Quantifying the impact of COVID-19 on the individuals in the Kingdom of Saudi Arabia: A cross-sectional descriptive study of the posttraumatic growth

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This study seeks to explore the effect of the COVID-19 outbreak pandemic on the posttraumatic growth among Saudi individuals and also to assess the effect of demographic variables on the PTG. A descriptive design was applied to detect the level of PTG and to determine the differences in PTG due to demographic variables. A randomized sample consisting of 365 participants was chosen; the participants’ ages ranged between 20 and 60. The study sample was divided into subgroups according to demographic variables. The posttraumatic growth scale (PTG-21) applied online to the study sample. The results indicated that there were high levels of improved personal relationships, increased emotional strength and resilience, greater spiritual connection, and a heightened sense of gratitude toward life among Saudis, while there were low levels of the new opportunities and the total score of posttraumatic growth. The results also found that there are significant statistical differences in the PTG due to demographic variables except academic degree has not no effect in PTG. The findings highlighting the importance of the psychological service centers, to help who suffer from the negative effects of COVID-19 pandemic outbreak symptoms such as anxiety, depression, and obsessive compulsive.

KEYWORDS
COVID-19 pandemic, emotional strength, personal relationships, posttraumatic growth PTG, resilience, spiritual connection

1 INTRODUCTION AND THEORETICAL BACKGROUND REVIEW

The world is experiencing a healthy, political, and economic labor that humanity has never experienced before. Humanity today is facing a global pandemic that spread and swept the world in a few weeks and months. As the Corona virus is associated with SARS-CoV-2, its development then leads to acute respiratory distress syndrome, septic shock, and then death (WHO, 2020).

The international human rights law guarantees everyone the right to the highest attainable standard of health, and obliges states to take procedures to prevent a public health threat and to provide medical care to those who need it. Human rights law also recognizes that restrictions imposed on some rights, in the context of serious threats to public health and public emergencies that threaten the life of a nation, can be justified when they have a legal basis, and are absolutely necessary, based on scientific evidence, and their application is not arbitrary or discriminatory (Arnout, 2020).

1.1 Quarantine as stressor

There is no doubt that the experiences and trauma to which the individual is subjected to such as current COVID-19 crisis have its apparent and hidden repercussions and psychological consequences at the level of society and individuals. It is one of the crises and specific
shocks to which the individual was exposed, either because of a loss or injury that occurred to him or a member of his family, in addition to his fear and anxiety that he or his family would be infected with this epidemic. As well as, the compulsory precautions imposed on all members of society such as social divergence, home bans, and changes in an individual’s lifestyle, thoughts, feelings, behavior, social relationship, and physical condition.

Arnout et al. (2020) pointed out the stresses associated with the quarantine; if a person is not able to confront it with effective coping styles, it may lead him to fall into psychological problems, and perhaps mental illness. These quarantine stresses include:

1. Longer periods of quarantine were associated with symptoms of posttraumatic stress, reluctance, and anger.
2. Quarantined people feel fear for their health or have suffered fears of injuring others. Quarantined people get angry and bored during it, due to restrictions, daily routine loss, and lack of social and material contact with others.
3. Inappropriate basic supplies (such as food, water, clothing, or accommodation) during quarantine caused frustration and were associated with anger and anxiety from four to 6 months after quitting.
4. Obtaining inappropriate information, including clarity about the actions to be taken, the purpose of quarantine, and the different levels of risk, have proven to be stressful.

In general, quarantine is an unsatisfactory experience that can cause traumatic situations.

1.2 COVID-19 pandemic and posttraumatic growth

The term posttraumatic growth is a new research term closely related to positive psychology, which in turn aims to fully and effectively employ the individual’s possessions—regardless of the individual’s psychological health or the nature of the circumstances he is undergoing—of personal skills and abilities so that he does not reach. The individual only attends to mental health or transcends conditions and crises, but rather lies in the development of a life characterized by satisfaction, happiness, and achievement in a way that satisfies himself and achieves it, and that is beneficial to himself and others around him (Al-Sabwa, 2006).

The concept of PTSD refers to positive psychological growth and development in all aspects of personality. This concept was coined by “Richard Duchy,” pointed that traumatic events give individuals greater strength, create positive changes, and increase the ability to cope stress of life.

These bright aspects of trauma and the potential for positive psychological outcomes as a result of traumatic life experiences have led to more theoretical and experimental research to describe and address fundamental psychological changes and the establishment of scientific concepts such as posttraumatic growth, and several other titles related to the intended meaning such as stress-related growth, and perceived benefits, prosperity, and reverse the growth (Younis, 2018).

In the same context, researchers in positive psychology point out that trauma is not necessarily followed by a disturbance in the lives of individuals, because trauma can increase the psychological and spiritual resilience, agratitude, and a tendency to help others (Al-Smadi, 2019). This was also confirmed by Abu Aisha (2017) when he mentioned that positive psychology researchers consider that “posttraumatic growth” is the most common among individuals who have experienced trauma compared to posttraumatic stress disorder; they see that growth and prosperity for the individual are the basis.

In the same context, Tedesch and Calhoun (2004) indicate that individuals experience posttraumatic growth not only exceeding trauma and returning to what they were before the trauma, they are also reaching a higher level of self-management, psychological performance, and awareness of life. Also, Tedesch and Calhoun (2004) believe that a distinction should be made between posttraumatic growth and the concepts of resilience and psychological resilience; these concepts describe the characteristics and traits of an individual’s personality that help and qualify him to manage adversity and trauma and overcome them, while the concept of posttrauma growth includes a qualitative shift and change and a real change in performance. On the other hand, Wang et al. (2015) believe that the symptoms of posttraumatic stress are positively related to posttraumatic growth, which means that there are both positive and negative symptoms.

Al-Zour (2001) believed that one of the most important effective strategies for overcoming trauma is the individual’s spiritual relationship to GOD and the strength of his belief in him, as well as knowledge, education, support, and family and community solidarity. Whereas, Schroevers et al. (2010) mentioned that the characteristics of individuals who thrive and develop aftershocks are that the individual is social: the most vulnerable to posttraumatic growth are the social people who love to socialize with others, as others are able to provide social support and that in turn, it contributes to overcoming shocks and achieving the psychological balance of the individual. He also sees that being optimistic is one of the contributing factors in helping him to grow and prosper aftershocks, so searching for positive aspects of crises and shocks is itself a growth and shows the individual’s strengths that drive him to adaptation and then access to his mouth growth of posttraumatic stress.

Whereas Abu Al-Qasman (2016) indicated that training an individual to cope life is one of the characteristics that must be present in individuals in order to be able to grow and develop after the trauma, researchers argued that individuals who are keen to engage in and gain new experiences are among the most able to grow aftershocks, exposure to life situations, and experiences and perhaps problems that differ in degrees and severity, individuals gain psychological immunity and cumulative experiences that qualify the individual to
better deal with trauma. The physical level of individuals, especially when it is high, is one of the factors that helps to reduce the impact of the trauma and the ability of the individual to overcome it and then grow after it.

By reviewing theoretical literature on posttraumatic growth posttraumatic growth (PTG) and the impact of the COVID-19 pandemic as a traumatic event, we conclude that this traumatic event (COVID-19) may have a positive impact on individuals Until now psychological studies did not interest to investigate the PTG after COVID-19 pandemic.

2 | OBJECTIVE

Accordingly, this study seeks to reveal the level of posttrauma growth among members of the Saudi society for the two categories of youth and the elderly in the light of some demographic variables, and then reaching recommendations that help individuals in general, workers and practitioners in the mental health field in particular to training practices and programs not only to overcome the current crisis and adapt to it, rather, to prosperity, growth, and development at various levels of the individual's personality, which contributes to improving the individual’s mental health and quality of life to enjoy stability and psychological well-being. This study attempts to reveal the differences in posttraumatic growth among a sample of Saudi society during the COVID-19 pandemic, which is due to the variable of gender and age, economic level, social level, marital status, as well as differences between injured and non-COVID-19 in the PTSD variable.

3 | METHODOLOGY

3.1 | Population and sample

The population of this study includes all individuals residing in the Kingdom of Saudi Arabia. We chose a randomized sample consisting of 5611 (365) and their ages ranged between 20 and 60. They were divided into subgroups according to sex, social status, age, academic level, income level, and COVID-19 affected/not affected (see Tables 1–6).

3.2 | Tools

3.2.1 | Posttraumatic growth scale

The posttraumatic growth scale consisted of 21 items; it was prepared by Tedeschi and Calhoun (2004), which consist of five dimensions. The individual responds with a 5-point Likert scale (never = 1 to very much = 5). The validity and reliability of the scale were verified on a sample that consisted of 50 respondents. The results showed in Tables 7–9 indicate that the psychological problems or symptoms are validated and reliable.

From the results shown in Tables 7 and 8, we noticed that the PTG-21 scale items and dimensions are significantly related to the total score of the scale, that mean this scale is characterized by internal consistency.

The findings showed in Table 9 about the Cronbach's Alpha coefficients for the posttraumatic growth scale (PTG-21) scale indicated that the scale is reliable.

3.3 | Research design

After the outbreak of the COVID-19 pandemic among Saudis, a survey descriptive design was used in this study to detect the level of PTG and to determine the differences in PTG due to age, sex, social status, academic level, and income level. PTG-21 applied online to a random sample from Saudis 356 Saudis have responded to the scale and sent it back to the researchers.

