

## Adverse Life Events and Family Distress During the Coronavirus Pandemic: A Field Study in Algeria

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أحداث الحياة السلبية والعبء الأسري خلال جائحة كورونا

دراسة ميدانية في الجزائر

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### Abstract

**O**bjective: The current study sought to assess what adverse life events were experienced by people living in Algeria during the coronavirus pandemic and the impact of these experiences on families. The country went into a first lockdown in March 2020 with a further significant increase in cases of coronavirus in November 2020. **Method:** N=123 were randomly recruited via the internet in November 2020 and completed two outcome measures assessing negative life events and family burden. **Results:** Among the most common events reported Participants reported a high frequency of adverse life events during the pandemic. Participants also perceived the impact of events as being like a 'moderate crisis' concerning the perceived burden placed on their families. also a relationship between the termination of the relationship with the partner and the loss of a close family member to his job and the family burden. **Conclusion:**

**Key words:** adverse life events, family burden, coronavirus pandemic, field study

**Declaration of interest:** None

### Introduction

A pandemic is a widespread infectious disease leading to mass physical illness and death across a wide geographical area with risk of major economic, social, and political unrest. Evidence suggests that the spread of pandemics has been more prolific over the last century due to the increase in travel, urbanization, and changes in land use. These patterns are likely to persist and will heighten. In December 2019, a viral outbreak in Wuhan, China is believed to have been the cause of a what is now known as the COVID-19, or the coronavirus.

It spread rapidly in Wuhan, then in various parts of China, within several weeks. Many Asian, European, North American and Oceania countries reported confirmed cases, with the total number worldwide rising rapidly to more than 5.35 million resulting in more than 343,000 deaths worldwide by 24 May 2020 the World Health Organization (WHO) announced in January 2020 that the new COVID-19 virus outbreak represented a public health emergency of international concern and warned of a the significant risk of COVID-19 spreading to other countries around the

world, which became reality by March 2020 after which time the WHO upgraded COVID-19 to pandemic status.<sup>2</sup>

The coronavirus pandemic is not merely a medical phenomenon. It affects individuals and society to the extent that it has led to unrest, anxiety, social tension, stigma, and xenophobia, among other responses. Individual behavior as a microcosm of society has significant influences on the pandemic dynamics that involve intensity, degree of flow and subsequent effects. The rapid human-to-human transmission of the coronavirus has led to regional restrictions to halt the spread of the disease, and isolation, social exclusion and closure of educational institutions, workplaces, and entertainment places. People all over the world have largely remained in their homes to help break the disease transmission chain. However, restrictive measures undoubtedly affect the social and mental health of individuals from all areas.<sup>2</sup> COVID-19 threatens not only people's health and lives, but also risks causing short- and long-term adverse psychological consequences. Early studies on the

psychological effects of COVID-19 suggest anxiety and depression,<sup>3,4,5</sup> and posttraumatic stress disorder (PTSD) will not be uncommon.<sup>6,7</sup> Prolonged deployment of COVID-19 is still a major psychological source of stress.<sup>8</sup>

In life, people will experience a range of positive milestones from high school graduation, job changes, marriage, and the birth of children. Adverse experiences, such as divorce, death of loved ones, ill health, and financial crisis are also equally life changing.<sup>9</sup> Such life events can predict psychological distress.<sup>10,11,12,13</sup> The coronavirus pandemic remains an ongoing problem for the world, such that it is increasingly seen as a traumatic life event characterized by an increase in stressful and negative experiences. This poses new and significant challenges, including major public health considerations that highlight the psychological burden for families.

In the shadow of the pandemic, which has engulfed the globe, there are many painful accounts of people managing their diagnosis of COVID-19 on their own without the presence of a family member. Patients who are admitted to ICU must leave behind their families in the emergency department and do not know if they will see each other again, and the closures and quarantine measures are taken in many countries which have also created risk, including within families. In short, the coronavirus has subjected many families and their mutual relations to significant and sometimes unprecedented pressures.<sup>14</sup> Family stress models indicate the pandemic can affect family functioning through adverse life events experienced by individual members who in turn directly affect the wider family. Indirect models may lead to indirect effects, which might reflect that the way parents respond to pressure extends to their relationships within the family, such as matters to do with family performance (e.g., marital relations and paternal behavior) that in turn affect child adaptation. Parental stress models extend indirect models to also indicate that the ways in which children manage stress can affect family systems, including by invoking paternal behaviors that shape family relationships, family conflict, and parental performance together. These models assume that the stress to which a family member is exposed affects the performance of the family system in general, which can influence the adaptation of each family member in turn.

