

دور المرونة النفسية في التنبؤ بالاضطرابات النفسية لدى عينة من الكويتيين خلال جائحة كورونا

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ملخص:

الخلفية التاريخية وهدف الدراسة: تم تعرف الالتهاب الرئوي الجديد الناجم عن مرض الفيروس التاجي (كوفيد-19)، الذي انتشر محلياً ودولياً من مدينة ووهان الصينية منذ نهاية ديسمبر 2019، وفي حين أن أعراض مثل الاكتئاب والقلق والضغط شائعة الظهور بين الأفراد خلال وباء كورونا، فإن دراسات محدودة بحثت في المتغيرات النفسية الناجمة خلال جائحة كورونا. وعلى حد علمنا، لا توجد دراسة اهتمت بدراسة المرونة النفسية كمتغير نفسي. وبناءً على ذلك؛ فإن البحث الحالي يهدف الى البحث في دور المرونة النفسية في التنبؤ بكل من القلق، الاكتئاب والضغط على عينة من البالغين الكويتيين خلال جائحة كورونا.

منهجية الدراسة: طبقت الدراسة على عينة عشوائية، بلغ قوامها 735 كويتي بالغاً، أكمّلوا عدداً من الاختبارات النفسية عبر الإنترنت، والاختبارات النفسية هي: اختبار للقلق والإكتئاب (HADS)، مقياس كونور ديفيدسون للمرونة (CD_RISC 25)، ومقياس الضغوط (PSS). ولقد تم استخدام التصميم الارتباطي المستعرض في الدراسة الحالية. **النتائج:** هناك فروق دالة إحصائية على مقياس الضغوط بين البالغين الكويتيين المشخصين بكورونا وبين غير المشخصين. كما أظهرت نتائج الدراسة وجود علاقة سالبة ودالة بين المرونة النفسية وكل من القلق، الاكتئاب والضغط، وهذا يتسق مع ما وجد في الدراسات السابقة. وأسفرت نتائج تحليل الانحدار المتدرج أن للمرونة النفسية قدرة تنبئية بالقلق والاكتئاب والضغط بعد ضبط المتغيرات الديموغرافية ومتغيرات الحجر الصحي عند الكويتيين البالغين خلال جائحة كورونا.

الخلاصة: تشير النتائج إلى أن زيادة المرونة النفسية قد تساعد في الحد من الضغوطات النفسية بعد مواجهة أحداث الحياة المجهدة عند المواطن الكويتي.

الكلمات المفتاحية: القلق، الاكتئاب، الضغط، كورونا، المرونة النفسية.

The Role of Psychological Resilience in Predicting Psychological Distress among Kuwaiti Adults during Corona Pandemic

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Abstract:

Background and Objective: A novel pneumonia caused by coronavirus disease (COVID-19), which has spread domestically and internationally, has been identified in the Chinese city of Wuhan since the end of December 2019. While symptoms such as depression, anxiety, and stress have become common among people during the Corona pandemic, only a limited number of studies have examined the psychological experience during Corona pandemic. Moreover, to the best of our knowledge, no study to date has examined psychological resilience and mental health during the Corona pandemic in Kuwait. Therefore, the present research investigates the role of psychological resilience in predicting psychological distress among Kuwaiti adults during the Corona pandemic. **Method:** the study sample comprised seven hundred and thirty five Kuwaiti citizens, of those who completed online surveys, including four scales: the Hospital Anxiety and Depression Scale (HADS), the Connor-Davidson Resilience Scale (CD-RISC-25), and the Perceived Stress Scale (PSS). A cross-sectional correlational design was used. **Results:** There were statistically significant differences in the stress variable between the groups of Kuwaiti adults who were diagnosed with COVID-19 and those who were not diagnosed. Psychological resilience was negatively correlated with anxiety, depression, and stress, which is consistent with previous studies. As expected, resilience was found to account for a significant portion of variance of anxiety, depression, and stress after controlling for demographic variables and Corona related variables. **Conclusion:** The findings suggest that with increased psychological resilience, distress can be reduced among Kuwaiti citizens during stressful life events.