3.4 | Data analysis

The data collected from the study sample (n = 365) were analyzed by using SPSS 25.0 and by calculating Mean, Standard Deviation, t test, and one-way ANOVA.

### TABLE 1 Distribution of the study sample according to sex

| Variable | Frequency | Percent | Valid percent | Cumulative percent |
|----------|-----------|---------|---------------|--------------------|
| Valid    |           |         |               |                    |
| Female   | 249       | 68.2    | 68.2          | 68.2               |
| Male     | 116       | 31.8    | 31.8          | 100.0              |
| Total    | 365       | 100.0   | 100.0         |                    |

### TABLE 2 Distribution of the study sample according to social status

| Variable | Frequency | Percent | Valid percent | Cumulative percent |
|----------|-----------|---------|---------------|--------------------|
| Valid    |           |         |               |                    |
| Unmarried| 91        | 24.9    | 24.9          | 24.9               |
| Married  | 248       | 67.9    | 67.9          | 92.9               |
| Widower  | 6         | 1.6     | 1.6           | 94.5               |
| Divorced | 20        | 5.5     | 5.5           | 100.0              |
| Total    | 365       | 100.0   | 100.0         |                    |
RESULTS

4.1 The results about posttraumatic growth PTG levels among total sample

To determine the level of PTG among the Saudi individuals, t-test value of one sample was calculated to detect the differences between the hypothetical mean and the mean scores of the individuals in PTG. The results are shown in Table 10.

The results shown in Table 10 indicate the lower levels of the total score of posttraumatic growth and the new opportunities among the study sample, while there were high levels in improved personal relationships, increased emotional strength and resilience, greater spiritual connection, and a heightened sense of gratitude toward life. The differences for one sample were statistically significant at the level 0.01.

4.2 The results about the differences in posttraumatic growth due to sex

The t test for independent samples were calculated to detect the difference between males and females in the PTG. The findings shown in Table 11.

From the results shown in Table 11, we note that there are significant statistical differences between males and females in post-traumatic growth in favor of females; they obtained high means in the PTG scale (total score and their dimensions).

4.3 The results about the differences in posttraumatic growth due to age

One-way ANOVA was calculated to detect the differences in the PTG due to age. The findings were shown in the Tables 12–14.

| Variable | Frequency | Percent | Valid percent | Cumulative percent |
|----------|-----------|---------|---------------|--------------------|
| Valid 20–30 year | 94 | 25.8 | 25.8 | 25.8 |
| 30–40 year | 141 | 38.6 | 38.6 | 64.4 |
| 40–50 year | 84 | 23.0 | 23.0 | 87.4 |
| 50–60 year | 46 | 12.6 | 12.6 | 100.0 |
| Total | 365 | 100.0 | 100.0 |

TABLE 3 Distribution of the study sample according to age

| Variable | Frequency | Percent | Valid percent | Cumulative percent |
|----------|-----------|---------|---------------|--------------------|
| Valid Middle school level | 40 | 11.0 | 11.0 | 11.0 |
| University education level | 262 | 71.8 | 71.8 | 82.7 |
| Master degree | 52 | 14.2 | 14.2 | 97.0 |
| PhD degree | 8 | 2.2 | 2.2 | 99.2 |
| Primary school level | 3 | 0.8 | 0.8 | 100.0 |
| Total | 365 | 100.0 | 100.0 |

TABLE 4 Distribution of the study sample according to academic degree

| Variable | Frequency | Percent | Valid percent | Cumulative percent |
|----------|-----------|---------|---------------|--------------------|
| Valid Less than 5000 SAR | 110 | 30.1 | 30.1 | 30.1 |
| Less than 10,000 SAR | 102 | 27.9 | 27.9 | 58.1 |
| Less than 20,000 SAR | 119 | 32.6 | 32.6 | 90.7 |
| Less than 30,000 SAR | 23 | 6.3 | 6.3 | 97.0 |
| More than 30,000 SAR | 11 | 3.0 | 3.0 | 100.0 |
| Total | 365 | 100.0 | 100.0 |

TABLE 5 Distribution of the study sample according to income level

| Variable | Frequency | Percent | Valid percent | Cumulative percent |
|----------|-----------|---------|---------------|--------------------|
| Valid Not affected by COVID-19 | 358 | 98.1 | 98.1 | 98.1 |
| COVID-19 affected | 7 | 1.9 | 1.9 | 100.0 |
| Total | 365 | 100.0 | 100.0 |
The results shown in Tables 12 and 13 indicated that there are significant statistical differences due to age in posttraumatic growth PTG (total score and all dimensions) except a heightened sense of gratitude toward life. To determine the direction of these differences, a Scheffe test was used (see results in Table 14).

As the results shown in Table 14, the differences in the total score of the posttraumatic growth, improved personal relationships, increased emotional strength and resilience, and greater spiritual connection in the favor of individuals belonging to the 50–60 year group, while the differences in the new opportunities and a heightened sense of gratitude toward life dimensions were in the favor of the 40–50 year group individuals.

### Table 7
Correlations between PTGS-21 items and the total scale

| Item | r     | Item | r     | Item | r     |
|------|-------|------|-------|------|-------|
| 1    | 0.772** | 8    | 0.761** | 15   | 0.299* |
| 2    | 0.751** | 9    | 0.733** | 16   | 0.714** |
| 3    | 0.674** | 10   | 0.700** | 17   | 0.641** |
| 4    | 0.610** | 11   | 0.750** | 18   | 0.627** |
| 5    | 0.740** | 12   | 0.788** | 19   | 0.675** |
| 6    | 0.843** | 13   | 0.728** | 20   | 0.756** |
| 7    | 0.642** | 14   | 0.826** | 21   | 0.723** |

*Correlation is significant at the 0.01 level (2-tailed).

### Table 8
Correlations between PTGS-21 dimensions and the total scale

| Dis1 | Dis2 | Dis3 | Dis4 | Dis5 | Total |
|------|------|------|------|------|-------|
| 1    | 0.688* | 0.630* | 0.467* | 0.681* | 0.853* |
| N    | 50   | 50   | 50   | 50   | 50   |
| 2    | 0.774* | 0.774* | 0.596* | 0.652* | 0.922* |
| N    | 50   | 50   | 50   | 50   | 50   |
| 3    | 0.774* | 0.774* | 1     | 0.596* | 0.852* |
| N    | 50   | 50   | 50   | 50   | 50   |
| 4    | 0.536* | 0.536* | 0.536* | 1     | 0.620* |
| N    | 50   | 50   | 50   | 50   | 50   |
| 5    | 0.652* | 0.652* | 0.588* | 0.620* | 0.818* |
| N    | 50   | 50   | 50   | 50   | 50   |
| Total| 0.853* | 0.922* | 0.852* | 0.680* | 1     |
| N    | 50   | 50   | 50   | 50   | 50   |

*Correlation is significant at the 0.01 level (2-tailed).

### Table 9
Cronbach's alpha coefficients for PTG-21 scale

| Dimensions | Alpha-Cronbach | Spearman-Brown coefficient | Guttman Split-half coefficient |
|------------|----------------|----------------------------|-------------------------------|
| Dis1       | 0.889          | 0.885                      | 0.838                         |
| Dis 2      | 0.910          | 0.895                      | 0.907                         |
| Dis 3      | 0.772          | 0.716                      | 0.743                         |
| Dis 4      | 0.849          | 0.849                      | 0.849                         |
| Dis 5      | 0.844          | 0.789                      | 0.887                         |
| Total score| 0.949          | 0.919                      | 0.924                         |
### TABLE 11: Differences between males and females in PTG

| Variables | Sex  | N   | M    | SD    | t    | Sig. (2-tailed) |
|-----------|------|-----|------|-------|------|-----------------|
| dis1      | Females | 249 | 14.8916 | 4.67581 | 2.545 | 0.011           |
|           | Males   | 116 | 13.5690 | 4.50550 |      |                 |
| dis2      | Females | 249 | 20.2369 | 6.73131 | 2.212 | 0.028           |
|           | Males   | 116 | 18.5172 | 7.29441 |      |                 |
| dis3      | Females | 249 | 13.6104 | 3.75414 | 2.741 | 0.006           |
|           | Males   | 116 | 12.3621 | 4.62770 |      |                 |
| dis4      | Females | 249 | 7.8635  | 1.99733 | 4.164 | 0.000           |
|           | Males   | 116 | 6.7845  | 2.85842 |      |                 |
| dis5      | Females | 249 | 10.8996 | 3.05625 | 5.061 | 0.000           |
|           | Males   | 116 | 9.0086  | 3.83688 |      |                 |
| Total     | Females | 249 | 67.5020 | 16.75659 | 3.599 | 0.000           |
|           | Males   | 116 | 60.2414 | 20.27018 |      |                 |