Given the potential long-term effects associated with COVID-19, the impact of pressure can be magnified by the simultaneous direct effects on each family member as well as the family system and indirect effects on relationships and individuals within the family. In this way, pandemic pressure may reverberate within the family, creating cycles of disruption in family processes and relationships that affect individual performance and adaptation.<sup>15</sup> Daks et al.<sup>16</sup> found greater stress arising from COVID-19, greater disagreements having to do with marriage and family differences, less positive regard for education, greater distress between parents and children, and the results also indicated that stress caused by the coronavirus predicted more family conflicts and problems, which in turn predicted greater use of authoritarian parenting (inconsistent, aggressive), which in turn predicted greater restraint on the child and parents. According to Panchal et al.,<sup>17</sup> COVID-19 and the resulting economic recession have adversely affected mental health for many.

In a mid-July KFF Health Tracking survey, 53% of adults in the United States reported that their mental health had been negatively affected by anxiety and stress because of the coronavirus. Many adults also reported specific adverse effects on their mental health and well-being, such as difficulty sleeping (36%) and eating (32%), increases in alcohol consumption or drug use (12%), and worsening chronic conditions (12%). Due to anxiety and stress from the coronavirus, we have noted that isolation and a sense of unity during the pandemic may pose health and psychological risks to families with adolescents and elderly people. The proportion of older persons (65 years and older) who have reported negative effects on mental health has increased since March 2020. Survey data shows that women with children under 18 are likely to report significant negative effects on mental health compared with men.

Adverse life events can add to the burden on families. It can be argued that the coronavirus is an adverse event itself and, as such, may be linked to increased burden on families. The threat posed by the pandemic has risked increasing the symptoms associated with the family burden, and these events can cause great hardship to families, which can sometimes develop into a full-blown crisis. From this standpoint, the current study examined adverse life events during the coronavirus pandemic and their relationship to the family burden.

## Field Study

### Sample

The study sample consisted of 123 participants (77 men; 44 women) aged 18-60 years. A survey

questionnaire was distributed electronically. Table 1 represents the socio-demographic characteristics of the sample.

**Table 1.** Study sample characteristics

Variable	Percentage		
<b>Gender</b>	<b>Male</b>	Frequency	77
		Percentage	63.6
	<b>Female</b>	Frequency	44
		Percentage	36.4
<b>Age</b>	<b>18-23 years</b>	Frequency	30
		Percentage	24.8
	<b>24-30 years</b>	Frequency	41
		Percentage	33.9
	<b>31-40 years</b>	Frequency	27
		Percentage	22.3
	<b>41-50 years</b>	Frequency	19
		Percentage	15.7
	<b>51-60 years</b>	Frequency	4
		Percentage	3.3
<b>Civil status</b>	<b>Single</b>	Frequency	75
		Percentage	62.5
	<b>Married</b>	Frequency	41
		Percentage	34.2
	<b>Divorced</b>	Frequency	3
		Percentage	2.5
<b>Education Level</b>	<b>University</b>	Frequency	3
		Percentage	2.5
	<b>Masters'</b>	Frequency	56
		Percentage	46.7
	<b>PhD</b>	Frequency	22
		Percentage	18.3

### Study Tools

*Life Events Inventory*<sup>18</sup> is a self-report questionnaire that has been developed to assess the experiences of various negative life events. The scale is comprised of 18 questions ranging from receiving a rejection notification from a college or a university to the death

of a family member. Each statement yields either a “yes” or “no” response option. Cronbach’s alpha is acceptable at 0.89. In our study, the alpha coefficient was found to be 0.928 and the measured Omega value was 0.925.

