Finding Strength in Times of Crisis? Post-Traumatic Growth During the Covid-19 Pandemic: A Saudi Arabian Perspective

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Abstract
This paper contributes to the Covid-19 literature by exploring the concept of post-traumatic growth (PTG) utilizing a mixed methods approach. The study examines to what extent the participants experienced positive growth and renewal arising from the prolonged period of lockdowns and emergency online learning. Exploring the experiences of 552 female undergraduate students in a private Saudi Arabian university, an online survey was utilized to gather the data. All the students had experienced online education as a result of the pandemic. The findings indicate the participants underwent a diversity of personal growth experiences. In addition, they also developed different coping mechanisms. The study provides insights into the responses of the students to the issues they were facing during the pandemic. It identifies ways in which participants experienced personal growth as well as a shift in perspective about their lives. There are implications for educators, counselors and policymakers emerging from this study.

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Introduction

For many people, the outbreak of Covid-19 pandemic, now in its second year, has produced quantum shifts in their lives. Recognized as contributing to psychological trauma, because of the pandemic, are the loss of loved ones, jobs or changes in employment, enforced isolation and online learning, the cancellation of festivities such as weddings, birthdays, and graduation ceremonies (Lonsdorf, 2022). Miller (2020) describes the pandemic as one of the greatest crises since the outbreak of World War II. Yet the long-term social, economic and societal consequences of the pandemic are still not foreseeable, nor is an end to the pandemic. Moreover, a *Generation Corona* has been identified (Rudolph & Zacher, 2020). A term referring those who will have to deal with the long-term social and economic consequences of the pandemic. Specifically, young people who will be disadvantaged compared to prior generations (Rudolph & Zacher, 2020). Consequently, they may suffer from noticeable psychological hurt (Masiero et al., 2020). While, there are ongoing discussions related to the use of the term trauma and its application to Covid-19, mental health issues are on the rise worldwide. The ongoing pandemic has people experiencing high level of uncertainties, anxiety and stress, - symptoms consistent with trauma (Lonsdorf, 2022).

For the purposes of this study trauma is defined as a "complex emotional response to a stressful event, that overwhelms the individual's capacity to cope" (Masiero et al., 2020, p. 514). A collective trauma defined by Hirschberger (2018) as:

> The psychological reactions to a traumatic event that affect an entire society; it does not merely reflect an historical fact, the recollection of a terrible event that happened to a group of people (2018, p. 1).

As such, collective trauma stimulates a collective sentiment and often leads to cultural changes.

However, there is minimal research examining what, if any, positive aspects have emerged from this pandemic which may lead to societal changes (Sun et al., 2021). This includes an exploration of the coping mechanisms developed in response to longevity of Covid-19. Post Traumatic Growth Theory (PTG) posits that people can grow personally through traumatic events and learn to overcome adversity because of this growth (Davis et al., 1998; Tedeschi & Calhoun, 1996, 2004). Since the advent of Covid-19 a more widespread discussion of PTG has occurred (Northfield & Johnston, 2021; Waters et al., 2021; Weir, 2020, June). Acknowledging the phenomenon of PTG recognizes that while victims of traumatic events may experience losses they also report personal development and a sense of renewal and growth (Weir, 2020, June).

Acccordingly, this paper aims to determine:

- What, if any, positive outcomes the research participants experienced during the pandemic?
- How coping mechanisms developed in response to the enforced restrictions to the pandemic?

- How these outcomes manifested themselves as growth and renewal experiences?