### TABLE 12: Descriptive

| Variable | 20–30 year | N   | M    | SD    | Std. error |
|----------|-------------|-----|------|-------|------------|
| dim1     |             | 94  | 14.4681 | 4.65983 | 0.48062    |
|          | 30–40 year  | 141 | 13.7730 | 4.66808 | 0.39312    |
|          | 40–50 year  | 84  | 15.2619 | 4.51268 | 0.49237    |
|          | 50–60 year  | 46  | 15.1739 | 4.69186 | 0.69178    |
|          | Total       | 365 | 14.4712 | 4.65719 | 0.24377    |
| dim2     |             | 94  | 19.4468 | 7.23435 | 0.74617    |
|          | 30–40 year  | 141 | 18.1702 | 6.85561 | 0.57735    |
|          | 40–50 year  | 84  | 21.2857 | 6.43704 | 0.70234    |
|          | 50–60 year  | 46  | 21.9348 | 6.54354 | 0.96479    |
|          | Total       | 365 | 19.6904 | 6.95156 | 0.36386    |
| dim3     |             | 94  | 12.9043 | 4.61197 | 0.47569    |
|          | 30–40 year  | 141 | 12.4610 | 3.97765 | 0.33498    |
|          | 40–50 year  | 84  | 14.3214 | 3.53693 | 0.38591    |
|          | 50–60 year  | 46  | 14.1304 | 3.70950 | 0.54694    |
|          | Total       | 365 | 13.2137 | 4.08741 | 0.21395    |
| dim4     |             | 94  | 6.7872  | 2.51393 | 0.25929    |
|          | 30–40 year  | 141 | 7.4326  | 2.39435 | 0.20164    |
|          | 40–50 year  | 84  | 8.0238  | 2.12260 | 0.23160    |
|          | 50–60 year  | 46  | 8.3696  | 1.83010 | 0.26983    |
|          | Total       | 365 | 7.5205  | 2.35637 | 0.12334    |
| dim5     |             | 94  | 10.3404 | 3.58177 | 0.36943    |
|          | 30–40 year  | 141 | 9.8794  | 3.42778 | 0.28867    |
|          | 40–50 year  | 84  | 10.7381 | 3.27134 | 0.35693    |
|          | 50–60 year  | 46  | 10.6957 | 3.39195 | 0.50012    |
|          | Total       | 365 | 10.2986 | 3.43401 | 0.17974    |
| total    |             | 94  | 63.9468 | 19.62244 | 2.02390    |
|          | 30–40 year  | 141 | 61.7163 | 17.70445 | 1.49098    |
|          | 40–50 year  | 84  | 69.6310 | 16.70133 | 1.82226    |
|          | 50–60 year  | 46  | 70.3043 | 17.32547 | 2.55450    |
|          | Total       | 365 | 65.1945 | 18.23663 | 0.95455    |
4.4 | The results about the differences in posttraumatic growth due to social status

One-way ANOVA was calculated to detect the differences in the PTG due to social status. The findings shown in Tables 15–17.

The results shown in Tables 15 and 16 indicated that there are significant statistical differences due to age in posttraumatic growth PTG (total score and all dimensions) except a heightened sense of gratitude toward life. To determine the direction of these differences, a Scheffe test was used (see results in Table 17).

The results shown in Table 17, indicated that there are differences in the total score of the posttraumatic growth, improved personal relationships, increased emotional strength and resilience, greater spiritual connection, and a heightened sense of gratitude toward life dimensions were in the favor of the widower individuals.

4.5 | The results about the differences in posttraumatic growth due to academic degree

One-way ANOVA was calculated to detect the differences in the PTG due to academic degree. The findings were shown in Tables 18–20.

The results shown in Tables 18 and 19 indicated that there are no significant statistical differences due to an academic degree in posttraumatic growth PTG (total score and all dimensions).

4.6 | The results about the differences in posttraumatic growth due to income level

One-way ANOVA was calculated to detect the differences in the PTG due to income level. The findings were shown in Tables 20–22.

The results shown in Tables 20 and 21 indicated that there are significant statistical differences due to income level in posttraumatic growth PTG (total score and all dimensions) except new opportunities. To determine the direction of these differences, a Scheffe test was used (see results in Table 22).

As the results shown in Table 22, the differences in the total score of the posttraumatic growth, improved personal relationships, increased emotional strength and resilience and a heightened sense of gratitude toward life dimensions in the favor of the individuals with monthly income (less than 20,000 SAR) group, while the differences in the change in spirituality dimensions were in favor of individual with the monthly income less than 10,000 SAR group.

5 | DISCUSSION

5.1 | Posttraumatic growth level

The findings of this study indicated that the total score of posttraumatic growth due to the outbreak of COVID-19 pandemic were low among the Saudi individuals, while the levels of improved personal relationships, increased emotional strength and resilience, greatest spiritual connection and a heightened sense of gratitude
| Dependent variable | (l) Age | (J) Age | Mean difference (l-J) | Std. error | Sig. | 95% confidence interval | Lower bound | Upper bound |
|--------------------|---------|---------|-----------------------|------------|------|-------------------------|-------------|-------------|
|                    |         |         |                       |            |      |                         |             |             |
| dim1               | 20–30 year | 30–40 year | 0.69504 | 0.61700 | 0.737 | -1.0379-2.4280 | -2.4280 | 1.1602 |
|                    | 20–30 year | 40–50 year | -0.79382 | 0.69572 | 0.729 | -2.7479-1.1602 | -2.7479 | 1.1602 |
|                    | 20–30 year | 50–60 year | -0.70583 | 0.63866 | 0.869 | -3.0477-1.0379 | -3.0477 | 1.0379 |
|                    | 30–40 year | 40–50 year | -1.48886 | 0.78679 | 0.368 | -3.2827-0.3050 | -3.2827 | 0.3050 |
|                    | 30–40 year | 50–60 year | -0.70583 | 0.78679 | 0.869 | -3.6107-1.0379 | -3.6107 | 1.0379 |
|                    | 40–50 year | 20–30 year | 0.79382 | 0.69572 | 0.729 | -1.1602-2.7479 | -1.1602 | 2.7479 |
|                    | 40–50 year | 30–40 year | 1.48886 | 0.63866 | 0.145 | -0.3050-3.2827 | -0.3050 | 3.2827 |
|                    | 40–50 year | 50–60 year | 0.08799 | 0.84992 | 1.000 | -2.2992-2.4752 | -2.2992 | 2.4752 |
|                    | 50–60 year | 20–30 year | 0.70583 | 0.83377 | 0.869 | -1.3630-3.0477 | -1.3630 | 3.0477 |
|                    | 50–60 year | 30–40 year | 1.40086 | 0.78679 | 0.368 | -0.8090-3.6107 | -0.8090 | 3.6107 |
|                    | 50–60 year | 40–50 year | -0.08799 | 0.84992 | 1.000 | -2.4752-2.2992 | -2.4752 | 2.2992 |
| dim2               | 20–30 year | 30–40 year | 1.27660 | 0.90872 | 0.578 | -1.2757-3.8289 | -1.2757 | 3.8289 |
|                    | 20–30 year | 40–50 year | -1.83891 | 1.22798 | 0.252 | -5.9370-0.9611 | -5.9370 | 0.9611 |
|                    | 20–30 year | 50–60 year | -1.27660 | 0.90872 | 0.578 | -3.8289-1.2757 | -3.8289 | 1.2757 |
|                    | 30–40 year | 40–50 year | -3.11550 | 0.94062 | 0.013 | -5.7574-0.4736 | -5.7574 | 0.4736 |
|                    | 30–40 year | 50–60 year | -3.76457 | 1.15878 | 0.015 | -7.0193-0.5099 | -7.0193 | 0.5099 |
|                    | 40–50 year | 20–30 year | 1.83891 | 1.02465 | 0.360 | -1.0391-4.7169 | -1.0391 | 4.7169 |
|                    | 40–50 year | 30–40 year | 3.11550 | 1.25177 | 0.013 | 0.4736-5.7574 | 0.4736 | 5.7574 |
|                    | 40–50 year | 50–60 year | -0.64907 | 1.25177 | 0.966 | -2.8668-4.1649 | -2.8668 | 4.1649 |
| dim3               | 20–30 year | 30–40 year | 0.44326 | 0.53606 | 0.877 | -1.0624-1.9489 | -1.0624 | 1.9489 |
|                    | 20–30 year | 40–50 year | -1.41717 | 0.60445 | 0.141 | -3.1149-0.2805 | -3.1149 | 0.2805 |
|                    | 20–30 year | 50–60 year | -2.48797 | 1.22798 | 0.252 | -5.9370-0.9611 | -5.9370 | 0.9611 |
|                    | 30–40 year | 40–50 year | -3.11550 | 0.94062 | 0.013 | -5.7574-0.4736 | -5.7574 | 0.4736 |
|                    | 30–40 year | 50–60 year | -3.76457 | 1.15878 | 0.015 | -7.0193-0.5099 | -7.0193 | 0.5099 |
|                    | 40–50 year | 20–30 year | 1.41717 | 1.02465 | 0.360 | -0.2805-4.1649 | -0.2805 | 4.1649 |
|                    | 40–50 year | 30–40 year | 1.86044 | 1.25177 | 0.013 | 0.2805-5.7574 | 0.2805 | 5.7574 |
|                    | 50–60 year | 20–30 year | 1.22618 | 0.73842 | 0.995 | -0.2505-3.5894 | -0.2505 | 3.5894 |
|                    | 50–60 year | 30–40 year | 1.66944 | 0.68357 | 0.115 | -0.2505-3.5894 | -0.2505 | 3.5894 |
|                    | 50–60 year | 40–50 year | -0.19099 | 0.73842 | 0.995 | -2.2650-1.8830 | -2.2650 | 1.8830 |
| dim4               | 20–30 year | 30–40 year | -0.64539 | 0.30669 | 0.221 | -1.5068-0.2160 | -1.5068 | 0.2160 |
|                    | 20–30 year | 40–50 year | -1.23658 | 0.34581 | 0.006 | -2.2079-0.2653 | -2.2079 | 0.2653 |
|                    | 20–30 year | 50–60 year | -1.58233 | 0.41443 | 0.003 | -2.7464-0.4183 | -2.7464 | 0.4183 |
|                    | 30–40 year | 40–50 year | -0.59119 | 0.31745 | 0.326 | -1.4828-0.3004 | -1.4828 | 0.3004 |
|                    | 30–40 year | 50–60 year | -0.93694 | 0.39108 | 0.127 | -2.0354-0.1615 | -2.0354 | 0.1615 |
|                    | 40–50 year | 20–30 year | 1.23658 | 0.34581 | 0.006 | 0.2653-2.2079 | 0.2653 | 2.2079 |
|                    | 40–50 year | 30–40 year | 0.59119 | 0.31745 | 0.326 | -0.3004-1.4828 | -0.3004 | 1.4828 |
|                    | 50–60 year | 20–30 year | -0.34576 | 0.42246 | 0.880 | -1.5323-0.8408 | -1.5323 | 0.8408 |
toward life were high. Tedesch and Calhoun (2004) mentioned that there is a disparity in psychological reactions among individuals, especially in such situations and trauma.