**Perceived Family Distress Scale**<sup>19</sup> was originally designed to measure the family burden of autism-disrupting families. Respondents in the family's brief distress scale answer a 10-point scale by indicating the perceived level of crisis they and their families experienced. Answers range from non-stress to full crisis with four sets of crises making up the scale. Scores from 1 to 3 indicate "no burden" group or a normal level of perceived family distress. Scores from 4 to 5 indicate "moderate burden" while scores from 6 to 7 indicate "significant burden" or proximity to crisis and scores from 8 to 10 indicate crisis.

**Study Procedures**

N=123 respondents were recruited to the study in Algeria and provided an electronic questionnaire indicating the different categories of distress and life events. Results were analysed using SPSS to calculate the correlation coefficient between negative life events and the family burden during the pandemic.

**Results**

*Adverse life events during the coronavirus pandemic*

**Table 2.** Repetitions and percentages of negative life events during the coronavirus pandemic

Item numbers	Description of event	Experienced during pandemic?			
		Yes		No	
		Frequency	Percentage	Frequency	Percentage
1	Loss of my job	27	21.6	98	78.4
2	Loss of a job by a member of my immediate family	47	37.6	78	62.4
3	Personal life-threatening injuries due to auto accident or other accidents	32	25.6	93	74.4
4	Life-threatening injuries by a member of my immediate family due to auto accident or other accidents	36	28.8	89	71.2
5	Personal life-threatening illness	34	27.2	91	72.8
6	Life-threatening illness by a member of my family	53	42.4	72	57.6
7	Having to care for an elderly parent or family member	52	41.6	73	58.4
8	Ending of a relationship with a partner (boyfriend or girlfriend)	60	48.0	65	52.0
9	Marital separation or divorce	22	17.6	103	82.4
10	Rejection notice(s) from colleges or universities	31	24.8	94	75.2
11	Rejection notice(s) from employer(s) where I applied or interviewed	33	26.4	92	73.6
12	Losing your financial assets such as retirement savings	59	47.2	66	52.8
13	Losing your real-estate properties such as home	25	20.0	100	80.0
14	Death of a pet	36	28.8	89	71.2
15	Death of a co-worker	45	36.0	80	64.0
16	Death of a friend	41	32.8	84	67.2
17	Death of a family member	41	32.8	84	67.2

Table 2 demonstrates a significant percentage of people experiencing adverse life events during the coronavirus pandemic with 20% experiencing a high frequency of events. The most significant occurrences endorsed by participants involved the ending of a relationship with a partner (48%), the loss of financial assets such as retirement savings (47.2%), having a family member with a life-threatening illness (42.4%), having to care for an elderly parent or family member (41.6%), loss of a job by an immediate family member (37.6%), death of a co-worker (36%), and death of a

friend or family member (32.8%). The remainder of events listed were experienced by fewer than 30% of respondents.

*Family burden*

The perceived family stress scale has been applied to the study sample and repetitions and percentages have been used to determine the level of burden during the coronavirus pandemic (Table 3)

**Table 3.** Repetitions and percentages of family burden during the coronavirus pandemic

Crisis groups	Frequency	Percentage
Normal level of perceived family distress (responding 1 to 3)	82	65.6
Non-referred level of distress (responding 4 to 5)	19	15.2
Close to crisis (responding 6 to 7)	13	10.4
Crisis (responding 8 to 10)	11	8.8

Table 3 shows the majority (65.6%) believe that the pandemic is normal, (15.5%) describe being at the non-referred level and (10.4%) were close to crisis with a final 8.8% describing being in crisis.

*The relationship between negative life events and the family burden*

Pearson's correlation coefficient has been calculated for between adverse life events and family burden as (Table 4).

**Table 4.** Pearson's correlation coefficient between negative life events and family burden

Correlations	
Description of event	Perceived Family Distress
Loss of my job	0.011
<b>Loss of a job by a member of my immediate family</b>	<b>0.246**</b>
Personal life-threatening injuries due to auto accident or other accidents	0.096
Life-threatening injuries by a member of immediate family due to auto accident or other accidents	0.034
Personal life-threatening illness	0.060
Life-threatening illness by a member of the family	0.137
Having to care for an elderly parent or family member	0.070
<b>Ending of a relationship with a partner</b>	<b>255**</b>
Marital separation or divorce	-0.014

