the existing literature and measured them on a five-point Likert scale (strongly agree to disagree strongly). More precisely, we adopted from [4] three items to evaluate UoC. The sample is "I perceive the COVID-19 as very complex." We adopted six items from [5] to assess FoC. The sample item is "It makes me uncomfortable to think about novel Coronavirus." Likewise, we adopted six items from [2, 3] to measure DfC. The sample item is "I do not experience any positive feelings because of COVID-19." Finally, we adapted from [1] five items to calculate FCA. The sample item is "I worry about future employment because I probably would not find a job that interests me."

4. Results

4.1 Reliability and Validity of the Questionnaire

We used a questionnaire to collect the data. In this regard, we measured the questionnaire's reliability and validity before moving to collect the large-scale data. By obtaining responses from 20 students, we conducted a pilot study to ensure these critical aspects. We used Cronbach's alpha to

ensure the questionnaire’s reliability and internal consistency among the items. This is 0.808 overall, and all the constructs as more significant than 0.70. Moreover, we ensured the questionnaire’s validity by obtaining feedback from the 20 students about its language, content, and design. As a result of their feedback, we made some minor changes before distributing the final questionnaire to collect the large-scale data.

4.2 Confirmatory Factor Analysis (CFA)

We conducted a Confirmatory Factor Analysis (CFA) to confirm the questionnaire’s validity and reliability. We ensured the loading, and these loading scores are within an acceptable range of >0.70 for almost all items except for foc4 and dfc2, which do not satisfy the required values (>0.70) [63-65]. Moreover, the Average Variance Extracted (AVE) values are above 0.50 [63], and the Composite Reliability (CR) scores are above 0.70 [63]. Likewise, the Cronbach alpha reliability (internal consistency) values are more significant than 0.70. Therefore, these are considered fair values [63] (see Table 1).

Table 1 CFA for measurement model.

Construct	Item code	Factor loadings	CR	AVE	α
Fear of COVID-19	foc1	0.866	0.911	0.673	0.872
	foc2	0.845			
	foc3	0.813			
	foc5	0.799			
	foc6	0.775			
Depression from COVID-19	dfc1	0.833	0.893	0.627	0.819
	dfc3	0.819			
	dfc4	0.800			
	dfc5	0.772			
	dfc6	0.731			
Uncertainty of COVID-19	uoc1	0.882	0.894	0.737	0.792
	uoc2	0.863			
	uoc3	0.830			
Future career anxiety	fca1	0.855	0.906	0.660	0.782
	fca2	0.839			
	fca3	0.818			
	fca4	0.791			
	fca5	0.755			

Note(s): Deleted items: foc4; dfc2. Source: Calculated by the authors. AVE = average variance extracted values; CR = composite reliability; α = Cronbach's alpha.

In addition, we ensured Discriminant Validity (DV) by matching the squared correlations between the study variables and the AVE for a variable. As shown in Table 2, the squared associations for each construct are less than the AVE, which indicates that the DV is satisfactory [63].

Table 2 Discriminant validity of constructs.

Constructs	FCA	FoC	DfC	UoC
FCA				
FoC	0.071			
DfC	0.231	0.062		
UoC	0.336	0.229	0.078	

Source: Researchers’ calculation. Note(s): “Diagonals represent the average variance extracted while the other entries represent the squared correlations.”

4.3 Structural Model

We used Maximum Likelihood Estimate (MLE) to examine the structural model through the AMOS software version 27.0 because it is the best and most predictive software for path analysis [66]. Table 3 and Figure 2 show that the study’s findings demonstrate FoC’s positive impact on DfC ($H1 = \beta = 0.404$; $p < 0.01$). Therefore, hypothesis H1 is accepted. Likewise, the analysis shows FoC’s positive impact on FCA ($H2 = \beta = 0.123$; $p < 0.01$). Therefore, hypothesis H2 is accepted. Moreover, FoC positively affects UoC ($H3 = \beta = 0.147$; $p < 0.01$). Therefore, hypothesis H3 is accepted. Furthermore, the DfC construct is also a positive predictor of FCA ($H4 = \beta = 0.228$; $p < 0.01$). Therefore, hypothesis H4 is accepted. As per expectations, UoC positively impacts FCA ($H5 = \beta = 0.304$; $p < 0.01$). Therefore, hypothesis H5 is accepted.

Table 3 SEM estimations [Direct path].