Painful experiences and trauma can cause negative impacts for some, such as anxiety, depression, and sadness. Arnout et al. (2020) and Arnout et al. (2020) emphasized that as a result of the multiple stresses imposed by the escalating outbreak of the Corona epidemic, from increasing physical, social, professional, and spiritual stresses, all members of the study, regardless of gender, nationality, level of learning, marital status, and age, have high levels of psychological problems following the outbreak of the COVID-19. Abu Aisha (2017) and Al-Smadi (2019) point out that trauma is not necessarily followed by a disturbance; it may lead to psychologically and spiritually flourishment.

According to what Tedeschi and McNally (2011) point out, the newer and developed trauma model has revealed the role of many other variables in increasing the potential for growth and psychological prosperity after trauma. The most prominent of these variables is to control the fears associated with traumatic events, cognitive therapy, rumination, the social and cultural context in which trauma occurs, the method and conditions in which therapy is carried out. In addition, Abdul-Basit (2008) points out the importance of social environment characteristics and their vital and effective role in the psychological development of the individual. The mental health of the Saudi individual today is a priority of attention and efforts by the state and its various institutions. The quality of one’s life is one of the main pillars of the Kingdom’s 2030 vision. Based on an ambitious homeland, a prosperous economy, and a vibrant community, the quality-of-life program is one of the core programs to achieve this vision. This is through improving the living standards of the members of society and their lifestyles and empowering its groups to enjoy a stable and balanced life.

### Table 14 (Continued)

| Dependent variable | (I) Age | (J) Age | Mean difference (I-J) | Std. error | Sig. | 95% confidence interval |
|--------------------|---------|---------|-----------------------|------------|------|-------------------------|
|                    |         |         |                       |            |      | Lower bound       Upper bound |
| dim5               | 20–30 year | 30–40 year | 0.46099               | 0.45656    | 0.797 | -0.8124–2- 1.7433 |
|                    | 40–50 year | 50–60 year | -0.35523               | 0.61696    | 0.954 | -2.0881–1- 1.3776 |
|                    | 30–40 year | 20–30 year | -0.46099               | 0.45656    | 0.797 | -1.7433–2- 0.8214 |
|                    | 40–50 year | 50–60 year | -0.85866               | 0.47258    | 0.349 | -2.1860–2- 0.4867 |
|                    | 50–60 year | 20–30 year | -0.81622               | 0.58219    | 0.580 | -2.4514–2- 0.8190 |
|                    | 30–40 year | 40–50 year | 0.39767               | 0.51480    | 0.897 | -1.0483–2- 1.8436 |
|                    | 40–50 year | 50–60 year | -0.04244               | 0.62891    | 1.000 | -1.7240–2- 1.8089 |
|                    | 50–60 year | 20–30 year | 0.35523               | 0.61696    | 0.954 | -1.3776–2- 2.0881 |
|                    | 30–40 year | 40–50 year | -0.46099               | 0.45656    | 0.797 | -1.7433–2- 0.8214 |
|                    | 40–50 year | 50–60 year | -0.85866               | 0.47258    | 0.349 | -2.1860–2- 0.4867 |
|                    | 50–60 year | 20–30 year | -0.35523               | 0.61696    | 0.954 | -2.0881–1- 1.3776 |
|                    | 30–40 year | 40–50 year | 0.39767               | 0.51480    | 0.897 | -1.0483–2- 1.8436 |
|                    | 40–50 year | 50–60 year | -0.04244               | 0.62891    | 1.000 | -1.7240–2- 1.8089 |
|        total        | 20–30 year | 30–40 year | 2.23050               | 2.39051    | 0.832 | -4.4838–8- 9.4448 |
|                    | 40–50 year | 50–60 year | -5.68414               | 2.69549    | 0.219 | -13.2550–8- 1.867 |
|                    | 30–40 year | 20–30 year | -6.35754               | 3.23037    | 0.277 | -15.4307–2- 2.7157 |
|                    | 40–50 year | 50–60 year | -7.91464               | 2.47442    | 0.018 | -14.8646–2- 0.9674 |
|                    | 50–60 year | 20–30 year | -8.58804               | 3.04834    | 0.049 | -17.1500–2- 0.0261 |
|                    | 30–40 year | 40–50 year | 5.68414               | 2.69549    | 0.219 | -1.8867–13- 1.2550 |
|                    | 40–50 year | 50–60 year | -7.91464               | 2.47442    | 0.018 | 0.9647–14- 8.6464 |
|                    | 50–60 year | 20–30 year | -6.7340               | 3.29294    | 0.998 | -9.9223–8- 5.7567 |
|                    | 30–40 year | 40–50 year | 8.58804               | 3.04834    | 0.049 | 0.0261–17- 1.5000 |
|                    | 40–50 year | 50–60 year | 0.67340               | 3.29294    | 0.998 | -8.5756–9- 2.9223 |

*aThe mean difference is significant at the 0.05 level.
Also included in this model is the relationship of the concept of posttraumatic growth with satisfaction with life and a sense of its meaning as well as wisdom. This in turn is related to the spiritual aspect of individuals, their religious beliefs, and their cultural and social references, according to what Davey et al. (2015) indicated. The Saudi personality is distinguished by high spiritual and religious aspects, as the practice and religious rituals are a pillar and a central part of the individual's daily activities, in addition to the religious instructions they receive. Among the most important religious symbols is the necessity of steadfastness, patience, calculating remuneration, optimism, good thinking in God, trust in him, contentment, and acceptance of his judgment in all the different events, trauma, and life experiences they face. This was confirmed by Abdul-Basit (2008) in that the growth, prosperity, and mental health are linked to the culture of society and its religious orientation as beliefs, behavioral patterns, and cultures that have the attribute of persistence and permanence in religious societies to eventually form the pillars of knowledge structures of the individual and the group; consequently, these are important factors and have an effective role in bringing about positive changes for members of society. This may explain the high level of dimensions of the concept of posttrauma growth for members of Saudi society.

We also see that the nature of the age and its speed and ease of access to information and psychological services, especially when we are in the age of globalization and the explosion of knowledge, had the greatest impact on the high level of individuals in all its segments and their different levels and educational qualifications. This result is consistent with the findings of Al-Abassadah and Abu Yousef (2015), Abu Al-Qasman (2016), and Abu Aisha (2017) that indicated that there were no differences in the level of posttraumatic growth according to the educational level or an academic degree variable.

According to McMillen et al. (1996), the individuals who invest in disasters and shocks can get rid of the distress of posttraumatic stress,

| Variable | $N$ | $M$ | $SD$ | Std. error |
|----------|-----|-----|------|------------|
| Married  | 248 | 14.3710 | 4.59795 | 0.29197 |
| Widower  | 6   | 15.3333 | 6.88961 | 2.81267 |
| Divorced | 20  | 18.0000 | 4.46507 | 0.99842 |
| Total    | 365 | 14.4712 | 4.65719 | 0.24377 |
| dim2     |     |       |      |            |
| Unmarried| 91  | 17.8901 | 6.67907 | 0.70016 |
| Married  | 248 | 19.8911 | 6.84533 | 0.43468 |
| Widower  | 6   | 22.5000 | 8.66603 | 3.53789 |
| Divorced | 20  | 24.5500 | 6.49271 | 1.45181 |
| Total    | 365 | 19.6904 | 6.95156 | 0.36386 |
| dim3     |     |       |      |            |
| Unmarried| 91  | 12.1319 | 4.46520 | 0.46808 |
| Married  | 248 | 13.3024 | 3.86006 | 0.24511 |
| Widower  | 6   | 17.0000 | 3.16228 | 1.29099 |
| Divorced | 20  | 15.9000 | 3.38573 | 0.75707 |
| Total    | 365 | 13.2137 | 4.08741 | 0.21395 |
| dim4     |     |       |      |            |
| Unmarried| 91  | 6.6374  | 2.57560 | 0.27000 |
| Married  | 248 | 7.7419  | 2.23651 | 0.14202 |
| Widower  | 6   | 9.5000  | 0.54772 | 0.22361 |
| Divorced | 20  | 8.2000  | 1.93581 | 0.43286 |
| Total    | 365 | 7.5205  | 2.35637 | 0.12334 |
| dim5     |     |       |      |            |
| Unmarried| 91  | 9.2088  | 3.62558 | 0.38006 |
| Married  | 248 | 10.5444 | 3.36420 | 0.21363 |
| Widower  | 6   | 12.3333 | 1.75119 | 0.71492 |
| Divorced | 20  | 11.6000 | 2.47939 | 0.55441 |
| Total    | 365 | 10.2986 | 3.43401 | 0.17974 |
| total    |     |       |      |            |
| Unmarried| 91  | 59.6923 | 18.39063| 1.92786 |
| Married  | 248 | 65.8508 | 17.57131| 1.11578 |
| Widower  | 6   | 76.6667 | 18.06285| 7.37413 |
| Divorced | 20  | 78.6500 | 16.94038| 3.78798 |
| Total    | 365 | 65.1945 | 18.23663| 0.95455 |

TABLE 15 Descriptive
then it fades with time and this in turn is due to the personality traits of the individual before the crises and sudden shocks, which he formed through formation during the previous stages of his life, which makes them able to adapt to the challenges of life and benefit from their experiences and achieve personal growth, while those who do not invest in and benefit from shocks, the distress of posttraumatic stress continues with them, perhaps for many years (referred in Shaaban, 2013).