Literature

Studies have shown that when individuals experience trauma there is a possibility this can lead to a sense of personal growth and the development of a new perspective on life (Davis & Nolen-Hoeksema, 2001). People who experienced traumatic situations and events reported that their relationships subsequently became closer and more authentic. They perceived a greater awareness of their own strength and that life is full of possibilities. Equally, they may simply be happy to be alive. During the various lockdowns, it became evident that a number of individuals generated a new sense of purpose in life. This included a sense of humbleness and gratitude in the face of the uncertainties (Dominick et al., 2021; Okafor et al., 2022). An awareness specifically demonstrated in recent studies of Covid-19 survivors (Sun et al., 2021). PTG describes the positive psychological change occurring in people who experience personal trauma or very stressful life situations (Tedeschi & Calhoun, 2004). Whereas mainstream psychology focuses on illness, positive psychology seeks to identify how an individual utilizes resources during traumatic experiences for healing and health (Park et al., 1996; Tedeschi & Calhoun, 1996). The concept of trauma causing people to mature and grow was first posited by (Tedeschi & Calhoun, 1996) Tedeschi and Calhoun (2004) contended that positive psychological change was possible as a result of directly confronting challenging life circumstances. As clinical psychologists, they observed a phenomenon of positive renewal occurring because of traumatic incidents experienced by their test subjects, a group of psychology students. All the students had survived a traumatic event: these experiences included death, an accident or the divorce of parents. The participants stated that while these experiences had burdened them, subsequently they had come to value their lives more than before. They felt stronger and more spiritual, their social relationships had deepened, and their priorities had shifted. This concept has grown in popularity (Gable & Haidt, 2005; Sheldon & King, 2001). However, the theoretical approach was not without its critics. The initial criticisms focused on the measurement of growth in the various studies. The more common PTG questionnaires, required the subjects to ask themselves a series of questions: to assess how they are doing psychologically at the moment; recall how they were doing before the traumatic event; assess how their psychological well-being has changed and, in the end, assess whether the traumatic event itself caused the change (Jayawickreme & Blackie, 2014; Taylor & Armor, 1996). There were expressions of concern that such a complex cognitive process is highly prone to error of interpretation. The subjects of such studies may often be wrong in their self-assessment – that people only believe they are growing after traumas and crises (Frazier et al., 2009). Referred to 'positive illusion' this phenomenon describes where, in stressful situations, most people respond with optimistically distorted perceptions (Taylor & Armor, 1996). This is also true in social comparison with others. Subjects who were asked to assess their own personality and that of their

acquaintances before a stressful event tended to describe their former self as more immature than their acquaintances presumably, according to the interpretation, in order to be able to attest they had matured (McFarland & Alvaro, 2000).

Moreover, there is a paucity of longitudinal studies examining how affected persons felt prior to the traumatic event and then several years later. In order to measure a meaningful improvement a control group would be required. One where the group had not experienced a traumatic event. The lack of this control group led some authors to assume that the trauma is the decisive reason for the personality change. Other possible explanations not considered for example, the possibility that the measured change is simply a coping strategy.

An alternative argument is that people do well for themselves after a trauma and try to build themselves up in order not to appear as victims (Prati & Pietrantoni, 2009; Tamiolaki & Kalaitzaki, 2020). While there is an increasing body of literature covering this concept, researchers still face the dilemma that growth after a crisis can never be definitively proven. Primarily, because the subjects of the studies were usually only interviewed after a personal crisis, rarely prior and then usually only by chance (Frazier et al., 2009). In regard to the pandemic the phenomenon of PTG has been primarily studied with reference to first responders, for example, nurses, doctors, emergency personal (Chen et al., 2021; Finstad et al., 2021). Yet, there a few studies examining the occurrence of PTG in secondary or third level groups, for example, how university students have experienced the phenomenon (Jin et al., 2021; Kutza & Cornell, 2021; Zeng et al., 2021).

Method

The mixed methods approach as outlined by (Creswell & Plano-Clark, 2011) was employed for two reasons. First, the deductive approach as it was important to develop a level of understanding as to the incidence of PTG in the sample population. Second, we were aware the study was examining people's lived experiences, behaviors, emotions and feelings, and cultural phenomena (Bhattacherjee, 2012; Strauss & Corbin, 1990). Therefore, it was important to acknowledge this by applying an interpretive lens.

