

## Stressful Life Events: Coping Strategies and their Relationship to Psychological Adjustment during the COVID -19 Pandemic

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### Abstract

**Objectives:** The aim of this study is to determine the level of stressful life events during the spread of the COVID-19 virus, as well as the strategies used to deal with these stressful events and the relationship between stressful life events and psychological adjustment.

**Methods:** A cross-sectional web-based observational study. A survey was carried out among Jordanian universities using random sampling. The validity and reliability of the study tools (Psychological Adjustment Scale, Coping Strategies with Stressful Life Events Scale, and Stressful Life Events Scale) were confirmed. 229 participants, with an average age of  $36.15 \pm 14.05$  years were selected to participate in this study.

**Results:** The findings revealed that the overall level of stressful life events was moderate. Political events were ranked first, followed by economic, emotional, health, social, and family events. The findings also indicated that the positive interaction strategy was one of the most widely used approaches to dealing with stressful life events. Most of the correlations between stressful life events and the degree of psychological adjustment were inverse correlations ( $r = -0.58, p = 0.01$ ).

**Conclusions:** The individual interacts globally using a positive interaction strategy when facing stressful life events to transform it from a source of fear into a source of success.

**Keywords:** COVID-19, stressful life events, coping strategies, psychological adjustment, psychological pressures.

### أحداث الحياة الضاغطة: استراتيجيات مواجهتها وعلاقتها بالتكيف النفسي خلال جائحة كوفيد-19

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#### ملخص

**الأهداف:** هدفت الدراسة إلى تحديد مستوى الأحداث الحياتية الضاغطة في أثناء انتشار فيروس COVID-19، وتحديد الاستراتيجيات المستخدمة لمواجهة هذه الأحداث الضاغطة، وتوضيح درجة العلاقة بين الأحداث الحياتية الضاغطة ومستوى التكيف النفسي لدى المشاركين في الدراسة.

**المنهجية:** دراسة رصدية مقطعية مستعرضة على شبكة الإنترنت، من خلال المعاينة العشوائية، جرى إجراء مسح بين الجامعات الأردنية بعد التحقق من صدق وثبات أدوات الدراسة، جرى تضمين ما مجموعه 229 مشاركاً بمتوسط عمر  $36.15 \pm 14.05$ .

**النتائج:** أظهرت نتائج الدراسة أن الدرجة الكلية للأحداث الحياتية الضاغطة جاءت بدرجة متوسطة؛ حيث جاءت الأحداث السياسية في المرتبة الأولى، تلتها الأحداث الاقتصادية، ثم الانفعالية، الصحية، الاجتماعية، وجاءت الأحداث الأسرية في المرتبة السادسة والأخيرة، وبدرجة متدنية، كما أظهرت النتائج أن أكثر الاستراتيجيات المستخدمة لمواجهة الأحداث الحياتية الضاغطة كانت استراتيجية التفاعل الإيجابي، أما بالنسبة للعلاقة الارتباطية بين الأحداث الحياتية الضاغطة ومستوى التكيف النفسي جاءت في معظمها علاقات ارتباطية عكسية وبلغت ( $r = -0.58, p = 0.01$ ).

**الخلاصة:** لوحظ أن الفرد يتفاعل عالمياً باستخدام استراتيجية التفاعل الإيجابي عند مواجهة أحداث الحياة الضاغطة وتحولها من مصدر خوف إلى مصدر نجاحات لتجاوز هذه الضغوطات المختلفة، وبالتالي رفع مستوى التكيف النفسي لديه.

**الكلمات الدالة:** كوفيد-19، جائحة كورونا، الأحداث الحياتية الضاغطة، استراتيجيات مواجهة الأحداث الحياتية الضاغطة، التكيف النفسي.

## Introduction

The effect of COVID-19 on the mental health of individuals is already highly concerning. The distress compounds social isolation, loss of family, and fear of contagion, resulting in loss of employment and income (World Health Organization. Coronavirus Disease (COVID-19) Pandemic, 2020). The Jordanian Ministry of Health and the Jordanian National Epidemic Committee, on January 26, 2020, placed strategies for managing the pandemic. The suggestions encompassed the design of different hospitals as treatment centers for prospective patients with established protocols and COVID-19 in preventing the exposure of the country's infectious disease even before the first case of COVID-19 was identified (Liu et al., 2012). Across the country, the Jordanian Ministry of Health followed the recommendations of the Epidemic Committee and opened five hospitals in different areas to treat patients with COVID-19.