This is confirmed by Murph et al. (2015) who state that individuals seek to search for new experiences and the desire to engage in them, and to practice activities that produce positive results is a contributing factor to their growth after trauma; therefore individuals who develop postrauma are individuals who enjoy a good amount of self-motivation toward life and its experiences. While the results of Zhang et al. (2015) referred to in Younis (2018) concluded that the most important dimensions of trauma growth are: communication with others, personal strength, a new style and philosophy in life and appreciation of it, and finally spiritual elevation. Perhaps it is appropriate here to point out that 70% of individuals are exposed to at least one trauma in their lives, and that most traumatic events do not yet form distress posttraumatic stress, the average of those who suffer from posttraumatic stress disorder is (4%) and in a subsequent study (5.6%), and this percentage does not seem large compared to the percentage of those expected to survive mental disorders.

This study results indicated that the Saudi society’s awareness of the stresses of COVID-19 pandemic outbreak was less. Likewise, the spirituality enjoyed by the Saudi personality, resorting to God through prayer and supplication in crises, psychological resilience, and hardness in the face of adversity, also reduced the influence of the COVID-19 pandemic outbreak. Arnout (2004, 2019), Arnout & Almoied (2020), and Arnout and Abelmotelab (2020) found that the spirituality and resilience moderate the negative effects of the stresses on the mental health components.

The high levels in the dimensions of the postrauma growth scale, except for the first dimension and the total score of the PTG scale, are due to the procedures that the Kingdom of Saudi Arabia take such as the financial, health, and societal supports for the community members, and what they have implemented in terms of home quarantine procedures have alleviated feelings of anxiety and fears of affection with COVID-19.

### TABLE 16 ANOVA

|       | Sum of squares | df | Mean square | F     | Sig. |
|-------|---------------|----|-------------|-------|------|
| dim1  | Between groups | 353.757 | 3 | 117.919 | 5.645 | 0.001 |
|       | Within groups  | 7541.191 | 361 | 20.890 |       |      |
|       | Total          | 7894.948 | 364 |       |       |      |
| dim2  | Between groups | 824.605 | 3 | 274.868 | 5.919 | 0.001 |
|       | Within groups  | 16765.412 | 361 | 46.442 |       |      |
|       | Total          | 17590.016 | 364 |       |       |      |
| dim3  | Between groups | 338.795 | 3 | 112.932 | 7.099 | 0.000 |
|       | Within groups  | 5742.536 | 361 | 15.907 |       |      |
|       | Total          | 6081.332 | 364 |       |       |      |
| dim4  | Between groups | 115.879 | 3 | 38.626 | 7.319 | 0.000 |
|       | Within groups  | 1905.217 | 361 | 5.278 |       |      |
|       | Total          | 2021.096 | 364 |       |       |      |
| dim5  | Between groups | 181.771 | 3 | 60.590 | 5.321 | 0.001 |
|       | Within groups  | 4110.678 | 361 | 11.387 |       |      |
|       | Total          | 4292.449 | 364 |       |       |      |
| total | Between groups | 7272.441 | 3 | 2424.147 | 7.691 | 0.000 |
|       | Within groups  | 113784.748 | 361 | 315.193 |       |      |
|       | Total          | 121057.189 | 364 |       |       |      |

5.2 | The differences in PTG according to demographic variables

5.2.1 | Sex

The results of this study revealed that there are significant statistical differences between males and females in PTG, the differences were in favor of females. These differences may resulting from the psychological nature of the woman and their contemplative thinking. Afaneh & Lulu (2002) indicated that female superiority over the male in the level of thinking meditative, which in turn is an effective contributor to the high level of satisfaction with life. Al-Sufyani (2017) found a positive correlation between life satisfaction and the ability to think contemplatively because the practice of contemplative thinking has an effective positive
### TABLE 17  The results of Scheffe test for the differences in PTG due to social status

| Dependent variable | (I) Social status | (J) Social status | Mean difference (I-J) | Std. error | Sig. | 95% confidence interval | Lower bound | Upper bound |
|--------------------|-------------------|-------------------|-----------------------|------------|------|-------------------------|-------------|-------------|
| dim1               | Unmarried         | Married           | -0.54679              | 0.56017    | 0.813 | -2.1202-1.0266          |             |             |
|                    | Widower           | Married           | -1.50916              | 1.92644    | 0.893 | -6.9200-3.9017          |             |             |
|                    | Divorced          | Married           | -4.57582              | 1.12874    | 0.001 | -7.7461-4.4315          |             |             |
|                    | Unmarried         | Married           | 0.54679               | 0.56017    | 0.813 | -2.1202-1.0266          |             |             |
|                    | Widower           | Married           | -0.96237              | 1.88835    | 0.967 | -6.2662-4.3415          |             |             |
|                    | Divorced          | Married           | -4.02903              | 1.06241    | 0.003 | -7.0131-4.0045          |             |             |
|                    | Widower           | Unmarried         | 1.50916               | 1.92644    | 0.893 | -3.9017-6.2200          |             |             |
|                    | Married           | Unmarried         | 0.96237               | 1.88835    | 0.967 | -4.3415-6.2662          |             |             |
|                    | Divorced          | Unmarried         | -3.06667              | 2.12746    | 0.557 | -9.0421-2.9088          |             |             |
|                    | Divorced          | Married           | 4.57582               | 1.12874    | 0.001 | 1.4055-7.7461           |             |             |
|                    | Widower           | Married           | 3.6067                | 2.12746    | 0.557 | -2.9088-9.0421          |             |             |
| dim2               | Unmarried         | Married           | -2.00102              | 0.83523    | 0.127 | -4.4340-0.3449          |             |             |
|                    | Widower           | Married           | -4.60989              | 2.87239    | 0.463 | -12.6776-3.4578         |             |             |
|                    | Divorced          | Married           | -6.65989              | 1.68298    | 0.002 | -11.3869-1.9329         |             |             |
|                    | Unmarried         | Married           | 2.00102               | 0.83523    | 0.127 | -0.3449-2.4340          |             |             |
|                    | Widower           | Married           | -2.60887              | 2.81559    | 0.835 | -5.2993-10.5171         |             |             |
|                    | Divorced          | Married           | -6.58878              | 1.58409    | 0.036 | -9.1081-2.0960          |             |             |
|                    | Unmarried         | Married           | 2.60687               | 2.81559    | 0.835 | -5.2993-10.5171         |             |             |
|                    | Widower           | Married           | -2.05000              | 3.17212    | 0.937 | -10.9596-6.8596         |             |             |
|                    | Divorced          | Married           | 6.65989               | 1.68298    | 0.002 | 11.3869-11.3869         |             |             |
|                    | Unmarried         | Married           | 2.05000               | 3.17212    | 0.937 | -6.8596-10.9596         |             |             |
| dim3               | Unmarried         | Married           | -1.17055              | 0.48882    | 0.127 | -2.5435-0.2024          |             |             |
|                    | Widower           | Married           | -4.86813              | 1.68108    | 0.040 | -9.5898-0.1465          |             |             |
|                    | Divorced          | Married           | -3.76813              | 0.98497    | 0.002 | -6.5346-0.1006          |             |             |
|                    | Unmarried         | Married           | 1.17055               | 0.48882    | 0.127 | -0.2024-2.5435          |             |             |
|                    | Widower           | Married           | -3.69758              | 1.64783    | 0.171 | -8.3259-0.9307          |             |             |
|                    | Divorced          | Married           | -2.59758              | 0.92710    | 0.051 | -5.2015-0.0064          |             |             |
|                    | Unmarried         | Married           | 4.86813               | 1.68108    | 0.1465 | 9.5898-6.5346          |             |             |
|                    | Widower           | Married           | 3.69758               | 1.64783    | 0.171 | -0.9307-8.3259          |             |             |
|                    | Divorced          | Married           | 1.10000               | 1.85650    | 0.950 | -4.1444-6.3144          |             |             |
|                    | Unmarried         | Married           | 2.59758               | 0.92710    | 0.051 | -0.0064-5.2015          |             |             |
|                    | Widower           | Married           | -1.10000              | 1.85650    | 0.950 | -6.3144-4.1144          |             |             |
| dim4               | Unmarried         | Married           | -1.10457              | 0.28156    | 0.022 | -1.8954-0.3137          |             |             |
|                    | Widower           | Married           | -2.86264              | 0.96830    | 0.034 | -5.5823-0.1430          |             |             |
|                    | Divorced          | Married           | -1.56264              | 0.56734    | 0.057 | -3.1561-0.0309          |             |             |
|                    | Unmarried         | Married           | 1.10457               | 0.28156    | 0.022 | 1.8954-6.3137          |             |             |
|                    | Widower           | Married           | -1.75806              | 0.94915    | 0.331 | -4.4240-0.9078          |             |             |
|                    | Divorced          | Married           | -4.5806               | 0.53400    | 0.865 | -1.9579-1.0418          |             |             |
|                    | Unmarried         | Married           | 2.86264               | 0.96830    | 0.034 | 0.1430-5.5823          |             |             |
|                    | Widower           | Married           | 1.75806               | 0.94915    | 0.331 | -0.9078-4.4240          |             |             |
|                    | Divorced          | Married           | 1.30000               | 1.06934    | 0.688 | -1.7035-4.3035          |             |             |
effect in clarifying and observing life situations and experiences to reach better and more responsive behavioral changes and wisdom that directly contributes to the balance and stability of the individual psychological and then his feeling of satisfaction with life and its events then bringing concrete growth and prosperity from different life experiences and events; this may explain the differences in the level of posttraumatic growth in favor of females. In addition, Abdul-Basit (2008) state that experimental studies indicate that females are more likely to grow and invest results.