H.No.	Effects	Estimate	SE	CR	P	Supported = Yes; Not supported = No
H1	FoC→DfC	0.404	0.062	6.518	0.000	Yes
H2	FoC→FCA	0.123	0.033	3.738	0.000	Yes
H3	FoC→UoC	0.147	0.033	4.409	0.000	Yes
H4	DfC→FCA	0.228	0.064	3.545	0.000	Yes
H5	UoC→FCA	0.304	0.063	4.864	0.000	Yes
H6	FoC→DfC→FCA	0.088	0.032	2.760	0.006	Yes
H7	FoC→UoC→FCA	0.222	0.061	3.613	0.000	Yes

Source: Authors’ own calculations. Note: CR = critical ratio; SE = standard error; p = significance level $p < 0.01$.

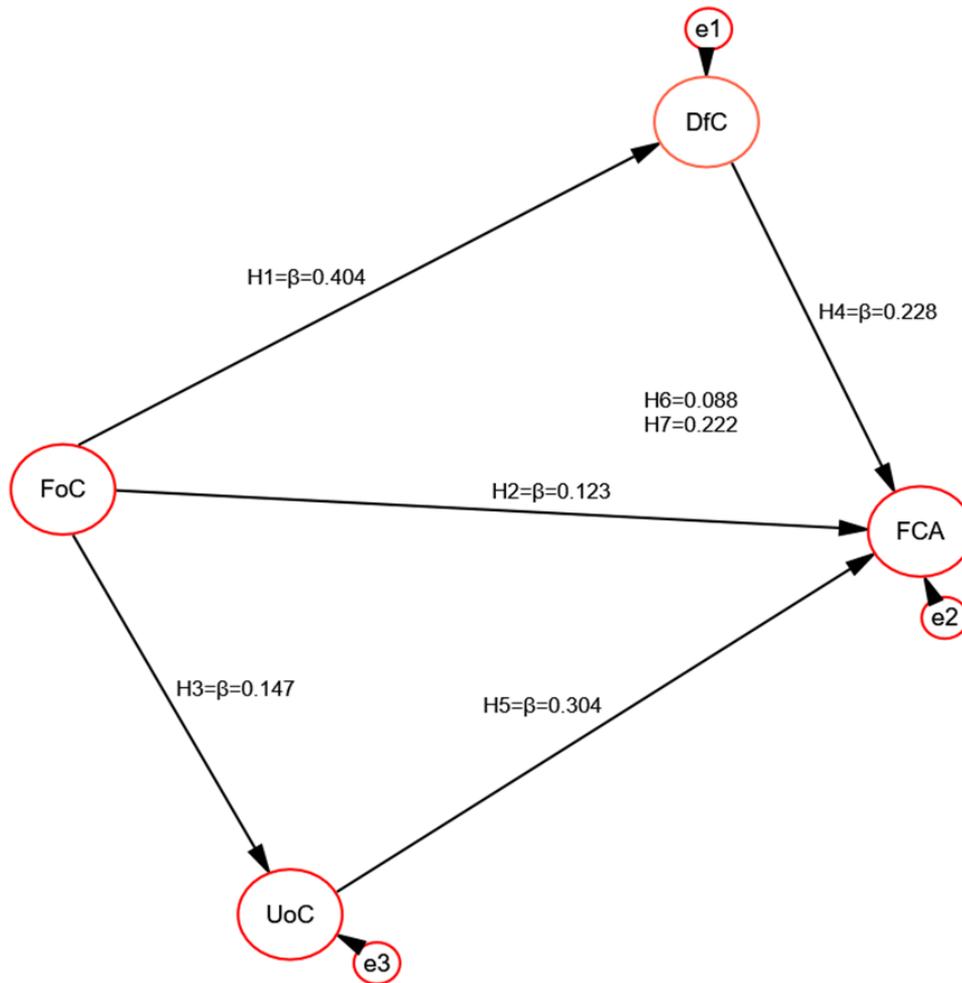


Figure 2 Path analysis. Source: Estimated by the researchers.

Turning to the indirect effects, this study's findings show that both DfC and UoC have a positive and mediating impact in developing the connection between FoC and FCA ($H6 = \beta = 0.088$; $p < 0.01$; $H7 = \beta = 0.222$; $p < 0.01$). Therefore, hypotheses H6 and H7 are accepted.

5. Discussion

This study aimed to examine the impact of the COVID-19 pandemic's psychological threats on Egypt's public sector university students' FCA. Concerning this study's hypotheses, this study's findings show that FoC positively impacts DfC, FCA, and UoC. These findings are consistent with those of previous studies such as [11, 12, 23, 36, 43- 47, 52, 53]. These findings demonstrate that Egypt's public sector university students see the COVID-19 pandemic as a complex, unpredictable, and variable phenomenon that changes quickly. The FoC made them uncomfortable thinking about the COVID-19 pandemic, and they were most fearful of its impact on their lives. Consequently, they have become anxious or nervous when viewing or listening on social media or any other media, such as TV and radio, to news bulletins about the COVID-19 pandemic. Their hands become sweaty when they begin to consider the matter and they become frightened about its impact on their daily lives due to COVID-19. They cannot even sleep because they are worried about contracting COVID-19.