Participants/Sampling

Participants came from the female campus of a private university in Saudi Arabia. The researchers contacted the students via email and on-line conversation; hence, the sample technique was convenience sampling. If they were interested, students were encouraged to forward the survey link to their peers. Thereby, using snowball sampling to build the sample size. Table 1 lists the characteristics of the sample. This study's participation was entirely voluntary and without remuneration.

Data Collection

The data for this study was gathered in November/December 2021. We collected the participants' written reflections, via an online survey. The first section of the survey was used to collect demographic data (such as age, college year, and major), as shown in Table 1. The purpose of the second section was to encourage student reflections. Students were supplied with basic instructions to assist them in their responses. That is, the reflection should be at least 400 words long and focus on how the student experienced the Covid-19 Pandemic. A total of 647 surveys were distributed, 552 responses were received. A response rate of 85%. All reflections were anonymized, and all participants gave their consent to participate in the study.

Data Analysis

The data analysis was conducted in two stages. In a first step, deductive thematic analysis was undertaken by applying the five PTG Scale Inventory Items as predefined set of codes to the dataset. The PTG inventory scale was designed by Tedeschi and Calhoun (1996) to measure positive effects for people who had experienced traumatic events. The original scale consisted of 21 items on a 6-point Likert scale. For our

Table 1. Participants (N = 552).

Gender	Female	100%
Age	Younger than 20	37.9
	Between 20-24	56.6
	Older than 24	5.5
Academic Year	Freshman	57
	Sophomore	20.2
	Junior	15.7
	Senior	7.1
Major	Interior Design	12.1
	HR	9.4
	Architecture	8.9
	Graphic Design	4.6
	Electrical Engineering	2.5
	Mechanical Engineering	5.2
	Civil Engineering	1.3
	Information Technology	3.94.8
	Computer Science	5.1
	Software Engineering	8.5
	Accounting	4
	Finance	14.3
	Law	11.6
	MIS	6.6

purposes, we used the five domains that the scale is exploring as codes (see Table 2). The analysis identified 225 of the 552 reflections as PTG items. Initially, each author applied the pre-defined codes were applied to the dataset, separately and then discussed to resolve discrepancies.

Second, the inductive approach. In the initial stages, we entered the responses into the NVivo software program to derive the initial codes. The researchers then simultaneously discussed and compared these codes and organized them into themes. Themes are understood as patterns in the dataset that help us to analyze and interpret the data (Rivas, 2013). In this study thematic analysis was carried out in accordance with Braun and Clarke (2006) six-step procedure:

- Familiarization with the information
- Creation of preliminary codes
- The search for a theme, as well as the examination of a theme
- Identifying and defining the theme
- The creation of reports

The use of NVivo played a beneficial and critical part in the initial analysis and supported the retrieval of information. However, manual thematic analysis helped the researcher achieve a more in-depth appreciation of the richness of the data and cultural nuances that may have been missed by the software analysis. Utilizing both approaches concurrently enabled a more holistic appreciation of the research data rather than relying solely upon one form. In addition to the five PTG items, seven additional themes were identified (see Table 3).

Findings

The initial coding using the PTGI scale indicated in 225 cases students expressed PTG by stating positive influences the pandemic had on their personal growth and development. The most predominant response was personal strength, followed by relating to others and appreciation of life. Openness to new possibilities was less frequent and lastly spiritual change mentioned by two participants. Figure 1.

Table 2. Posttraumatic Growth Inventory Items (PTGI).

Item	Number
Personal Strength	90
Relating to others	79
Appreciation of Life	48
Openness to new possibilities	6
Spiritual change	2

Table 3. Additional Themes[1].

