



Explaining Post-Traumatic Growth During COVID-19 Pandemic: A Qualitative Research

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Abstract

Introduction: The sudden onset and difficult consequences of COVID-19 pandemic are considered a trauma for healthcare. Despite its devastating consequences and psychological distress, it has also undergone positive changes. The main objective of this study was to explain post-traumatic growth among nurses and physicians during COVID-19 pandemic.

Methods: In this study, a descriptive phenomenological approach was utilized and semi-structured interviews were conducted with 17 nurses and physicians who were selected by purposive sampling. The interviews were analyzed using Colizzi's method.

Results: The findings of the study were summarized into two main themes: distress with four subthemes including corona and loss of life, psychological trauma, ambiguity and confusion about the career path, environmental and interpersonal stress, and growth with four subthemes including alternative ways to overcome trauma, promoting interpersonal relationships, empathy in treatment, and finding meaning.

Conclusion: The results of the present study revealed post-traumatic growth played an important role in maintaining the mental health of nurses and physicians beyond traumatic coronavirus pandemic. It is hoped that this study will encourage further exploration and examination of this subject and interventions for all groups of healthcare.

Keywords: Nurses and physicians, COVID-19, Post-traumatic growth, Qualitative research

Introduction

At the end of December, 2019, an outbreak of the novel coronavirus disease (COVID-19) of unknown etiology was gravely threatening the health, safety, and life of people, and World Health Organization (WHO) announced the COVID-19 outbreak as a

pandemic (1). The COVID-19 pandemic was so unexpected that the psychological catastrophe of COVID-19 is considered as a traumatic event (2, 3). Sudden collapse of core beliefs and assumptions of people about themselves and the world around



them can adversely affect their coping strategies, mood, cognition, and interpersonal relationships, contributing to widespread emotional distress (4).

Nurses and physicians are adversely affected by such changes while they can play a vital role in prevention and treatment of this disease (5). They are more vulnerable to stress of an infectious disease outbreak in the line of their duties (6). Healthcare workers exposed to unexpected infectious diseases have more stress, depression, and anxiety. They are also at higher risk for post-traumatic stress during the COVID-19 pandemic that affects the most important aspects of their lives (7).

Interestingly, in addition to such repercussions, there has been growing evidence that post-traumatic growth (PTG) or positive psychological changes can also occur following some significant life-threatening events despite suffering a worldwide traumatic pandemic (8, 9). PTG can be defined as the “positive change that an individual experiences as a result of the struggle with a traumatic event” (10). PTG can occur in five dimensions including greater appreciation of life, warmer and more intimate relationships, greater sense of personal strength, recognition of new possibilities, and spiritual development (11). According to Tedeschi and Calhoun (12), PTG is the independent variable of traumatic stress, meaning that a person can simultaneously experience growth and distress during a stressful event. The results of a study showed positive changes occurred in nurses caring for COVID-19 patients. It was also indicated that it was possible to transcend this unique experience as levels of self-regulation and resilience increased (13). Taku also found that physicians who had higher levels of PTG, experienced lower levels of burnout in their work environment (14).

As mentioned above, a high stressful event like the COVID-19 pandemic, can have positive psychological impacts despite its high risk for the healthcare workers. Although many studies have pointed to the effects of post-traumatic stress, there is a lack of research that has found profoundly positive changes in healthcare workers during pandemic crisis.

However, to the best of the researchers' knowledge, there have been no studies on the COVID-19 pandemic that have explicitly explored positive experiences in the healthcare performance. Therefore, the main objective of this qualitative study was to explain Iranian nurses and physicians' lived experiences of post-traumatic growth in coronavirus pandemic. This research can lead to rich insights into the impacts of COVID-19 adversity, and by designing or implementing effective interventions can improve

the career satisfaction of healthcare.

Methods

This research was carried out based on a qualitative descriptive phenomenological approach that can analyze and specify various aspects of a particular phenomenon from the perspective of individuals (15). At first, ethics approval was granted by the Ethics Committee of University of Isfahan (IR.UI.REC.1399.049). Then, a sample of 17 volunteer participants living in Iran was selected through purposive sampling (Table 1). The only inclusion criterion was to have working experience during COVID-19 pandemic in the hospitals.