The Ministry of Health equipped these hospitals with trained infectious disease medical staff and personal protective equipment such as gloves, face shields, disposable gowns, masks, and ventilators (Liu et al., 2012). Furthermore, all healthcare workers were advised by the Jordanian Ministry of Health to wear PPE and adopt quarantine policies. Due to its disproportionately higher mortality and morbidity rates in older age, the COVID-19 pandemic was considered a geopandemic (Wister & Speechley, 2020). On the contrary, extant studies have reported that older age was correlated with lower psychological distress concerning the COVID-19 pandemic and lockdown measures. Higher levels of depressive, stress, and anxiety-related symptoms were reported majorly among younger individuals, such as women, than older age (Barzilay et al., 2020; Rossi et al., 2020a; Rossi et al., 2020b). The increased physical susceptibility of the elderly to COVID-19 contrasts with the evidence that better psychological outcomes are correlated with older age. Older adults reveal slightly fewer COVID-19-associated uncertainties than younger adults (Kang & Jung, 2020; Barzilay et al., 2020). The previous study has also reported issues related to loneliness and isolation (Rossi et al., 2021).

According to the Centers for Disease Control (CDC), it becomes essential to identify stress symptoms led by the lockdown measures and the disease itself (Taylor et al., 2008). Previous studies have documented distressful psychological implications throughout occurrences of transmittable diseases, including equine influenza and severe acute respiratory syndrome (SARS) (Bai et al., 2004; Liu et al., 2012; Sprang & Silman, 2013; Taylor et al., 2008; Rith-Najarian, Boustani & Chorpita, 2019). According to the Centers for Disease Control and Prevention (2020), the epidemic's direct social and psychological effects are inevitable, and it is important to establish resilience and cope with such distressing outcomes of an epidemic. It is high time to investigate the impact of COVID-19 on the mental health of students and the pre-requisite for instant interventions (Grubic, Badovinac & Johri, 2020). The pandemic has disrupted the learning of more than one billion students in 129 countries globally (UNESCO, 2020). Most universities have switched to emergency remote teaching on online platforms globally, triggering anxiety among the students. Extant studies have reported on the effect of COVID-19 and lockdowns on college students and showed a substantial adverse impact on student's psychological well-being and high anxiety levels (Cao et al., 2020; Wang et al., 2020; Bao et al., 2020).

Similarly, the psychological effects of viral disease occurrences endure after the event, which impacts psychological well-being adversely and causes post-traumatic depression, and stress among healthcare workers, and stress (Zandifar & Badrfam, 2020; Zhang et al., 2020; Lazurus & Folkman, 1984). Healthcare workers deal with the traumatic experiences of patients and the unexpected loss of family, colleagues, and friends. Consequently, healthcare workers frequently reported psychological distress such as anxiety, stress, and depression (Weiller et al., 1998). A meta-analysis conducted by Batra et al. (2020) showed new evidence associated with COVID-19 effects on the psychological well-being of healthcare workers. Burnout, post-traumatic stress syndrome, insomnia, psychological distress, stress, depression, and anxiety are among the core factors determined as causal in psychological distress. The prevalence of higher depression and anxiety levels was reported among females compared to males and nurses compared to front-line workers and doctors (Hou et al., 2020).

## Literature Review

Similar to this study, extant literature has reported epidemics' adverse effects on students' psychological well-being, leading to acute anxiety and depression (Mosley et al., 1994; Aktekin et al., 2001). The psychological impact on Chinese university students was further reported by Cao et al. (2020) throughout the COVID-19 pandemic and witnessed anxiety as

the principal determinant among the psychological symptoms (21.3%). Moreover, 53.8% of the students from 194 Chinese cities documented severe to moderate psychological effects, with female students correlated with a more significant psychological impact. Previous studies have further reported that increased uncertainty and its suffering on students' academic progress could impact their psychological well-being (Bayram & Bilgel, 2008; Auerbach et al., 2016). Additionally, 34.19% of the participants showed moderate to extremely severe depression symptoms in a study conducted by Odriozola-González et al. (2020), investigating the psychological well-being among Spanish university students. The study also reported severe anxiety (21.34%) and stress symptoms (28.14%).

Family income stability, reduced social interactions, imposition of travel bans, increased number of new cases and affected provinces, and parents' psychological status were the other stressors (Peng et al., 2012; Gentili et al., 2020; Xiao et al., 2020; Tang et al., 2020). Quarantines or lockdowns are essential protective measures for physical health, but protracted impositions can be unfavorable. It is an intimidating experience that can cause extreme financial stress because of employment loss, mental health issues, social disorders, and financial stress (Reger, Stanley & Joiner, 2020; Thunström et al., 2020; Gardner & Moallem, 2015; Brooks et al., 2020). According to Hawryluck et al. (2004), quarantine was associated with high depression (31.2%) and anxiety rates (28.9%). Moreover, the 2009 H1N1 pandemic detects high anxiety but further documents aloneness, irritation, worsening anxiety, mental distress, and monotony (Wheaton et al., 2012; Xiang et al., 2020).