Additional Themes	Subthemes
Increased confidence and new values	Changes in personality Shift in priorities and goals
Improved relationships with family	Changes in friendships Changes in forms of social interactions
Appreciation of being alive	Appreciation of staying healthy Appreciation of family health
Acquiring new skills	New plans and goals New opportunities
Acceptance of Fate	Focusing on God's guidance Strengthen religious/spiritual beliefs

[1]Number of themes does not add up to total number of participants because in some interviews multiple themes were mentioned.
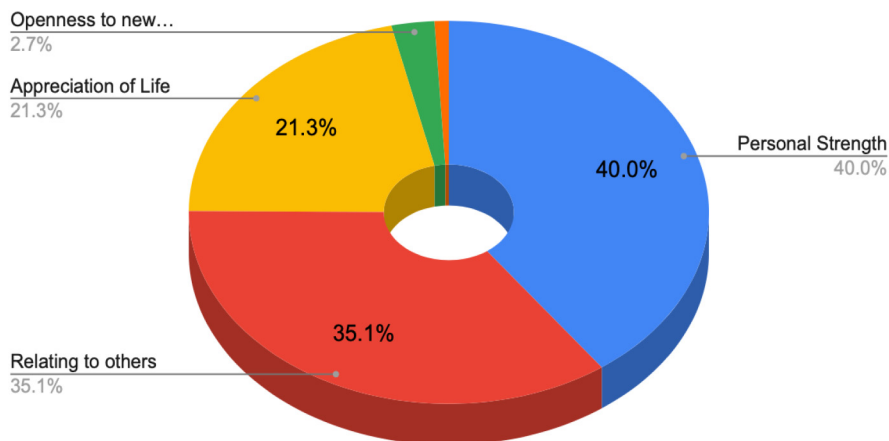

Figure 1. PTG items.

Personal Strength

More than 40 percent of participants reported they felt a growth in personal strength. In the following quote the participant reflects how the lockdowns and isolation resulting from enforced on-line learning facilitated her ability to rely upon and trust her own judgement. Thereby enhancing both intellectual and personal maturity.

> When we stopped social gatherings and physical communication, I started to pay more attention to me. The normal life pattern we engage, can unconsciously distract us from our own self. It distracted me from my own self as a result in focusing on the outside

more than the inside. By spending a lot of time with others, socializing, gathering, communicating and reacting, and sometimes overreacting to please others. My life was fully occupied with my own relationships with people. "what do they say? how would they react? etc. I can say that being locked down with my own self for two years in a raw, extremely developed my psychological experience and improved my own way of thinking. And most importantly, it played a huge rule in bringing my true-self to the surface rather than the false-self and egocentrism that we are all by nature filled with.

Relating to Others

Family relationships are important in Saudi Arabia, families are usually larger than those found in western society (Winkel et al., 2021). The importance of family was at the forefront of several of the comments especially during the strict lockdowns and curfews. The advantage of technology became evident as even virtual meetings with extended family provided great joy and made life more interesting.

> The pandemic days it really showed me what is the essence of my life, I learned the important things in my life is my family, and well-being. Even though it was really difficult to be separated from people that we love, and we couldn't visit them, having the chance to call them virtually it was so interesting and fun we shared our memories through video calls and it was best days of my life.

Appreciation of Life

A deeper appreciation of life was referred to by 21 percent of the participants. The pandemic was described as a humbling experience for these students. While the death and hospitalization rate in Saudi Arabia was low relative to other countries, the pandemic still manifested itself as a frightening experience. One that had the potential to create fear and uncertainty and lack of direction for the future. Yet as per the comment below – one that provided a sense of renewal and optimism.

> The pandemic has taught me a lot, gave me many reasons to appreciate life and to appreciate my loved ones even more. Standing here today, in my dream college and dream major, and the cases decreasing and knowing that I have not lost any family members, makes me realize that life is much bigger than being sad and crying over a graduation ceremony while others were fighting for their lives. I think the pandemic taught me so much and made me realize the worth of many valuable aspects of my life.

Openness to New Possibilities

Approximately 3 percent of the participants reported a greater openness to new opportunities. The following commentary refers to the experiences during Covid-19 resulted

in new experience and broadened her horizon. It resulted in reflection on prior lifestyle and life choices.

> The Corona period made me learn many things, including the use of time, and attention to my mental and physical health, period. Corona allowed me to try studying remotely, and relying more on myself, the period of Corona polished me, changed me, opened up horizons and experiences for me, and achieved my goals, made me think about the meaning of living and life, also a crisis. Corona made me reflect on my wasted energies and money in normal days.