Rejection notice(s) from colleges or universities	0.083
Rejection notice(s) from employer(s) where I applied or interviewed	0.155
Losing your financial assets such as retirement savings	0.141
Losing your real-estate properties such as home	0.015
Death of a pet	-0.004
Death of a co-worker	0.005
Death of a friend	0.011
Death of a family member	-0.047

Table 4 describes only two adverse events of statistical significance relating to burdens experienced by participants, which are:

- Loss of a job by an immediate family member
- Ending of a relationship with a partner

### Discussion

The coronavirus pandemic has resulted in worldwide restrictions that have affected millions of people in ways that have impacted on psychological health and led to many adverse life events. According to the results of the current study, participants reported experiencing a range of life events during the pandemic, which may have long-term consequences regardless of their frequency and duration.

The current study assessed adverse life events of experienced by people living in Algeria during the coronavirus pandemic. According to the survey sample responses, the rate of negative life events was low compared with those who reported not experiencing any adverse events; however, results suggest a reasonable cause for concern even though few rated their experiences as being a crisis. There was a strong relationship between perceived family burden and the experience of having gone through adverse events during the pandemic, particularly as relates to job loss and the breakdown of an intimate relationship.

The ending of an intimate relationship during the pandemic, e.g., between boyfriend and girlfriend, was among the more frequently reported events and contributed to the family burden for many. Partners and friends are generally 'safe havens' who can ease loneliness and isolation and when such relationships

are strained or, indeed, end the burden to mitigate against such losses may fall to the family.

A key factor influencing family pressures during the coronavirus pandemic has been financial instability. Financial burden may contribute to domestic violence, which is an important consideration.<sup>21</sup> Job losses and the cessation of work or study during the pandemic were commonly reported sources of stress for participants. Loss of financial assets, such as reinvestment savings, was also a commonly reported problem, which is consistent with other findings.<sup>22</sup>

In the current study, having a close family member experience a life-threatening illness was also among the more notable events endorsed by participants. Poor health and the threat of illness can pose a burden on families, which may have been exacerbated by the inconsistent and often less restrictive measures that governments imposed on communities to ease the socio-economic pressures of lockdown e.g., partial quarantine, opening transportation inside cities, opening universities and schools. These approaches offered temporary reprieve for families that were otherwise forced to stay at home; however, also had consequences, including the further spreading of the virus within communities.

### Study limits

In terms of limitations, the survey was conducted via internet, which meant only people who were able to access it participated. This approach excludes those who do not have such access and, likely, limits the generalizability of the study to people from a higher socio-economic class within Algerian society.

## Conclusion

The current study surveyed a small cohort of people living in Algeria during coronavirus pandemic to understand the frequency of adverse events in their

lives and impact on family life. Participants reported having experienced a significant number of adverse life events during the pandemic with some rating it as

a moderate crisis in relation to perceived family burden. Among the most reported events to place a significant burden on families was the breakdown of intimate partner relationships and the death of a close family member. Despite its limitations, the current

study provides a preliminary indication of the magnitude of adverse events experienced during the coronavirus pandemic in Algeria. Future research should consider the impact of such events on mental health.

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## الملخص

هدفت الدراسة الحالية إلى الكشف عن أحداث الحياة السلبية خلال جائحة كورونا وعلاقتها بالعبء الأسري لدى عينة من المستجيبين في الجزائر. تم إجراء الدراسة على عينة مكونة من (123) فرداً من مختلف الفئات تم اختيارهم بطريقة عرضية، ولتحقيق أهداف الدراسة تم استخدام المنهج الوصفي بالاعتماد على أداتي قياس هما مقياس أحداث الحياة السلبية ومقياس العبء الأسري. أشارت النتائج إلى وجود مستوى معتبر من الأحداث السلبية خلال جائحة كورونا، كما توصلت إلى وجود أزمة معتدلة فيما يتعلق بالعبء الأسري، كما تم التوصل إلى وجود علاقة بين إنهاء العلاقة مع الشريك وفقدان أحد أفراد الأسرة المقربين لوظيفته والعبء الأسري.

**الكلمات المفتاحية:** أحداث الحياة السلبية، العبء الأسري، فيروس كورونا، الجائحة، دراسة ميدانية.

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