Keywords: Resilience, Anxiety, Depression, Corona, Stress

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Introduction

The COVID-19 epidemic is a public health emergency of international concern and poses a challenge to psychological resilience. Evidence-based studies are needed to develop strategies to reduce adverse psychological impact during the Corona pandemic. The World Health Organization describes Covid-19 as “an infectious disease caused by a newly discovered coronavirus” (WHO, 2020). There are two ways for COVID-19 virus to spread out, the main one being directly through the respiratory system caused by droplets scattered during conversation, sneezing or coughing. The second way the virus can spread is indirectly through exposure to contaminated surfaces (Maharlouei, 2020). As a result, social distancing is supposedly the most effective way to manage the spread of the virus (Maharlouei, 2020).

The COVID-19, or the Corona virus disease 2019, has affected all aspects of life of people, including their mental and physical health (Holmes et al., 2020). The disease has disrupted life and created new norms. It created a massive amount of pressure on the society, in general, leaving people wondering if they will receive adequate care should they contract the infection. The disease has no cure yet, and therefore, leaves everyone vulnerable. As a result, billions of people around the world have been forced to isolate themselves in their homes. As a result, anxiety and depression have been on the rise, as limited social interaction caused people to suffer from anxiety and depression.

Anxiety, depression, and stress are human beings' natural responses to difficult situations. Stress negatively impacts the lives of individuals and their psychological health. It often leads to disturbances such as anxiety and depression (Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014). As Selye (1959) emphasizes, stress goes into three stages: alarm, resistance, and exhaustion. On the other hand, the response to stress can impact health in many ways, the three most important of which are: (1) Physiological changes such as heart disease, (2) harmful health behaviours such as smoking, eating unhealthy foods, and not taking good care of oneself, and (3) negative mental effects such as rumination, anxiety, and depression which most commonly follow stressful events (Chiracu, 2019).

Several studies have investigated the psychological impacts of COVID-19 in western countries and China (e.g., Casagrande, Favieri,

Tambelli, & Forte, 2020; McBride et al., 2020). To the best of our knowledge, this study is the first attempt to investigate the role of psychological resilience on psychological distress during the Coronavirus disease in Kuwait. Therefore, the current study attempts to identify the extent of the psychological impact of the crisis on Kuwaiti citizens and whether the psychological resilience works as a protection factor against psychological distress.

Background

A recent study, conducted by Wang et al (2020) in 194 cities in China, investigated the psychological impacts and symptoms of the Corona pandemic virus using an online survey which involved 1210 participants in the study. The results of the study indicated that more than half of the respondents, 53.4%, rated the psychological impact of the outbreak as moderate to severe, 17% reported moderate to severe depression, 29% reported moderate to severe anxiety, and 8% reported moderate to severe stress levels. In addition, the study showed that female participants and students suffered from specific physical symptoms (e.g., myalgia), which were associated with higher levels of anxiety, depression, and stress, and greater psychological impacts from the outbreak (Wang et al., 2020).

By developing resilience, a person builds capacity to overcome stressful situations. Resilience has been widely conceptualized, and it is defined as “a dynamic process that encompasses adaptation to various circumstances, an adaptation that helps maintain healthy levels of psychological functioning in the face of traumatic events as a stable trajectory over time” (Gouzman et al., 2015). A surprising finding in Chiracu (2019) stated that “high levels of resilience fail to combat the effects of critical life events”, which in turn have a detrimental impact on individual well-being. However, Cao, Yang, and Wang (2020) found that resilience was a significant contributor to parents’ ability to cope with depression brought about by the loss of their children. Resilience can help an individual cope better with stress and maintain well-being at previous levels.

The theoretical foundation for resilience in psychology focuses on an individual’s reaction to adversity. During difficult times, an individual is exposed to stressors that are expected to negatively affect his /her

mental processes and mental health. Psychologists expect individuals to use their mental processes in order to prevent the adverse effects of a traumatic event. This ability is referred to as resilience. Also, the effects of traumatic events are expected to be temporary and last only for a certain period of time.

There are various coping mechanisms to help an individual stay positive; for example, self-efficacy, self-coping, and mindfulness (Al-Tammar, 2019; de Vera García & Gambarte, 2019). A number of cross-sectional studies have reported negative significant correlations between psychological resilience and anxiety, depression, loss-related symptoms, emotional fatigue and distress (Al Eid et al., 2020; Brissette, Whyne, Lehrer, Woo, & Steinhardt, 2020; de Vera García & Gambarte, 2019). For example, Al Eid et al. (2020) conducted a study on 329 cancer patients in Saudi Arabia and found that psychological resilience is inversely associated with anxiety and depression. Moreover, resilience predicts anxiety and depression among cancer patients.