This result is consistent with the Tedesch and Calhoun’s (2004) study that indicated that there are differences in the level of posttraumatic growth between males and females, as well as the Abu Aisha’s (2017) study, which indicated that there are differences in posttraumatic growth depending on the gender variable in favor of females.

### TABLE 17 (Continued)

| Dependent variable | (I) Social status | (J) Social status | Mean difference (I-J) | Std. error | Sig. | 95% confidence interval |
|--------------------|-------------------|-------------------|-----------------------|------------|------|------------------------|
|                    |                   |                   | Lower bound           | Upper bound|      |                        |
| Divorced           | Unmarried         |                   | 1.56264               | 0.56734    | 0.057| -0.0309-               | 3.1561 |
|                    | Married           |                   | 0.45806               | 0.53400    | 0.865| -1.0418-               | 1.9579 |
|                    | Widower           |                   | -1.30000              | 1.06934    | 0.688| -4.3035-               | 1.7035 |
| dim5               | Unmarried         | Married           | -1.33556*             | 0.41358    | 0.016| -2.4972-               | -0.1739-|
|                    | Widower           |                   | -3.12454              | 1.42230    | 0.187| -7.1194-               | 0.8703 |
|                    | Divorced          |                   | -2.39121*             | 0.83335    | 0.043| -4.7319-               | -0.0506-|
|                    | Unmarried         | Married           | 1.33556*              | 0.41358    | 0.016| 0.1739                 | 2.4972 |
|                    | Widower           |                   | -1.78898              | 1.39418    | 0.649| -5.7048-               | 2.1269 |
|                    | Divorced          |                   | -1.05656              | 0.78439    | 0.613| -3.2588-               | 1.1475 |
| Widower            | Unmarried         | Married           | 3.12454               | 1.42230    | 0.187| -0.8703-               | 7.1194 |
|                    | Married           |                   | 1.78898               | 1.39418    | 0.649| -2.1269-               | 5.7048 |
|                    | Widower           |                   | 0.73333               | 1.57072    | 0.975| -3.6784-               | 5.1451 |
| Divorced           | Unmarried         | Married           | -1.33556*             | 0.83335    | 0.043| 0.0506                 | 4.7319 |
|                    | Married           |                   | 1.05656               | 0.78439    | 0.613| -1.1475-               | 3.2588 |
|                    | Widower           |                   | -0.73333              | 1.57072    | 0.975| -5.1451-               | 3.6784 |
| total              | Unmarried         | Married           | -6.15850*             | 2.17591    | 0.047| -12.2700-              | -0.0470-|
|                    | Widower           |                   | -16.97436             | 7.48304    | 0.163| -37.9921-              | 4.0434 |
|                    | Divorced          |                   | -18.95769*            | 4.38444    | 0.000| -31.2724-              | -6.6430-|
|                    | Unmarried         | Married           | 6.15850*              | 2.17591    | 0.047| 0.0470                 | 12.2700 |
|                    | Widower           |                   | -10.81586             | 7.33506    | 0.538| -31.4180-              | 9.7863 |
|                    | Divorced          |                   | -12.79919*            | 4.12681    | 0.023| -24.3903-              | -1.2081-|
| Widower            | Unmarried         | Married           | 16.97436              | 7.48304    | 0.163| -4.0434-               | 37.9921 |
|                    | Married           |                   | 10.81586              | 7.33506    | 0.538| -9.7863-               | 31.4180 |
|                    | Divorced          |                   | -1.98333              | 8.26389    | 0.996| -25.1943-              | 21.2276 |
| Divorced           | Unmarried         | Married           | 18.95769*             | 4.38444    | 0.000| 6.6430                 | 31.2724 |
|                    | Married           |                   | 12.79919*             | 4.12681    | 0.023| 1.2081                 | 24.3903 |
|                    | Widower           |                   | 1.98333               | 8.26389    | 0.996| -21.2276-              | 25.1943 |

*The mean difference is significant at the 0.05 level.

### Academic degree

The findings of this study indicated that there are no differences in PTG due to an academic degree. This result can interpret in the light of the intensive awareness campaigns by the official recruiting agencies from the state for this task, such as the National Center for Mental Health Promotion, which had scheduled tasks during the crisis period to receive psychological and family counseling, in addition to continuous training that were centered the basic rehabilitation and empowerment of individuals and families on how to deal with the crisis and overcome it in peace, growth, and prosperity, and invest it in self-development and documenting family relations and accomplishing deferred tasks, and not to be immersed in the details of the exhausted and useless crisis, which increased the psychological ability of individuals and had a specific in facing and overcoming the repercussions of these the global COVID-19 pandemic. There were also clear and
diversified efforts in the nonprofit sector represented by charitable societies as well as academics and psychologists who volunteered to provide treatment, preventive and development advisory programs as well as to provide free and extensive free consultations on a large scale covering all regions of the Kingdom of the Saudi Arabia.

**Age**

The results indicate that there is a significant statistical difference in PTG due to age in the favor of the individuals belonging to the 40–50 and 50–60 year group. As for the high level of posttraumatic growth in individuals in the age range of 40–60, the researchers attribute these results to the nature of this age stage and its characteristics. According to Erikson’s theory of psychosocial development, which indicates that individuals at this stage (middle age stage) are considered in the stage of production and creativity to be distinguished in life at the personal level of the individual surrounding them from the family (whether the partner or children) they are keen to provide opportunities for a good life, and Erikson also indicated that they are candidates for developing their feelings on production, growth, and prosperity (Abdel-Moati & Qenawy, 2010), and the nature of this stage may be a strong motivation for its members to invest all available opportunities that they face.

**TABLE 18** Descriptive

|            | N   | M    | SD   | Std. error |
|------------|-----|------|------|------------|
| University education level | 262 | 14.5878 | 4.69510 | 0.29006 |
| Master degree | 52  | 14.3846 | 4.35284 | 0.60363 |
| PhD degree | 8   | 15.7500 | 5.67576 | 2.00669 |
| Primary school level | 3   | 12.0000 | 1.73205 | 1.00000 |
| Total | 365  | 14.4712 | 4.65719 | 0.24377 |
| dim2 Middle school level | 40  | 19.9750 | 7.00362 | 1.10737 |
| University education level | 262 | 19.4351 | 6.94157 | 0.42885 |
| Master degree | 52  | 20.8654 | 7.04893 | 0.97751 |
| PhD degree | 8   | 19.6250 | 8.03452 | 2.84063 |
| Primary school level | 3   | 18.0000 | 2.64575 | 1.52753 |
| Total | 365  | 19.6904 | 6.95156 | 0.36386 |
| dim3 Middle school level | 40  | 13.2750 | 3.73471 | 0.59051 |
| University education level | 262 | 13.1565 | 4.16728 | 0.25746 |
| Master degree | 52  | 13.5000 | 4.18447 | 0.58028 |
| PhD degree | 8   | 13.5000 | 3.66450 | 1.29560 |
| Primary school level | 3   | 11.6667 | 1.52753 | 0.88192 |
| Total | 365  | 13.2137 | 4.08741 | 0.21395 |
| dim4 Middle school level | 40  | 8.0250  | 2.17783 | 0.34435 |
| University education level | 262 | 7.4733  | 2.37912 | 0.14698 |
| Master degree | 52  | 7.4808  | 2.40498 | 0.33351 |
| PhD degree | 8   | 7.0000  | 2.50713 | 0.88641 |
| Primary school level | 3   | 7.0000  | 1.73205 | 1.00000 |
| Total | 365  | 7.5205  | 2.35637 | 0.12334 |
| dim5 Middle school level | 40  | 9.6250  | 3.17593 | 0.50216 |
| University education level | 262 | 10.3092 | 3.51459 | 0.21713 |
| Master degree | 52  | 10.7885 | 3.23181 | 0.44817 |
| PhD degree | 8   | 10.1250 | 3.94380 | 1.39434 |
| Primary school level | 3   | 10.3333 | 1.15470 | 0.66667 |
| Total | 365  | 10.2986 | 3.43401 | 0.17974 |
| total Middle school level | 40  | 64.6500 | 18.25398 | 2.88621 |
| University education level | 262 | 64.9618 | 18.33340 | 1.13264 |
| Master degree | 52  | 67.0192 | 18.14267 | 2.51594 |
| PhD degree | 8   | 66.0000 | 21.23340 | 7.50714 |
| Primary school level | 3   | 59.0000 | 6.08276 | 3.51188 |
| Total | 365  | 65.1945 | 18.23663 | 0.95455 |
including traumatic events such as COVID-19 pandemic crisis; this may justify this category having high levels of PTSD.