Data were collected through semi-structured interviews from August 21 to September 17, 2020. At the request of the participants, all interviews were conducted via online video call to prevent the possibility of transmitting the virus in the hospital. The outline of interviews was designed based on previous literature and consulting with experts. Each interview started with a general question like “Could you please tell me about your experience from the beginning of facing the announcement of the COVID-19 pandemic?” “How did this event affect your career and personal life?” “What aspects of this incident did you find unpleasant?” “Have you experienced any positive changes, if yes in what areas?” The interviews continued and lasted approximately 45 to 70 minutes with more exploratory questions and all interviews were recorded. The sampling process continued until data saturation and a total of 17 people were interviewed.

The analysis was conducted according to Colaizzi's seven-step method, which is a specific analytical method of interpretive phenomenology (16). All data were analyzed through MAXQDA qualitative software. First, after recording interviews, transcription process began. Second, the initial codes appeared, which showed the main content of sentences. Third, they were classified into categories with a common concept. Fourth, common classes were analyzed and grouped as subthemes and fifth, they were combined into major themes to gain a full description of the phenomenon. Sixth, the thematic map was drawn in the software. Seventh, the credibility, transferability, dependability, and conformability were achieved to ensure trustworthiness using Lincoln and Guba's (17) criteria. For reaching these criteria, the interviewer's interest in the subject of study and expertise in the phenomenological method was important. Moreover, sufficient time was allocated to establish good relations with individuals and collect data. The results of the analysis were presented to the interviewees to ensure if they agreed with the coding process.

Table 1. Participant Characteristics (N=17)

Participant No.	Age	Gender	Marital status	Designation in COVID19 response	Years in service
P1	40	Female	Married	Emergency Medicine Resident	16
P2	43	Female	Single	Specialist in infectious and tropical diseases, Subspecialty in control of nosocomial infections	17
P3	43	Male	Married	Master of nursing	18
P4	43	Male	Married	Emergency medicine specialist	18
P5	48	Female	Single	Emergency medicine specialist	7
P6	53	Female	Married	Emergency medicine specialist	5
P7	39	Female	Married	Bachelor of Nursing	12
P8	36	Male	Single	Master of nursing	15
P9	33	Male	Single	Emergency medicine specialist	5
P10	53	Male	Married	Physician	27
P11	33	Female	Married	Emergency medicine resident	5
P12	35	Male	Married	Specialist in infectious and tropical diseases	5
P13	38	Male	Married	Physician	10
P14	29	Male	Single	Emergency Medicine Resident	5
P15	48	Female	Married	Emergency Medicine Resident	21
P16	43	Female	Single	Emergency medicine specialist	15
P17	46	Male	Married	Emergency Medicine Resident	18

Results

This qualitative inquiry aimed at exploring the Iranian nurses and physicians' lived experiences of distress and growth in traumatic coronavirus pandemic. The two main themes of *distress* with four subthemes including corona and loss of life, psychological trauma, ambiguity and confusion about the career path, environmental and interpersonal stress, and *growth* with four subthemes including self-reliance to overcome trauma, promoting interpersonal relationships, empathy in treatment, and finding meaning emerged that are summarized with exemplar quotes below.

Distress

Most participants believed COVID-19 pandemic caused psychological distress in them, especially in their workplace environment. Some of the participants underwent trauma of the event experiencing more negative psychological changes than others due to underlying conditions.

Corona and Loss of Life

Seven participants experienced emotional distress due to a previous history of obsession, depression, and anxiety, as well as the death of patients and medical staff and having no opportunity to mourn the death of their close colleagues. All of these reasons can lead to complex emotions that shatter one's life. For instance, Participant 1 said, "I never thought COVID-19 would lead to a catastrophe. My life would be made hell after the outbreak. My obsession comes back again. If I touch anything, I should start disinfecting the house". Participant 9

also said, "I regret the sudden loss of my close colleagues and I do not even have the opportunity to mourn their death because I am at the forefront of the COVID-19 response".