Resilience also works as protection to an individual. Cao, Yang, and Wang (2020) conducted a study to analyze how differently parents who had lost their only child, and those who had not, coped with stress in their lives. The study revealed that for parents who had lost their children, support from their families improved their "mental health by improving resilience" (p. 679). The study supports the notion that resilience enables people to protect their mental well-being. Brissette et al. (2020) also supported this finding; the researchers established that loss related symptoms manifested less amongst resilient individuals. Therefore, in the event of a traumatic experience, resilience enables individuals to stay healthy. This provides them with the ability to maintain some form of normalcy in their lives. Resilience may work beneficially for an individual, hence helping individuals go through painful periods in life. Individuals who have higher levels of psychological resilience are characterized by lower levels of anxiety, depression and stress.

Study Aims

Few researchers have focused on resilience in relation to psychological distress (anxiety, depression, and stress) during the Corona pandemic in Kuwaiti adults. Consequently, the aim of this research was to survey the general public in Kuwait during the initial stage of the

Corona pandemic in order to better understand the difference in psychological distress between Kuwaiti adults who have been diagnosed with the COVID-19 virus, and those who have not. In addition, the current study sought to examine the associations of psychological resilience, anxiety, depression, and stress among Kuwaiti adults during the Corona pandemic and to examine whether psychological resilience can predict mental health.

Research Questions and Hypotheses

The purpose of this study is to examine the role of resilience in predicting anxiety, depression, and stress in Kuwaiti adults during the Corona virus pandemic. More specifically, the study will attempt to answer the following research questions: (1) Is there a significant difference in psychological distress between Kuwaiti adults who have been diagnosed with the COVID-19 virus and those who have not? And to what extent do they differ, if any? (2) How does resilience relate to the psychological distress in Kuwaiti adults during the Corona virus pandemic, and (3) How well can resilience predict depression, anxiety, and stress in Kuwaiti adults during the pandemic, having controlled for demographic and Corona related variables?

The research hypotheses of interest in this study are, therefore, as follows: H_1 : The psychological distress in Kuwaiti adults of the first group is higher than that of the second group; H_2 : Resilience is negatively correlated with depression, anxiety, and stress in Kuwaiti adults; and H_3 : Resilience explains additional variance in depression, anxiety, and stress in Kuwaiti adults.

Methods and Results

The Questionnaire

The instruments for this research study included four scales: the HADS (anxiety and depression), the Connor-Davidson Resilience Scale (CD-RISC-25), the Perceived Stress Scale (PSS) in addition to the demographic and Corona related questions that included age, gender, marital status, educational level, as well as some Corona related variables, such as whether or not the participant is diagnosed with Covid-19 virus, whether or not the participant volunteered in community

activities, and whether or not the participant worked on the front lines of Covid-19 defense teams.

The Hospital Anxiety and Depression Scale (HADS: Zigmond & Snaith, 1983)

The HADS is a four point Likert style scale that consists of 14 items designed to assess symptoms of anxiety and depression in patients with no psychiatric history (Zigmond & Snaith, 1983). The scale has two subscales of seven items each, the first seven items are designed to assess anxiety, and the last seven items are designed to assess depression. The scores of the scale range between 0-21 and such that 0-7 indicate no symptoms, 8-10 indicate mild symptoms, 11-14 indicate moderate symptoms, and 15-21 indicate severe symptoms, (Zigmond & Snaith, 1983). The scale has been translated into Arabic and has high validity and reliability (El-Rufaie & Absood, 1987).

The Connor-Davidson Resilience Scale (CD-RISC-25: Connor & Davidson, 2003)

CD-RISC is a 25-item questionnaire designed to assess trait resilience (Connor & Davidson, 2003) using 5-point scales, ranging from 0 = not true at all to 4 = true nearly all the time. The Scale has been translated into more than 25 languages, including Arabic (Connor, 2020). The Arabic version of the CD-RISC-25 was used in this paper. On this scale, higher scores indicate higher resiliency (Connor & Davidson, 2003).