Spiritual Change

The responses to the Covid-19 pandemic, for example, school-closures, curfews, lockdowns and prolonged online education are recognized as having significant impact on students worldwide. Alghamdi (2021) contended that while students were negatively impacted there was evidence of spiritual changes and higher level of spiritual awareness. While there were only two explicit references to religion and spiritual concepts, when reading the responses there was evidence that the spiritual dimension did underpin many of the other responses.

It showed me my true friends and found my spiritual peace, as I was able to appreciate these times and give thanks to them. Also, I found myself thanking God. As for the academic level, the Corona epidemic allowed me to think with a clear mind to determine my future in a way that suits what I wish, and thanks to it. I can say that the Corona epidemic was a blessing from God because it showed me something in myself that I did not know existed.

The thematic analysis revealed several additional subthemes related to PTG (see Table 3). The majority of these referring to positive changes that participants experienced like increased relationships with family and friends, reappraisal of life and a shift in priorities and goals.

Increased Confidence and New Values

The experience of lockdowns and the sudden shut down of normal life lead participants to focus on themselves and explore different coping strategies. Similar studies have indicated that participants develop a broad variety of coping mechanisms to deal with crisis such as the pandemic (Northfield & Johnston, 2021). Self-exploration and focus on their own strengths and capabilities are often the main elements of PTG. Participants expressed, in diverse ways, the discovery of new inner strengths and the ability to overcome different problems.

> The pandemic taught me a lot about myself, my strengths and weaknesses, how to improve and develop my abilities, who is my support, how to be happy, and how to

deal with toxic people. Taking advantage of the time I had before I graduated to act in a comprehensible way is something I am grateful for.

Improved Relationships with Family

Many participants experienced an increased bond with their families; due to the prolonged time spend together during the lockdowns. Prior studies have pointed out that better relationships with family members and friends are often a result of traumatic events (Calhoun & Tedeschi, 2014; Dominick et al., 2021; Okafor et al., 2022).

> The pandemic days it really showed me what is the essence of my life, I learned the important things in my life is my faith, family, and well-being. I learned how to love myself… and my flaws. I explored many aspects of myself that I was not aware of due to the busy days of socialising and keeping up with the routine.

Appreciation of Being Alive

Covid-19 brought uncertainty to many peoples' lives (Sun et al., 2021). Even without contracting the virus, our participants experienced a new appreciation for life and appreciated being healthy and alive.

> COVID taught me a lot of lessons. One of them is that life is shorter than we know. For that reason, we should treat ourselves and our loved ones with love and respect, because we might not live another day. I always believed in a saying in Arabic, "Nothing is forever" which is true. I am not the same person that I was, nor is the world the same after COVID. The lesson I learned is to enjoy the small moments because they are what life is all about.

Acquiring New Skills

Participants in prior studies reported changes in priorities and attitudes towards life (Sun et al., 2021). In this study the long period of online classes resulted in the students seeking to acquire new skills while trying to stay busy.

> The pandemic gave me the opportunity to explore myself and learning about new capabilities and developing my energies more than ever before. At the same time, we follow up on our daily life and commitments, whether it is work, study, or family life in a new way. Since the beginning of this crisis, I have been searching through the Internet more than ever, learning about different topics, the most important of which is business, and improving my drawing skills I keep studying to catch up on university subjects.

Keeping busy and trying to improve oneself during a time of crisis is a coping mechanism (Gan & Flores, 2021). Participants tried to use the time at home to find meaningful ways to spend their time and used various instruments (online courses, apps, videos) that would help them to improve.

> COVID-19 changed a lot in my lifestyle because during the pandemic I have been more focused in myself without any distraction. First, I started to attend a lot of online courses which effected on my skills as interior designer, also I became more managed on my time, and I work effectively in a short time which also impacted the amount of work I am able to do now.