The instant psychological effects of national lockdowns integrated throughout the COVID-19 pandemic were examined in Western countries (Wang et al., 2020; Fernández et al., 2020; Solomou & Constantinidou, 2020). There lacks evidence concerning such strategies in Arab countries, including Jordan. The Jordanian government rapidly activated the National Defense Law and adopted an overall lockdown to prevent the disease from spreading and protecting the people of Jordan (Alqutob et al., 2020). Thereby, the Jordanian people were forced to implement new ways of living to deal with this crisis. It is essential to identify the initial psychological responses of the pandemic on the general population, which include the national lockdowns implemented globally based on these changes.

### ***Objectives***

This study determines the level of stressful life events during the spread of the COVID-19 virus and strategies to confront these stressful events. Further seeks to examine the relationship between stressful events and psychological adjustment in adults in the hope of helping them increase their psychological adaptation to alleviate the life and psychological pressures that may result from their inability to face the conditions imposed by the pandemic. The findings contribute to the recognition of some demographic attributes affecting psychological well-being among Jordanian citizens during the COVID-19 pandemic despite the preliminary nature of this study.

## **Material and Methods**

### ***Study Design***

This cross-sectional web-based observational study was conducted to determine the stressful life events during the COVID-19 pandemic and strategies to confront these stressful events. The participants had provided online consent. The anonymous survey was conducted among a random sample of the Jordanian population in universities, government, and private institutions, via social media platforms and emails two weeks after the beginning of the second wave of COVID-19. Inclusion was made for every person living in Jordan  $\geq 18$  years old. Ethics approval for this study was obtained from the deanship of scientific research and innovation and the deanship of Al-Shoubak University College. A total of 400 participants received online questionnaires out of those, only 229 questionnaires were received completely.

### ***Study Instrument***

A total of three instruments were used in this study. Details are presented below:

#### ***Stressful Life Events Scale (SLES)***

The SLES (Mustafa et al., 2014) is a self-report questionnaire that assesses stressful life events. The questionnaire consists of

54 items and distributed over six areas of stressful events are family (10 items), economic (7 items), social (8 paragraphs), health (10 items), emotional (11 items), and policies (8 items). All items were measured on a 5-point Likert scale (Strongly agree = 5, agree = 4, neutral = 3, disagree = 2, strongly disagree = 1). Cronbach Alpha was used to determine the internal consistency of the questionnaire, and the scale ranges from (0.73-0.88). The Cronbach coefficient for the overall scale was 0.93.

#### *Coping Strategies with Stressful Life Events Scale (CSSLES)*

The CSSLES (Al-Shaka'a, 2009) was used to assess the coping strategies employed by the participants to cope with stressful life events. The scale consisted of 30 items distributed over three strategies: positive interaction (13 items), negative interaction (7 items), and behavioral behaviors (10 items). The scale was measured on a three-point rating scale (fully applicable = 3, sometimes applicable = 2, do not apply = 1). The results showed saturation of the three strategies on one factor, accounting for 79.9% of the variation in the current study. The internal consistency of Cronbach's alpha coefficient for the areas of the scale ranged between (0.68 -0.80), which verified the authenticity of the correlation coefficients (0.33-0.76).

#### *Psychological Adjustment Scale (PAS)*

The PAS (Beni Ha Ni, 2019) was used to assess the psychological adjustment level. It consists of 40 items, distributed over four domains: personal, emotional, family, and social, with ten items for each. The scale was rated on a 5-point rating scale (always = 5), (often = 4), (sometimes = 3), (a little = 2), and (never = 1). The value of the internal consistency coefficient of Cronbach's Alpha for the scale was 0.91, and for the scale ranged between (0.86 -0.92), which verified the authenticity of the scale.

#### *Statistical Analysis*

The Statistical Package for Social Sciences (SPSS) version 25.0 was used to analyze the data. The characteristics of the sample were calculated through descriptive statistics, including arithmetic mean, standard deviation, and percentages. Mean  $\pm$  standard deviation (S.D.) was used to assess the level of stressful events, essential strategies, and the level of psychological adaptation of participants to such events.

Cronbach's Alpha was used to measure the internal consistency of the scales. Pearson Correlation was used to determine the correlation between variables.