The Perceived Stress Scale (PSS: Almadi, Cathers, Mansour, & Chow, 2012)

The PSS-14 assesses the degree of daily stress that individuals experienced over the last month. It is a self-report scale consisting of 14 items. Participants are asked to respond using the five-point Likert scale, ranging from never = 0 to very often = 4 (Remor, 2006). Scores are obtained by reversing the scores on the seven positive items (4, 5, 6, 7, 9, 10 and 13). This scale was translated into Arabic and had a good reliability and validity (Almadi et al., 2012).

Procedure

The participants in this study completed an online survey that included HADS, the Connor-Davidson Resilience Scale (CD-RISC-25)

and the Perceived Stress Scale (PSS). These scales were included in the questionnaire in order to examine the correlations between depression, anxiety, stress and resilience. The study was carried out during the partial quarantine period which was imposed in Kuwait during the month of April-July 2020.

Study Design

This study is a cross-sectional correlational study which measures the variables at interest at one single point in time. The independent variable was resilience, while anxiety, depression, and stress were the dependent variables

Data Analysis

All analyses in this study were carried out using the Statistical Package for Social Sciences (SPSS version 22). The data was first validated and prepared for analysis, and then it was analysed in order to estimate the levels of anxiety, depression and stress, and later tests of significance were carried out to compare between those individuals who were diagnosed with the Corona virus and those who were not. Pearson correlation coefficient correlations (r) were computed for the psychological variables in the study to explore the bivariate relationships between these variables. Finally, a series of multiple regression models were tested on the psychological variables to determine the role of resilience as a predictor of these psychological variables after partialling out the effects of the demographic and Corona related variables from the equations.

Participants

More than 735 Kuwaiti adults, aged 18 and above, participated in an online survey using Twitter and other social media platforms to collect data. Information about the study was first presented and participants were required to indicate consent to participate in the study. Upon granting approval to participate in the survey, a link would take the participant to a website where the online survey is placed.

Ethical Approval

Approval for the study was obtained from the Ethics Committee at the Public Authority for Applied Education and Training.

Results

Sample Characteristics

The sample was collected a month after the partial quarantine was imposed in Kuwait during the months April through July 2020. Participants were aged 18-75 years ($M = 43.70$, $SD = 13.49$). Five hundred and sixty-nine were females, one hundred and thirty-nine were males, with one hundred and forty-eight being single, four hundred and ninety-eight being married, fifty-two were divorced, twenty-seven were widows, and ten were other. Regarding educational attainment, 28 participants were holding a high school degree, 105 a diploma, 463 a bachelor's degree, 89 a Master's degree, 55 a Ph.D. degree and six held with other qualifications.

Regarding Corona questions, 11 participants were subjected to institutional quarantine, 115 participants to home quarantine, and 609 were not subjected neither to institutional nor to home quarantine. Only 62 of the total number of participants worked on front line teams (e.g., medical sector, military sector, public security sector, firemen sector and the special forces sector). Forty-seven participants worked as volunteers for Covid-19 teams during Corona crisis, while the remaining 688 didn't.

Differences between Corona groups

In view of the first hypothesis in this study, which is about the differences in psychological anxiety, depression, and stress between the groups of Kuwaiti adults who were diagnosed with COVID-19 Corona virus and those who were not diagnosed with the virus, the first group was clearly much smaller in size than the second group. As a result, the number of individuals sampled from the first group was also smaller than that sampled from the second group. This disparity in the sample size between the two groups can occasionally violate the equality of variance assumptions that is required by the ordinary t-test when comparing samples from two groups. Fortunately, a modified version of the t-test was available to perform the test when the hypothesis of equal group variances was rejected. In Table 1, we list the results of these tests of significance for the two groups of individuals. These tests of significance show that only the stress variable was significantly different between the first and second group. For the other variables, no significant difference between the two groups was shown. In brief, the psychological effects of

the Corona pandemic crisis on Kuwaiti adults mostly increased stress but did not affect anxiety or depression levels.

Table 1.