Acceptance of Fate

Participants expressed the influence of religion and faith on an ongoing basis. This is unsurprising given the fact that Saudi Arabia is a, hierarchical conservative-religious country. Participants mentioned their faith in God as important during the pandemic and that they accepted their situation as something that was God-given. This is in keeping with prior studies with participants who are from a strong faith-based context. Religion may play an important role as a coping strategy when dealing with traumatic events such as Covid-19 (Okafor et al., 2022).

> Covid-19 made me focus on what is laid out for us in life by god. It also made us understand how blessed we were, and now I am sure that each one of us knows this blessing and how to thank god for it.

Discussion

In keeping with prior studies (Davis et al., 1998; Davis & Nolen-Hoeksema, 2001; Dominick et al., 2021; Son et al., 2020), the participants reported experiencing PTG and viewed the consequences of the pandemic as period of change and renewal, both of their worldviews and of personal growth. The young women strived to find meaning in the losses they had experienced, reporting undergoing positive changes. This was evident even if they did not experience major losses such as the death of family members While personal growth is not only experienced after traumatic events or existential crisis, whenever it occurs it can make people shift their focus to things that seem more meaningful and important. For example, like friendships, family relations or lifestyle changes (Weir, 2020, June).

While the majority of the participants experienced the pandemic as a stressful and traumatic event, they were able to develop different coping strategies to improve their psychological health and overall well-being. As reported in similar studies, developing new hobbies and interests as well as spending more time with family members and spending time on social media were named as coping strategies. Similarly as reported

by Dominick et al. (2021) the participants in our study reexamined core beliefs and values and focused on their own strength and capabilities. Saudi Arabia is recognized as a devoted Islamic society therefore it is unsurprising the role of religion played a greater role in our participants' experience than has been reported by college student in some other contexts (Gan & Flores, 2021). Whether by strengthening social relationships or focusing on new values and goals, the participants in this study responded to the individual stresses of lockdowns, social distancing, and the multiple uncertainties with an appreciation of individual growth based on spirituality. The sense of having grown and become stronger as a result of the pandemic was expressed by many of our participants, but also the simple realization that one has survived the crisis and is now open to new opportunities.

Prior studies (Agbing et al., 2020; Son et al., 2020) have indicated that supportive, highly positive environment and social relationships play a major role in the enhanced ability to cope with traumatic experiences and regain an improved quality of life. Our students particularly valued the close bond with family and the additional time spent with them. As was the support of friends. However, there was an identified shift in perspective. With the sweeping changes brought about by the pandemic in addition to family there was also a recognition of the significance of meeting their own needs. This change in perspective was perceived as an expression of their own strength. As a tribal collective society, this is a significant shift. This change supporting the findings of Sun et al. (2021) as it revealed the development of insights into their own actions and thinking.

Conclusion and Limitations

The consequences of the Corona crisis are far too disparate to speak of a collective trauma without further research. Different social groups experience the pandemic differently (Weir, 2020, June). For some, the pandemic means deceleration and self-discovery; for others, distress and the loss of jobs and homes. However, the notion of personal growth ameliorates the view of harsh social and economic realities – shifting the focus to each person's individual responsibility. Personal strengths were the most reported element of PTG in this study and indicated that students experienced the pandemic as a life-changing event. Many participants re-focused on positive things like learning a new skill or using the time to change their diets and taking up new hobbies. There are implications for educators, counselors and policy makers when working with these young people. This would necessitate the development of positive psychological principles and emphasizing the PTG coping strategies identified in this study.

The study's limitations arose from Saudi Arabia's hard-lockdown restrictions. We were unable to conduct face-to-face interviews with our participants and effected the study completely online. Ease of access resulted in only female students participants in this study. It is recommended further research with male students be conducted prior to applying the findings to other groups. Our participants were all young females from

middle to upper class families who are able to pay for their education at a private university. In addition, the study was conducted in the Eastern Region of Saudi Arabia, a more developed and affluent region than other parts of the country. Further research is required before generalizing these findings to the wider Saudi Arabian population.

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