#### **Results**

Twenty-nine participants were included with a mean age of  $36.15 \pm 14.05$  years (54% males and 46% females). The highest percentage of those with a university degree was 52%. The participants were distributed in all regions of Jordan. More than half of them were married (56.3%), and 43.7% were single (Table 1).

**Table 1. Participants' Characteristics (N = 229)**

<b>Age (years)</b>	<b>Mean <math>\pm</math> SD or n (%)</b>
	36.015 $\pm$ 14.05
<b>Gender</b>	
Male	124 (54%)
Female	105 (46%)
<b>Educational Level</b>	
Elementary and secondary	40 (17%)
Technical Diploma	71 (31%)
Bachelor's, Master and Doctorate	118 (52%)

Age (years)	Mean $\pm$ SD or <i>n</i> (%)
<b>Marital Status</b>	
Single	100 (43.7%)
Married	129 (56.3%)

Furthermore, stressful life events experienced by participants were political events ( $3.77 \pm 0.77$ ), followed by the second largest economic events ( $2.64 \pm 0.86$ ), emotional events ( $2.48 \pm 0.79$ ), health ( $2.40 \pm 0.81$ ), social ( $2.21 \pm 0.68$ ), and the family events ( $2.15 \pm 0.71$ ) (Table 2).

**Table 2. Level of stressful life events for the participants**

Events	Mean	SD	Rank	Degree
Family	2.15	0.71	6	Low Yeh
Economic	2.64	0.86	2	medium
Social	2.21	0.68	5	low
Health	2.40	0.81	4	medium
Emotional	2.48	0.79	3	medium
Political	3.77	0.77	1	big
Total	2.60	0.54		medium

The results of the current study also showed that the most used strategies to confront stressful life events were the positive interaction strategy ( $2.33 \pm 0.32$ ), followed by the behavioral aspects strategy ( $2.20 \pm 0.32$ ), and the negative interaction strategy ( $2.13 \pm$ ) (Table 3).

**Table 3. The degree of use of the face of the events of the compressor life strategies**

Coping strategies	Mean	SD	Rank	Degree
Positive interaction	2.33	0.32	1	Greater
Negative interaction	2.13	0.42	3	Medium
Behavioral aspects	2.20	0.32	2	Medium

The degree of psychological adjustment of the participants was as follows: emotional adjustment ( $3.91 \pm 0.56$ ), adaptation to my sense ( $3.81 \pm 0.56$ ), and social adjustment. The results of the current study show that the correlation coefficients between (personal adaptation), emotional adaptation, and social adaptation were negative and statistically significant with each of the stressful life events (family, social, health, emotional, total score). The correlation coefficients between family adjustment were negative and statistically significant with each stressful life event (family, economic, social, health, emotional, total degree) (Table 4).

**Table 4. Pearson's correlation coefficients between stressful life events and psychological adjustment**

	Family	Economic	Social	Health	Emotionality	Political	Total
Profile	-0.46**	-0.12	-0.48**	-0.51**	-0.67**	0.012	-0.56**
Emotional	-0.47**	-0.08	-0.54**	-0.43**	-0.55**	-0.04	-0.51**
Captive	-0.44**	-0.17**	0.46**	-.033**	-0.63**	-0.04	-0.56**
Social	-0.30	-0.008	-0.40**	-0.48**	-0.36**	-0.09	-0.32**
Total	-0.49**	-0.12	-0.55**	-0.52**	-0.65**	-0.024	-0.58**

## Discussion

The current study has revealed the level of stressful life events and the strategies used to confront these events, in addition, to revealing the size of the relationship between the level of life events and the degree of psychological adjustment among adults in Jordan. The study's results showed that the level of stressful life events came to a medium degree. This is because the time for the spread of COVID-19 has exceeded almost a year. Individuals began to live with the epidemiological circumstance, in addition to the emergence and adoption of several types of global vaccines for the COVID-19 virus. This is also reported by Perez-Arce et al. (2021) in their study that people vaccinated between December 2020 and March 2021 have decreased mental distress levels in the surveys conducted after receiving the first dose of the vaccines. Furthermore, the rapid development witnessed by contemporary life, the changes in society, the increase and diversity of life necessities, and many traumatic events affected the various segments of society.