T-test and modified t-test (when variances not equal) for the psychological variables between two groups

Psychological Variables	Group Variable	N	Mean	Std. Deviation	Std. Error Mean	t-test / modified t-test Value	Sig.
Resilience	Corona	126	70.968	12.798	1.14014	.862	.389
	No Corona	609	71.927	11.052	.44787		
Anxiety	Corona	126	6.230	4.354	.38794	1.932	.054
	No Corona	609	5.472	3.929	.15925		
Depression	Corona	126	5.555	3.956	.35251	.559	.576
	No Corona	609	5.361	3.461	.14026		
Stress	Corona	126	23.174	9.602	.85546	2.131	.033
	No Corona	609	21.472	7.831	.31736		

Descriptions for the Psychological Variables

Since the psychological variables are measured on a continuum, we need to check for their reliability, although the scales for these variables were shown in the literature to have high validity and reliability (see the questionnaire section). To this end, the values of Cronbach alpha coefficients for the variables of Resilience, Anxiety, Depression, and Stress in this study were computed and found to be, respectively, .88, .84, .76, .84. These values are large and confirm the reliability of the measures in this study and hence paves the way to proceed with the statistical analysis of the data.

Next, we use the original scores of the psychological variables to compute the Pearson correlation coefficients between pairs of the variables. These correlations are listed in Table 2. The table shows that all correlations are significant, and that resilience is correlated negatively with anxiety, depression, and stress. This implies that high levels of resilience are associated with low levels of depression, anxiety and stress, which confirms the second hypothesis in this study.

Table 2.

Pearson Correlations for Psychological Distress Variables

	Resilience	Anxiety	Depression	Stress
Resilience	1	-.42**	-.39**	-.53**
Anxiety	-.42**	1	.62**	.67**
Depression	-.39**	.62**	1	.59**
Stress	-.53**	.67**	.59**	1

Note: $N = 735$, * $P < .05$. ** $P < .01$.

Table 3.

Tests' Results of Two-sample T-test and ANOVA F-test Using the Scores of Three Psychological Variables and with Groups Defined by Categories of Each of Five Control Variables

	Gender	Social Status	Educational Level	Quarantine	Volunteering
Anxiety	$t = -.981$	$F = 3.055$	$F = .56$	$F = 2.146$	$t = -1.858$
	Df = 733	Df = (4,730)	Df = (5,730)	Df = (2,732)	Df = 733
	Sig. = .327	Sig. = .016*	Sig. = .731	Sig. = .118	Sig. = .064
Depression	$t = -1.99$	$F = .398$	$F = 2.507$	$F = .736$	$t = -1.682$
	Df = 733	Df = (4,730)	Df = (5,430)	Df = (2,732)	Df = 733
	Sig. = .047*	Sig. = .81	Sig. = .029*	Sig. = .479	Sig. = .093
Stress	$t = -1.767$	$F = 3.893$	$F = .517$	$F = 2.286$	$t = -1.622$
	Df = 733	Df = (4,730)	Df = (5,730)	Df = (2,732)	Df = 733
	Sig. = .078	Sig. = .004**	Sig. = .764	Sig. = .102	Sig. = .105

Note: * $P < .05$. ** $P < .01$.

Dependency of the Psychological Variables on Demographics

Prediction models in psychological research often include variables related to the characteristics of the sample such as demographic and environmental variables, although they are included in the model only as controls. In this study, four demographic variables (gender, social status, educational level and age) and three Corona related variables (Quar-

antine type, and Volunteering and Frontline status) were included in the study. All of these variables are categorical except for age which is considered continuous since the actual values of age (in years) were reported in the study. As a result, the dependencies of the psychological variables on these categorical variables are best assessed by the significance levels of the tests that compare them for different categories of the variables, where a test is either the two-sample t-test or the Anova F-test, depending on the number of categories in the variable. The results of these tests are listed in Table 3. The table shows that the psychological variables have only few significant correlations with the demographic variables and none with the Corona related variables.

Multiple Regression Models

In this final section we will consider the third hypothesis in the study and attempt to build predictive models for the psychological variables, anxiety, depression, and stress using variable resilience as a predictor since this variable is significantly correlated with the other variables (see Table 2 above). Moreover, past research had shown that variable resilience had a good predictability power for predicting the variables of anxiety, depression, and stress (Al Eid et al., 2020). To objectively assess the predicting power of a predictor, one needs to account for the variance contained in the control variables in the model. Accordingly, we need to account for all the demographic as well as Corona related variables in the model. To this end, we fit three models for each dependent variable (e.g., anxiety, depression, and stress). The first model fits the simple regression model that includes only variable resilience. The second model includes all the control variables (i.e., both demographic variables and Corona related variables) as predictors and hence assesses the significance of the variables of age, gender, social status, and educational level as well as the variables of quarantine, volunteering, and frontline. Since the variable of age is the only quantitative variable in this list, all the other variables enter the regression equation as dummy variables except for age. This ensures that the variance accounted for by these variables is due to their categories and not otherwise due to their arbitrary values.