Social status

The results of this study showed that there are significant statistical differences in PTG due to the social status variable; these differences were in favor of divorced and widowed persons. We can interpret these results to the fact that the category of divorced and widowed women is not subjected to marital stresses and differences compared to the married people as a result of the precautionary procedures and conditions of home quarantine imposed by the state as preventive methods that may be a contribution to raising the level of challenges and psychological stresses in conjunction with the repercussions of the crisis and its psychological effects. As well as, we can say that divorcees and widows did not come under more psychological and financial stresses and responsibilities during the crisis, such as the economic and financial stresses that singles and married are exposed to. Moreover, the married couples face many family financial problems faced toward their partners and children, as well as radically changing lifestyle.

Divorces and widows individuals received intense and multiple psychological, financial, and social support during the COVID-19 crisis that contributed to the transformation and prosperity of their life more than it was before the crisis, as it has the attention and sympathy of the official and nonprofit institutions of the state, and all members of society work to enable and support them in various forms and in various fields before the COVID-19 crisis occurred and during the crisis, and also what might lead us to say that it is the biggest winner in this global COVID-19 pandemic.

The Kingdom of Saudi Arabia provides assistance to people with special circumstances, including divorcees, widows, the elderly, and low-income people. Therefore, these groups were the highest in the positive changes or posttraumatic growth PTG after the COVID-19 pandemic outbreak from other groups in the Saudi society. This is due to the increased awareness of the Saudi Arabia government of the stresses these groups are experiencing, which increases their needs for aid, especially in times of disasters and crises. As well as the nature of Saudi society as an Islamic society based on the principle of social solidarity, and the proliferation of voluntary charitable institutions that provide aid and assistance to all groups of society, including widowed, divorced, and low-income individuals. As in light of the spread of the COVID-19 pandemic, many charitable organizations have contributed to their efforts to help community members to mitigate the negative effects and provide financial and moral support.

6 | LIMITATIONS AND FUTURE DIRECTIONS

The limitations of this study include that it was applied to a survey cross-sectional design, which revealed the level of PTG among the sample of the study and also detected the effect of demographic variables on PTG. Thus, we need future experimental studies to reveal the effectiveness of the counseling and psychotherapy programs to
relieve the negative effects of COVID-19 pandemic for the individuals.

7 | CONCLUSION

The study findings highlighting the importance of the counseling and psychotherapy service centers in the Kingdom of Saudi Arabia help Saudi individuals who suffer from the negative effects of the stresses related to the COVID-19 pandemic outbreak symptoms such as anxiety, depression, and obsessive compulsive. The results of this study confirm the importance of all individuals collaborate together to alleviate the pandemic stresses of COVID-19, especially health and psychological care providers. We need to prepare counseling programs to raise people’s awareness about self and life and how to manage it; and to achieve high levels of quality of life in line with the aims of Vision 2030. The results of these studies emphasized the importance of preparing guidance programs to develop hardiness and psychological resilience among members of Saudi society. As well as, we need to educate the members of the society in their various age stages about the importance of contemplative thinking about life events.

| Variables | N   | Mean  | SD   | Std. error |
|-----------|-----|-------|------|------------|
| dim2      | 365 | 14.4712 | 4.65719 | 0.24377    |
| dim3      | 365 | 13.2137 | 4.08741 | 0.21395    |
| dim4      | 365 | 7.5205  | 2.35637 | 0.12334    |
| dim5      | 365 | 10.2986 | 3.43401 | 0.17974    |
| total     | 365 | 65.1945 | 18.23663 | 0.95455    |

| TABLE 20 | Descriptive | Variables | N   | Mean  | SD   | Std. error |
|-----------|-------------|-----------|-----|-------|------|------------|
|           |             | Less than 10,000 SAR | 102 | 14.0490 | 4.47961 | 0.44355    |
|           |             | Less than 20,000 SAR | 119 | 15.2185 | 4.56991 | 0.41892    |
|           |             | Less than 30,000 SAR | 23 | 13.1304 | 4.48537 | 0.93527    |
|           |             | More than 30,000 SAR | 11 | 14.7273 | 4.94148 | 1.48991    |
|           |             | Total       | 365 | 14.4712 | 4.65719 | 0.24377    |
|           | dim2        | Less than 5000 SAR | 110 | 19.0182 | 7.33845 | 0.69969    |
|           |             | Less than 10,000 SAR | 102 | 19.2941 | 6.58319 | 0.65183    |
|           |             | Less than 20,000 SAR | 119 | 21.1092 | 6.80452 | 0.62377    |
|           |             | Less than 30,000 SAR | 23 | 16.9130 | 6.74815 | 1.40709    |
|           |             | More than 30,000 SAR | 11 | 20.5455 | 6.21874 | 1.87502    |
|           | dim3        | Less than 5000 SAR | 110 | 13.0818 | 3.96575 | 0.37812    |
|           |             | Less than 10,000 SAR | 102 | 13.3333 | 4.51254 | 0.44681    |
|           |             | Less than 20,000 SAR | 119 | 13.7311 | 3.65851 | 0.33538    |
|           |             | Less than 30,000 SAR | 23 | 10.6087 | 4.63915 | 0.96733    |
|           |             | More than 30,000 SAR | 11 | 13.2727 | 2.57258 | 0.77566    |
|           | dim4        | Less than 5000 SAR | 110 | 7.2000  | 2.57653 | 0.24566    |
|           |             | Less than 10,000 SAR | 102 | 7.9020 | 2.17324 | 0.21518    |
|           |             | Less than 20,000 SAR | 119 | 7.8151 | 2.09910 | 0.19242    |
|           |             | Less than 30,000 SAR | 23 | 5.6957 | 2.63602 | 0.54965    |
|           |             | More than 30,000 SAR | 11 | 7.8182 | 1.83402 | 0.55298    |
|           | dim5        | Less than 5000 SAR | 110 | 10.0545 | 3.39950 | 0.32413    |
|           |             | Less than 10,000 SAR | 102 | 10.4314 | 3.56970 | 0.35345    |
|           |             | Less than 20,000 SAR | 119 | 10.8655 | 3.09161 | 0.28341    |
|           |             | Less than 30,000 SAR | 23 | 8.2174 | 4.06712 | 0.84805    |
|           |             | More than 30,000 SAR | 11 | 9.7273 | 3.22772 | 0.97319    |
|           | total       | Less than 5000 SAR | 110 | 63.6636 | 18.86567 | 1.79877    |
|           |             | Less than 10,000 SAR | 102 | 65.0098 | 17.81783 | 1.76423    |
|           |             | Less than 20,000 SAR | 119 | 68.7395 | 17.11252 | 1.56870    |
|           |             | Less than 30,000 SAR | 23 | 54.5652 | 21.0757 | 4.40123    |
|           |             | More than 30,000 SAR | 11 | 66.0909 | 12.15281 | 3.66421    |
|           |             | Total       | 365 | 65.1945 | 18.23663 | 0.95455    |
### TABLE 21 ANOVA

| Variables    | Sum of squares | df | Mean square | F     | Sig.  |
|--------------|----------------|----|-------------|-------|-------|
| dim1         |                |    |             |       |       |
| Between groups | 129.592        | 4  | 32.398      | 1.502 | 0.201 |
| Within groups | 7765.356       | 360| 21.570      |       |       |
| Total        | 7894.948       | 364|             |       |       |
| dim2         |                |    |             |       |       |
| Between groups | 490.743        | 4  | 122.686     | 2.583 | 0.037 |
| Within groups | 17099.273      | 360| 47.498      |       |       |
| Total        | 17590.016      | 364|             |       |       |
| dim3         |                |    |             |       |       |
| Between groups | 191.346        | 4  | 47.837      | 2.924 | 0.021 |
| Within groups | 5889.985       | 360| 16.361      |       |       |
| Total        | 6081.332       | 364|             |       |       |
| dim4         |                |    |             |       |       |
| Between groups | 114.038        | 4  | 28.509      | 5.382 | 0.000 |
| Within groups | 1907.058       | 360| 5.297       |       |       |
| Total        | 2021.096       | 364|             |       |       |
| dim5         |                |    |             |       |       |
| Between groups | 149.813        | 4  | 37.453      | 3.255 | 0.012 |
| Within groups | 4142.636       | 360| 11.507      |       |       |
| Total        | 4292.449       | 364|             |       |       |
| total        |                |    |             |       |       |
| Between groups | 4364.159       | 4  | 1091.040    | 3.366 | 0.010 |
| Within groups | 116693.030     | 360| 324.147     |       |       |
| Total        | 121057.189     | 364|             |       |       |