It is noted from the results that the stressful life events came in succession: political, economic, social, health, social, and family, and the occurrence of political events, because Jordan is geographically located in a volatile region in the Middle East and is affected by what is happening in neighboring countries such as Syria, Iraq, and Palestine. Jordan is a small country of space with limited resources. It is affected by everything going on around him in the political area economically, as Jordan has a lot of refugees from neighboring counties (Singh, 2021). Moreover, Jordan has limited economic resources and depends on international aid and grants (Singh, 2021). The majority of the Jordanian population is either public sector employees or military institutions, so most of them have limited income, thereby increasing the economic burden on them, such as family expenses necessary and needs, teaching children in universities, health and medicine treatment requirements, and other financial obligations. It is also reported in UNDP Survey (2020) that 72.5% indicated struggling to manage necessities like rent, food, heating, and medicine since the lockdown; 63.3% were concerned about access to health care services, and 58.6% agreed that the pandemic and its measures would have a long term impact.

As for the advent of emotional, stressful life events, this can be explained by the reason for the political and economic events that the participants are going through, which makes them vulnerable to an increase in the level of emotional events, in addition to their fear and anxiety about the epidemiological situation in which they live, and the fear of infection with the virus, infection with it and thus the number of deaths and health life events ranked fourth, to a medium degree, and this can be explained by the passage of a whole year to the spread of the virus, and community members began to coexist with it, and use means to prevent infection and infection with the virus, and start to open the vital sectors that were closed due to the spread of the epidemic. To maintain normal daily life, the World Health Organization's adoption of a group of vaccines for the COVID-19 virus and the start of free vaccination campaigns in various regions of Jordan led to a decrease in the level of health pressures and the stressful social and family life events.

The results of a previous study indicated that stressful events strongly influenced psychological well-being based on economic, health, confidential, social, and political factors (Abu Mustafa, 2019). This is due to the different characteristics of the study sample, which included only university students who face pressure. It was noted that political events ranked last due to their preoccupation with studying and working to increase their academic achievement, preoccupation with curricular and extracurricular activities, and practicing their hobbies.

The current study also showed that the most frequently used coping strategies for stressful events were the positive interaction strategy, to a large extent, followed by the behavioral behavior strategy, and finally, in the third place, the negative interaction strategy. The researchers believe that the reason for the positive interaction strategy to get the first rank was due to the nature of the study sample. Most of them were married people and individuals with university qualifications, and these two categories of society were the most self-reliant. They enjoy high self-confidence, given their culture and awareness of the circumstances surrounding them, more than others than the rest of the community members (Abdul Salam, 2003). The positive interaction strategy is characterized by the ability to deal with a group of internal or external sources to which they are exposed in their daily lives, and they can control these sources without causing any adverse physical or psychological damage in their response while facing these stressful events.

The negative interaction shows that a good percentage of members cannot face the pressures of daily life, and they deal

with them weakly and negatively. This also indicates that a portion of the participants accept the position in their dealings with those events and are looking for alternative activities to keep them away from those only events and escape them. This finding agrees with the results of Abdullah (2018) and (Al-Shaka'a, 2009). This is due to the similarity of the samples of the two studies with the current research, as their samples were from the category of young adults, and they are similar in the same general and societal culture.

The study's results indicated a negative correlation between stressful life events and the participants' psychological adjustment levels. Moreover, some individuals fail to face the stressful events in a psychological adaptation to life (Maliki, 2013) and the epidemiological circumstances. COVID-19 pandemic resulted in habits and procedures that people were not accustomed to, such as social distancing, partial and comprehensive bans for days, sterilization methods, wearing masks, etc. All these aspects combined interact with each other, directly and indirectly affecting everything related to life and its quality, and thus the individual's ability to adapt to all.

It is noted from the results that there is no correlation between the different dimensions of psychological adaptation to stressful political events, and this is explained by the preoccupation of the members of society with meeting the most necessary needs (such as food, drink, clothing, education, and health) that ensure an easy life for family members. Brown (2004) confronted that the individual with different life conditions makes an intellectual effort or physical in response to the circumstances of stressful life events. The higher the psychological adaptation to these events, the results of a previous study (Gharaybeh & Tashtoush, 2016).

Several limitations in this study might be addressed in future research. Firstly, participants in this study were collected over the Internet, and most of the participants were highly educated and had access to the Internet easier to have others. It is recommended that future researchers collect data from various sources to verify this study's findings further. Moreover, psychological adjustment can be affected by many other factors such as anxiety, depression, and quality of life. These factors can act as potential mediators in the relationship between psychological adaptation and stressful life events, so multiple mediating models are recommended for future studies.

### **Conclusion**

In conclusion, it has been observed that individual interacts globally using appropriate coping methods and strategies in facing life pressures and transforming them from a source of fear. A source of success in overcoming these various pressures raises the psychological adjustment level. The more an individual can confront stressful life events successfully, the higher his level of psychological and appropriate adaptation in the face of the circumstances surrounding him.

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