The third model that will be considered here includes the variable of resilience as a predictor and includes all other variables in the model as controls. This means that the effects of these other variables are not of direct

interest to us, but they are included in the model so that their effects on the dependent variables are accounted for. Hence, by comparing these regressions with the corresponding regressions in Model 1, one can evaluate the role of the control variables and assess to what extent they improve the regressions.

The outputs from the three regression models just described are given, respectively, in Table 4, Models 1, 2 &3, for all the three dependent variables. To exemplify the interpretation of the outputs, consider the output from Model 2, which regresses a dependent variable on the control variables. The output indicates that, for dependent variable Anxiety, the regression is significant with F-value 4.444 and with degrees-of-freedom 15 and 719. Here, the only significant control variables in the model are Age and Volunteering. On the other hand, when Depression is regressed on the control variables, the regression is not significant and hence no variance in the control variables accounts for variance in the Depression. Moreover, by regressing Stress on the control variables, the regression is significant with F-value 5.751 and same degrees of freedom. In this case, the significant variables are Gender, Social Status, and Age without including the other control variables.

Table 4.

Regression Models to Predict Dependent Variables from Variable Resilience and/or Control Variables

Model 1. Simple regression to predict dependent variable from variable resilience				
Dependent Variable	F-value for Regression	Degrees of Freedom	R-Square	Significant Variables
Anxiety	155.99	1, 733	.175	Resilience
Depression	127.21	1, 733	.148	Resilience
Stress	287.042	1, 733	.281	Resilience
Model 2. Multiple regression to predict dependent variable from the control variables alone				
Dependent Variable	F-value for Regression	Degrees of Freedom	R-Square	Significant Variables
Anxiety	4.444	15, 719	.085	Age, Volunteering
Depression	1.401	15, 719	.028	None
Stress	5.751	15, 719	.107	Gender, Social Status, Age

Table 4.

Regression Models to Predict Dependent Variables from Variable Resilience and/or Control Variables

Model 3. Multiple regression to predict dependent variable from variable resilience and from the control variables				
Dependent Variable	F-value for Regression	Degrees of Freedom	R-Square	Significant Variables
Anxiety	13.176	16, 718	.227	Age, Resilience
Depression	9.618	16, 718	.177	Age, Resilience
Stress	24.168	16, 718	.350	Gender, Social Status, Age Resilience

The output from Model 1 shows that all three regressions are significant because the F-values for the three regressions are all very large. This implies variable resilience is a useful predictor of all three psychological variables, anxiety, depression, and stress although resilience explains only between 14.8%-28.1% of the variation in these variables. Now, if we compare these percentages to the corresponding percentages from Model 3, we notice only marginal improvements in the percentages of explaining variations in the dependent variables. We also notice these improvements correspond to different control variables for different cases of the Model 3, with variable age being common to all three cases. These results confirm the conclusions reported in the literature about the role of variable resilience in predicting the psychological distress. It also provides evidence that such relation between resilience and psychological distress is independent of sample characteristics such as demographics and environmental conditions.

Discussion

To the best of our knowledge this is the first study that investigated the association between psychological resilience and psychological problems during the Corona pandemic in Kuwait. The first aim of the current research was to assess the difference in psychological distress between Kuwaiti adults who have been diagnosed with the COVID-19 virus and those who have not. The findings partially supported the hypothesis that the first group would experience high levels of anxiety,

depression and stress during the Corona pandemic compared to the second group. The purpose of this study was also to examine the relationship between psychological resilience and distress (anxiety, depression and stress) in both groups of Kuwaiti citizens. The findings supported the hypothesis that both groups of Kuwaiti citizens who reported higher level of psychological resilience would also report lower level of anxiety, depression and stress. Further investigation was carried out to examine the role of psychological resilience on anxiety, depression, and stress. This finding supports the hypothesis and demonstrates that lower psychological resilience predicts anxiety, depression and stress.