Moreover, they are worried about their future employment due to the highly competitive job market and the potential for an economic recession. They also fear losing their jobs and becoming

unemployed due to news about job cuts being reported by the mass media. They think their salaries may not be as good as they wish and that they may not secure a job that benefits them. Also, the COVID-19 pandemic situation increases their depression and tensions since the COVID-19 pandemic means that they do not harbor any constructive feelings. They realize that their lives are meaningless and that working up the enthusiasm to do things is problematic. They feel downhearted and blue by the COVID-19 pandemic and cannot become passionate about anything.

Moreover, as reflected in the existing literature [7, 8, 12, 35], DfC positively increases Egypt's public sector university students' FCA among students, which is This study's findings demonstrate that, due to DfC, Egypt's public sector university students are worried about future employment and competition in the job market. They are frightened of a potential economic recession and job cut policies that harm their future careers. They are also apprehensive about their future employment prospects and the desirable salaries they may or may not receive. They are more likely to feel that they may not find suitable jobs that interest them.

This study's findings show that UoC is a momentous resistance to Egypt's public sector university students' FCA. These findings are consistent with previous studies by, such as [6-9, 14, 39]. This study's findings show that UoC increases Egypt's public sector university students' FCA. The students think the COVID-19 pandemic's complex situation may ruin their creativity and competency to pursue their careers. Due to the unpredictability and uncertainty arising from the COVID-19 pandemic, they may not continue their struggles to obtain suitable jobs. In this vein, UoC is another hurdle to improving their career prospects.

Finally, consistent with those of previous studies [8, 24, 42, 54-56], this study's findings show DfC's and UoC's mediating influences in developing an association between FoC and FCA, which is in line with the literature. These findings demonstrate that FoC already increases FAC and, in addition to DfC and UoC, further reinforces the connection between FoC and FAC.

6. Conclusion

During COVID-19, university students confronted massive challenges in terms of psychological problems and career-related issues. Therefore, we conducted this study with Egypt's public sector university students. This study's overall findings demonstrate that FoC positively affects DfC, FAC, and UoC. In addition, DfC and UoC impact positively on FAC. Turning to the mediating effects, the path analysis shows that, among Egypt's public sector university students, DfC and UoC have mediating impacts in developing the association between FoC and FAC Egyptian university students.

In terms of the practical implications, this study's findings help policymakers and university authorities to develop plans, strategies, and policies to tackle unforeseen situations such as the COVID-19 pandemic and other disasters and diseases. This study's findings assist Egypt's public sector university students in overcoming different psychological problems that include depression, anxiety and fear. Moreover, this study's findings help to control the unpredictable, complex and rapidly changing situation arising from the COVID-19 pandemic. This study's findings help to control people's fears and make people comfortable by reducing the fear of contracting coronavirus. This study's conclusions assist in reducing Egypt's public sector university students' worries and tensions regarding the COVID-19 pandemic causing future unemployment and a potential economic recession.

Regarding the theoretical implications, this study's findings offer a robust framework that

integrates FoC, UoC, DfC, and FCA in a single framework. DfC's and UoC's mediating contributions further enrich the depth of the present conceptual framework. Confirming these constructs in the context of Egypt's public sector university students further provides valuable empirical insights. Methodologically, establishing a framework with empirical and quantitative approaches further reinforces the worth of this study's findings. Finally, this study's findings contribute to the existing literature.

This study's limitations are that we used only a quantitative approach and based its findings on cross-sectional data collected through a questionnaire. We did not underpin this study's conceptualization with a theory and restricted it to a few constructs. Moreover, we limited the context of this study to Egypt's public-sector university students. We applied a convenience sampling technique to identify this study's respondents. Finally, we based this study's findings on a 334-sample size.

In the future, we recommend that more longitudinal studies be conducted to confirm the same model and, also that future studies use both qualitative and quantitative methods. Furthermore, we recommend that the conceptual framework underpins its framework with a concerned theory. Finally, we recommend that future studies deal with other contexts, such as health and SMEs, to examine the effects of the COVID-19 pandemic on them.

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Author Contributions

Abdelwahed NAA developed the conceptualization framework, hypotheses of the study, analyzed the data and discussed the results in the light of literature. Muhammad Sufyan Ramish MS developed the methods and write-up of the manuscript. Both authors accepted the final version after revisions.

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Competing Interests

The authors have declared that no competing interests exist.

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