### TABLE 22 The results of Scheffe test for the differences in PTG due to income level

| Dependent variable | (I) Income level | (J) Income level | Mean difference (I-J) | Std. error | Sig. | 95% confidence interval |
|--------------------|------------------|------------------|-----------------------|------------|------|------------------------|
|                    | Less than 5000 SAR| Less than 10,000 SAR | 0.26007               | 0.63841    | 0.997| -1.7166-2.2368          |
|                    | Less than 5000 SAR| Less than 20,000 SAR | -0.90940              | 0.61430    | 0.701| -2.8114-0.9926          |
|                    | Less than 5000 SAR| Less than 30,000 SAR | 1.17866               | 1.06487    | 0.874| -2.1185-4.4758          |
|                    | Less than 5000 SAR| More than 30,000 SAR | -0.41818              | 1.46869    | 0.999| -4.9657-4.1293          |
|                    | Less than 5000 SAR| Less than 10,000 SAR | -0.27594              | 0.94735    | 0.999| -3.2092-2.6573          |
|                    | Less than 5000 SAR| Less than 20,000 SAR | -2.07594              | 0.91156    | 0.264| -4.9135-0.7314          |
|                    | Less than 5000 SAR| Less than 30,000 SAR | 2.10514               | 1.58017    | 0.777| -2.7875-6.9978          |

(Continues)
| Dependent variable | (I) Income level | (J) Income level | Mean difference (I-J) | Std. error | Sig. | 95% confidence interval |
|--------------------|-----------------|------------------|----------------------|------------|------|------------------------|
| More than 30,000 SAR | Less than 10,000 SAR | -1.52727- | 2.17940 | 0.974 | -8.2753- 5.2208 |
| Less than 20,000 SAR | Less than 10,000 SAR | 0.27594 | 0.94735 | 0.999 | -2.6573- 3.2092 |
| Less than 30,000 SAR | Less than 10,000 SAR | -1.25134- | 1.59085 | 0.692 | -5.5207- 3.7068 |
| More than 30,000 SAR | Less than 5000 SAR | 2.09106 | 0.91156 | 0.264 | -0.7314- 4.9135 |
| Less than 20,000 SAR | Less than 5000 SAR | 1.81513 | 0.92995 | 0.434 | -1.0643- 4.6945 |
| More than 30,000 SAR | Less than 5000 SAR | 4.19620 | 1.56980 | 0.131 | -2.5446- 7.3068 |
| Less than 30,000 SAR | Less than 5000 SAR | 2.09106 | 0.91156 | 0.264 | -0.7314- 4.9135 |
| Less than 10,000 SAR | Less than 5000 SAR | -2.38107- | 1.59085 | 0.692 | -7.3068- 2.5446 |
| More than 30,000 SAR | Less than 5000 SAR | -4.19620- | 1.56980 | 0.131 | -9.0567- 4.1903 |

*dim3* Less than 5000 SAR | Less than 10,000 SAR | -0.25152- | 0.55600 | 0.995 | -1.9731- 1.4700 |
| Less than 20,000 SAR | Less than 10,000 SAR | -0.64927- | 0.53500 | 0.831 | -2.3058- 1.0072 |
| Less than 30,000 SAR | Less than 10,000 SAR | 2.47312 | 0.92741 | 0.133 | -0.3984- 5.3446 |
| More than 30,000 SAR | Less than 10,000 SAR | -0.19091- | 1.27910 | 1.000 | -3.6154- 2.7030 |
| Less than 20,000 SAR | Less than 10,000 SAR | 0.25152 | 0.55600 | 0.995 | -1.4700- 1.9731 |
| Less than 30,000 SAR | Less than 10,000 SAR | -0.39776- | 0.9579 | 0.797 | -2.8077- 1.2922 |
| More than 30,000 SAR | Less than 10,000 SAR | 2.72464 | 0.93368 | 0.077 | -0.1663- 5.6156 |
| Less than 20,000 SAR | Less than 10,000 SAR | 0.64927 | 0.53500 | 0.831 | -1.0072- 2.3058 |
| Less than 30,000 SAR | Less than 10,000 SAR | 0.39776 | 0.9579 | 0.797 | -1.2922- 2.8077 |
| More than 30,000 SAR | Less than 10,000 SAR | 3.12240a | 0.92132 | 0.023 | -0.2697- 5.9751 |
| Less than 30,000 SAR | Less than 10,000 SAR | -0.06061- | 1.28366 | 1.000 | -3.9140- 4.0352 |

*dim4* Less than 5000 SAR | Less than 10,000 SAR | -0.70196- | 0.31638 | 0.297 | -1.6815- 0.2776 |
| Less than 20,000 SAR | Less than 10,000 SAR | -0.61513- | 0.30442 | 0.397 | -1.5577- 0.3275 |
| Less than 30,000 SAR | Less than 10,000 SAR | 1.50435 | 0.52771 | 0.089 | -0.1296- 3.1383 |
| More than 30,000 SAR | Less than 5000 SAR | -0.61818- | 0.72783 | 0.949 | -2.8718- 1.6354 |

Less than 10,000 SAR | Less than 5000 SAR | 0.70196 | 0.31638 | 0.297 | -0.2776- 1.6815 |
| Less than 20,000 SAR | Less than 5000 SAR | 0.08683 | 0.31057 | 0.999 | -0.8748- 1.0484 |
| Less than 30,000 SAR | Less than 5000 SAR | 2.20631a | 0.53128 | 0.002 | 0.5613- 3.8513 |
| Dependent variable | (I) Income level | (J) Income level | Mean difference (I-J) | Std. error | Sig. | 95% confidence interval |
|--------------------|-----------------|-----------------|------------------------|------------|------|------------------------|
|                    | More than 30,000 SAR | Less than 20,000 SAR | 0.08378 | 0.73042 | 1.000 | -2.1778 | 2.3454 |
|                    | Less than 5000 SAR | Less than 10,000 SAR | 0.61513 | 0.30442 | 0.396 | -2.1778 | 2.3454 |
|                    | Less than 10,000 SAR | Less than 30,000 SAR | 2.11947 | 0.52425 | 0.003 | 0.4963 | 3.7427 |
|                    | More than 30,000 SAR | Less than 5000 SAR | -1.50435 | 0.52771 | 0.089 | -3.1383 | 0.1296 |
|                    | Less than 10,000 SAR | Less than 30,000 SAR | -2.0631 | 0.3128 | 0.002 | -3.8513 | -0.5613 |
|                    | Less than 20,000 SAR | Less than 30,000 SAR | -2.11947 | 0.52425 | 0.003 | -3.7427 | -0.4963 |
|                    | More than 30,000 SAR | Less than 5000 SAR | -2.12253 | 0.84374 | 0.178 | -4.7350 | 0.4899 |
|                    | Less than 10,000 SAR | Less than 30,000 SAR | -1.50435 | 0.52771 | 0.089 | -3.1383 | 0.1296 |
|                    | Less than 20,000 SAR | Less than 30,000 SAR | -2.20631 | 0.53128 | 0.003 | -3.8513 | -0.5613 |
|                    | More than 30,000 SAR | Less than 5000 SAR | -2.12253 | 0.84374 | 0.178 | -4.7350 | 0.4899 |
|                    | Less than 10,000 SAR | Less than 30,000 SAR | -1.50435 | 0.52771 | 0.089 | -3.1383 | 0.1296 |
|                    | Less than 20,000 SAR | Less than 30,000 SAR | -2.20631 | 0.53128 | 0.003 | -3.8513 | -0.5613 |
|                    | More than 30,000 SAR | Less than 5000 SAR | -2.12253 | 0.84374 | 0.178 | -4.7350 | 0.4899 |

(Continues)
TABLE 22  (Continued)

| Dependent variable | (I) Income level | (J) Income level | Mean difference (I-J) | Std. error | Sig. | Lower bound | Upper bound |
|---------------------|------------------|------------------|-----------------------|------------|------|-------------|-------------|
|                    | More than 30,000 SAR | Less than 30,000 SAR | 2.64859 | 5.67379 | 0.994 | -14.9191- | 20.2162    |
|                    | Less than 5000 SAR | Less than 10,000 SAR | -9.09842-1 | 4.12797 | 0.304 | -21.8798- | 3.6830     |
|                    | Less than 10,000 SAR | Less than 20,000 SAR | -10.44459- | 4.15587 | 0.179 | -23.3123- | 2.4232     |
|                    | More than 20,000 SAR | More than 30,000 SAR | -14.17426-1 | 4.10089 | 0.019 | -26.8718- | -1.4768-   |
|                    | Less than 5000 SAR | Less than 10,000 SAR | -11.52569-1 | 6.60010 | 0.550 | -31.9615- | 8.9101     |
|                    | Less than 10,000 SAR | Less than 20,000 SAR | 2.42727 | 5.69339 | 0.996 | -15.2011- | 20.0556    |
|                    | Less than 20,000 SAR | Less than 30,000 SAR | 1.08111 | 5.71365 | 1.000 | -16.6100- | 18.7722    |
|                    | Less than 30,000 SAR | Less than 5000 SAR | -2.64859 | 5.67379 | 0.994 | -20.2162- | 14.9191    |
|                    | Less than 5000 SAR | Less than 10,000 SAR | 11.52569 | 6.60010 | 0.550 | -8.9101- | 31.9615    |

*The mean difference is significant at the 0.05 level.

and its positive impact to reach high levels of psychological well-being and encouraging them to employ and invest their mental abilities and skills to cope with different life challenges and situations.

ACKNOWLEDGMENT
The authors would like to express their gratitude to King Khalid University, Kingdom of Saudi Arabia for providing administrative and technical support.

CONFLICT OF INTEREST
The authors declare there is no conflict of interest.

DATA AVAILABILITY STATEMENT
Not applicable.

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How to cite this article: Arnout BA, Al-Sufyani HH. Quantifying the impact of COVID-19 on the individuals in the Kingdom of Saudi Arabia: A cross-sectional descriptive study of the posttraumatic growth. *J Public Affairs*. 2021;e2659. https://doi.org/10.1002/pa.2659