Previous studies showed that the levels of anxiety, depression and stress were usually high among the population during crises such as SARS, Tsunami and the Corona pandemic (Albott et al., 2020; Badahdah et al., 2020). This contrasts with our current study in which only the level of stress was found to be significantly different between Kuwaitis who have been diagnosed with the Corona and those who haven't during the Corona pandemic. Therefore, the psychological effect of the Corona pandemic crisis on Kuwaiti adults mostly increased stress but did not affect anxiety or depression. Several possible explanations can be offered to explain why there is no difference between both groups on anxiety and depression symptoms during the Corona pandemic. One explanation is that community members may not be exposed to the risk of mental disorders such as anxiety and depression during the Corona pandemic, and therefore, the medical staff should be targeted in future studies because they might have a higher risk of developing anxiety and depression. According to Albott et al. (2020), medical staff has exposure to many stressful conditions such as suffering, death, and threats of catching Corona Virus which can lead to depression, anxiety, and sleep disorders (Albott et al., 2020).

Another explanation is that the government has offered Kuwaiti citizens a huge support during this crisis. For example, Jaber Hospital, which is the largest hospital in the Middle East, has provided Kuwaiti citizens with a high standard medical care, and Kuwait suspended study at schools and universities till the 4th of August 2021, and shifted education to e-learning. Kuwait brought home more than (50) thousand Kuwaiti citizens stranded abroad in Coronavirus-hit countries from 19 April to 7 May 2020 (Agency, 2020). Despite the interruption of work in

the public sector, Kuwaiti employees were paid their full salaries on a regular basis. These reasons may explain why there was no difference in anxiety and depression for both groups during this pandemic.

The present findings seem to be consistent with previous research, which found negative significant correlation between resilience and anxiety, depression, and stress (Al Eid et al., 2020; Brissette et al., 2020; Shin & Park, 2013). Moreover, the current study confirmed previous findings of Al Eid et al. (2020) and Hjemdal, Vogel, Solem, Hagen, and Stiles (2011) which found that resilience predicts anxiety, depression, and stress and contributes additional evidence that suggests psychological resilience is an important variable during the Corona Virus Pandemic. Further studies are needed to investigate the predictive factors of psychological resilience among a sample of Kuwaiti citizens. Therefore, future studies may benefit by studying other positive psychological factors such as social support and satisfaction of life and their relationship with resilience.

Considering the third research question, multiple regression analyses findings indicated that psychological resilience explained 14.8%-28.1% of the variance in anxiety, depression and stress. In particular, high levels of psychological resilience were predictive of lower anxiety, depression and stress. The present study demonstrates the importance of psychological resilience which can help an individual to better cope with anxiety, depression and stress and maintain well-being. These findings suggest that targeting psychological resilience interventions may lower anxiety and stress and enhance well-being. Resilience intervention equips individuals with the tools that they need to navigate their psychological problems and help them move on with life (Joyce et al., 2018). The previous systematic review has shown that resilience-training programs have a small to moderate impact on enhancing resilience and other mental health outcomes (Leppin et al., 2014). According to a recent systematic review, resilience programs based on a combination of cognitive behavioural therapy and mindfulness techniques tend to have a beneficial effect on individual resilience (Joyce et al., 2018)

The strength of the study resides in its being the first study to report that resilience plays a significant role against mental health problems (anxiety, depression, and stress) among the Kuwaiti population during the Corona pandemic. Secondly, the validity and reliability of all the

measures used in the present study with high reliability values Cronbach's Alpha between $\alpha = .79$ and $\alpha = .88$. Moreover, the sample size was large in the current research ($N = 735$).

The limitation of this study is a cross sectional study, thus, not establishing causality. A future study should consider examining resilience as a moderator between stress and well-being. According to a recent systematic review, resilience was shown to moderate the relation between levels of stress and well-being (Li & Hasson, 2020). The generalisability of these results is subject to certain limitations. For instance, the study focuses only on Kuwaiti citizens. Consequently, the results can only be generalized to the Kuwaiti citizens. The sample predominantly included females. A possible explanation for this might be that women are more vulnerable to mental disorders during the Corona pandemic (Maharlouei, 2020).

In conclusion, the present study was designed to examine the relationship between psychological resilience and psychological distress in Kuwaiti citizens during the Corona pandemic. The findings suggest that in general higher levels of psychological resilience were associated with lower levels of depression, anxiety, and stress. This information can be used to develop targeted psychological resilience interventions that could help people cope better with their mental health problems.

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