Psychological Trauma

Most participants experienced psychological trauma such as extreme fatigue, fear of COVID-19 infection by contacting patients at the hospital emergency ward, explosive outbursts of anger and/or violence and helplessness, increased negative mood, suicidal ideation, and reduced quality of sleep during the pandemic. Participant 15 said, "Man has a limited capacity for enduring any kind of traumatic event. It is like a glass is filled to the brim and overflows. My state of fatigue and burnout now looks like this".

Participant 5 said, "There is always doubt among the personnel in the emergency department if patients are infected with COVID-19, leading to increasing the fear of the infection for health workers". Participant 2 stated, "Hospital corridors were like tunnel of death. The corpses were lying in coffins and lime was sprinkled on them. It was the most heart-breaking scene I have ever witnessed".

Ambiguity and Confusion about the Career Path

Five participants confirmed the confusion and ambiguity in their career path, especially those who entered the field without interest. As a result, some of them proceeded with a suspicion of resignation or the decision to retire early, and did not have any plan for their future working lives. For example, Participant 17 said, "I feel incompetent at work; I

feel really useless at what I do and I can't even make a future for myself. I cannot stand all that pressure at work". Participant 4 also said, *"I would rather retire early than suffer from burnout"*.

Environmental and Interpersonal Stress

Most participants experienced environmental and interpersonal stress during the pandemic such as behavioral duality, the contradiction between personal and work life and between saving the life of a patient or saving their own lives, and the effect of the negative attitude of family towards such a crisis.

For instance, Participant 14 said, *"People are afraid of us and we are afraid of COVID-19 patients. On the other hand, we heard that healthcare workers are the angels of saving humanity from corona, but when the internet taxi driver found that I would go to hospital, he rejected my request"*. Participant 11 also stated, *"I have a colleague whose family members told her that she should live in the basement of the house because of her job and she has no direct contact with them. It's unbelievable to hear. The hardest moment of my life was when I faced my child crying and trying to hug me but I rejected his hug"*.

Growth

Although COVID-19 led to distress, the Iranian medical staff believed that positive changes occurred in their lives as a result of the COVID-19 pandemic that kept them safe from this traumatic event and they began a new life.

Alternative Ways to Overcome Trauma

About five participants used music, reducing work shifts, seeing a psychologist, setting a time to rest at home, and consulting with their supervisor for selfcare in order to achieve active acceptance by coping with and managing stress. In other words, despite the stress and tension, they performed their assigned tasks well. For example, Participant 3 said, *"It is important that a person can manage stress in his working environment and at the same time perform his assigned tasks. When something bad happens, we must accept it, but instead of being passive and aggressive, we should plan and evaluate it actively. When I am at the height of my frustration, I benefit from consulting with my supervisor"*.

Promoting Interpersonal Relationships

Some participants believed that physical distancing during pandemic has led to promoting the quality of interpersonal work relationships. Getting the emotional support from family members and friends not only reduces stress, but also increases the intimacy and closeness in relationships. Moreover, the improvement of educational relationships related to work using online meetings and increasing enthusiasm for teamwork are some examples of changes in the relationships. For instance, Participant 2 said, *"I realized that in the past my behavior was not such that I could accept myself, but now I have more self-acceptance"*. Participant 10 said, *"My parents felt worried about me and called me more. My friends sent me messages to recommend me take care of myself and said we pray for you. These are instances of emotional support"*. Participant 12 said, *"I made an intimate relationship with my colleagues and students. I refrain from the degree of seriousness and harshness governing the medical team. I would like to change our work and education system"*.

Empathy in Treatment

Nine respondents pointed to the effect of empathy in treating COVID-19 patients and increasing their strength. For instance, Participant 6 said, *"When I was infected with COVID-19, I realized that patients needed something beyond treatment. I was very empathetic with my patients. I listened well to the story of their infection. I understood all their thoughts and feelings. When I took patient histories, they felt confident, and I felt reciprocally helpful"*.

Finding Meaning

Many participants believed that they found a positive feeling of starting a new life after the outbreak, and considered it an indication of making their life more meaningful. Increased appreciation of life, prayer and supplication, increased self-reflection, and more commitment to the career are significant blessings from COVID-19. Participant 13 said, *"I considered COVID-19 as a double-edged sword in terms of both positive and negative aspects. A revolution took place inside me. There is a spiritual dimension to my life that is not comparable to the past. It makes me closer to God and I realized that I must appreciate every moment of my life"*. Participant 7 also said, *"I experienced life*

as being easier than I felt it was in the past. I realized my values”.

Discussion

The purpose of the current study was to explore Iranian nurses and physicians' lived experiences of distress and growth in traumatic coronavirus pandemic. There is no comparable qualitative research in Iran and this paper is the first Iranian study that focuses on this target group at time of COVID-19 outbreak.

The results of this study suggest that most of the participants experienced psychological distress due to the severity of the stress and tension caused by the COVID-19 pandemic, which was consistent with the results of previous studies (18-20). The results of this study demonstrated that healthcare workers experienced psychological distress such as anxiety, social isolation, and role conflicts in their lives. Interestingly, in the present study, the participants stated that the severity of psychological distress was higher in physicians and nurses who had a previous history of psychological distress. The occurrence of various psychological damages during the pandemic was detected as the unknown consequence of the traumatic event as intrapersonal and interpersonal relationships were affected, which is in line with the results found by Singh et al. (21). The individuals in this study expectedly reported intensive work stress as well as confusion and ambiguity in the career path by being unable to control the patients' conditions, which is consistent with previous studies (22, 23). However, another outstanding finding of this research was having doubt about the continuation of the medical profession as a career path. Some participants had a great sense of satisfaction with their career due to its effectiveness in pandemic, as a traumatic condition, leading to positive changes. Thus, in this study, some participants experienced severe psychological distress due to fear of the COVID-19 infection and death, but the majority of them could cope with the stress caused by COVID-19 using a variety of coping skills, leading to increasing their self-reliance, which was in line with the results of the study by Page et al. (24). Besides, this result is consistent with the findings of previous studies (11, 25, 26) showing positive psychological changes occurred in nurses as the post COVID-19 growth. Therefore, in this study, the experiences of healthcare workers facing the COVID-19 pandemic indicated occurrence of PTG. As a result of the struggle with trauma, PTG consists of more resilience and re-evaluating plans, openness to new experiences, a deeper appreciation for life and for

each other, enriched relationships and increased passion about others, and experiencing an evolved spiritual belief (27). Although all these dimensions may not be clearly tangible, a number of the study participants in the Iranian cultural and religious context experienced positive psychological change a few months after the COVID-19 pandemic.

The healthcare workers developing empathy in contact with patients beyond the treatment had a high sense of self-efficacy in performing their tasks and received positive feedback from the ambiguous treatment process of patients. This empathy was also reflected in relationships with medical staff in a such way that they showed higher levels of perceived social support and more intimacy in their relationships, which exerted a positive effect on the work and education system. These findings are also consistent with the results of previous studies (28). The other important finding of this research was development of positive spiritual changes. According to religious beliefs in Iran, people got a positive feeling of starting a new life after the COVID-19 outbreak, and considered it an indication of making their life more meaningful. This was in harmony with the study of Rabelo et al. and Haghanizemeydani et al. (29, 30) suggesting that spiritual dimension served as a sublimation mechanism among health staff in such societies.

One of the strengths of this study was its large population that can increase trustworthiness of data in qualitative methods. Moreover, the sample was selected from several COVID-19 wards of Iranian hospitals. One limitation of this study was that the sample composition was uneven with 17 nurses and physicians. However, the authors did not aim to compare experiences of nurses and physicians.

Conclusion

The investigation of experiences of medical staff including physicians and nurses indicated that in addition to challenges of working in COVID-19 wards and psychological distress, they can make their life more meaningful, leading to post-traumatic growth. Therefore, it is necessary to increase training on psychological distress for medical students and healthcare staff during the in-service in order to cope with traumatic events like COVID-19. On the other hand, strengthening the spirituality, self-sacrifice, and altruism can have a long-lasting impact on society. Moreover, teaching coping strategies to maintain mental health and manage stress and intervention skills during a crisis are among the factors that help the healthcare staff care for COVID-19 patients to increase their

motivation to endure a painful or difficult situation.

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Conflict of Interest

The authors declared no conflict of interest.

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