The Relationship Between Perceived Support and Post Traumatic Growth Among Nurses During the COVID-19 Pandemic

Anna Nieman
University of Arkansas, Fayetteville

The Relationship Between Perceived Support and Post Traumatic Growth Among Nurses

During the COVID-19 Pandemic

Anna Nieman

Eleanor Mann School of Nursing, University of Arkansas

Mentor: Dr. Patton

Committee Member: Kristina Simpkins-Spain

May 2, 2022

Abstract

Background: Nurses continue to experience significant challenges related to the COVID-19 pandemic, putting them at risk of occupational stress, burnout, and turnover. The post-traumatic growth model focuses on growth and knowledge that comes from experiences of stress and trauma.

Aim: Identify post-traumatic growth (PTG) in a population of nurses affected by the COVID 19 pandemic.

Method: PTG was measured by the Post-Traumatic Growth Inventory, a 21-item questionnaire with five factors: relating to others, new possibilities, appreciation of life, personal strength, and spiritual change. Participants (n=22) responded on a 6-point Likert scale, 0 for no change and 5 for great degree of change. The total score ranges from 0 to 105, with higher scores indicating higher levels of PTG.

Results: 22 nurses completed the survey. Ages ranged from 23 to 61 with the mean of 34 years. Years of experience ranged from 1 to 38 years with a mean of 8.6 years. The mean PTG scores were as follows: Relating to others 3.50; New possibilities 3.65; personal strength 4.0; spiritual change 3.05; appreciation of life 4.04. The total PTG scores ranged from 22 to 96, mean 53.05 sd 20.1. Previous studies reported mean item scores ≥ 3 reached moderate and above levels of PTG (Cui et al., 2021, Jansen et al., 2011). Four common themes were identified after interviewing seven nurses on the frontlines of the pandemic: learning on the go, need for PPE, better compensation, and mental health resources.

Conclusions: The PTG of responding nurses was moderate. Programs that introduce PTG can help build resilience and expand coping skills of nurses during times of crisis, protecting them from burnout and enhancing job satisfaction and retention.

Introduction

Courageous, brave, heroic, and selfless are just a few of the words that have been used to describe the people working on the frontlines of the COVID-19 pandemic. Although the respect is appreciated, words can only account for so much, and the reality is that frontline workers, specifically healthcare workers, are emotionally and physically drained. Burnout is a term used to describe the physical and emotional exhaustion that develops when a person has a "prolonged response to chronic emotional and interpersonal stressors" (Friganović et al., 2019). Healthcare workers, particularly nurses, work in high stress environments characterized by long hours and challenging decisions, which have been heightened by the stress and anxiety of the COVID-19 pandemic.

Job satisfaction is often associated with work environment, work conditions, and pay, which can also be linked to the incidence of burnout syndrome. The Maslach Burnout Inventory is a scale used to assess burnout syndrome according to three categories: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 1996). The first category, emotional exhaustion, refers to the "feelings of being emotionally overextended and exhausted by one's work" (Maslach et al., 1996). Depersonalization occurs when a person feels indifferent towards work, which can lead to negative effects on behavior, motivation, etc. The last category is reduced personal accomplishment, which relates to one's feelings of success and competence (Maslach et al., 1996).

A study conducted by Shanafelt et al. (2020) identified 8 sources of anxiety among healthcare professionals during the pandemic, that were then characterized into five requests: hear me, protect me, prepare me, support me, and care for me. Employers fulfilling these requests, along with perceived support can contribute to post-traumatic growth (PTG) in nurses.

Cui et al. explores the concept of post-traumatic growth as it pertains to the COVID-19 pandemic. PTG is defined as "positive psychological changes after an individual experiences traumatic events" (Cui et al, 2021). The purpose of this study was to survey and interview registered nurses who have been on the frontlines of this pandemic and determine factors that can contribute to post-traumatic growth, especially those that deal with perceived support from their employers during the COVID-19 pandemic.

Literature Review

The reviewed studies resulted in a combined group that consisted of over 50,000 nurses and healthcare professionals from numerous countries. One study was a systematic review of 29 articles that examined 31,523 nurses from countries such as the United States, Saudi Arabia, Brazil, Thailand, Iran, Turkey, China, and France (Friganović et al., 2019). Another systematic review examined 38 articles that involved 18,705 nurses. This study explored factors such as stress and burnout that influence nurse resilience (Yu et al., 2019). Labrague and de los Santos (2020) conducted a cross-sectional study on 261 frontline nurses in the Philippines. Shanafelt et al. (2020) interviewed 69 physicians, nurses, advanced practice clinicians, residents, and fellows to determine their fears and requests related to the coronavirus pandemic. Another systemic review relates the prevalence of work stress and burnout among nurses with the working environment and other factors, such as gender and family obligations, work relationships, and management styles (Jennings, 2008). The other four articles are cross-sectional studies that examine major stressors, trauma, coping strategies, and post-traumatic growth among nurses related to the COVID-19 pandemic (Chen et al., 2020) (Ali et al., 2020) (Giménez-Espert et al., 2020) (Cui et al, 2021).

In the systematic review by Friganović et al. (2019), many of the articles used the Maslach Burnout Inventory to examine the effect of burnout on job satisfaction in nurses. One study concluded that "16% of nurses had high levels of burnout in all three dimensions" and that the highest degree of burnout was in the emotional exhaustion category. Another study included in the review found that nurses in high stress environments—emergency room and critical care units—reported higher burnout results than nurses in less stressful environments (Friganović et al., 2019). Similarly, another study explored the association of work environment with burnout and how that affects job satisfaction. The results concluded that "limited nurse autonomy, poor physician-nurse relationships, and poor control over nurses' practice" increased the level of burnout and, in turn, negatively affected their job satisfaction (Friganović et al., 2019). Each study included in the systematic review led to the conclusion that there is a high incidence of burnout among healthcare professionals, especially nurses. The issues that contribute to higher levels of burnout are often related to the work environment, relationships with coworkers, and nurse autonomy (Friganović et al., 2019). Similarly, Bonnie M. Jennings explores work and stress burnout among nurses as it relates to different factors. Interestingly, Jennings points out that stress is subjective to the person, given that a person's "perceptions and interpretations give meaning to events and determine whether events are viewed as threatening or positive" (2008). It is important to remember that certain factors can influence and increase one's stress; however, people handle stressful situations differently, which has been heightened by the stress of the pandemic.

Yu et al. (2019) explores the factors associated with nurse resilience as it relates to stress and burnout. In the study, resilience is defined as "a nurse's adaptability, capacity, and ability to solve problems and seek solutions" (Yu et al., 2019). Due to the stressful environment and high

workload that nurses experience, burnout is common. Nurse resilience is a factor that allows

nurses to overcome such challenges. This study focuses on exploring personal and work-related

factors linked to nurse resilience. The following scales were used to measure nurse resilience: the

Connor Davidson Resilience Scale, the Resilience Scale, the Stress Resilience Profile, and the

Dispositional Resilience (Hardiness) Scale Revised. The results of the studies suggest that

resilience had effects on both job demand factors (burnout, stress, workplace bullying,

anxiety/depression, posttraumatic stress disorder, and fatigue) and job resources (coping skills,

social support, self-efficacy, job satisfaction, job retention, and general wellbeing) (Yu et al.,

2019). There were no consistent results on whether personal and demographic information affect

nurse resilience. Resilience was negatively associated with burnout and anxiety/depression,

whereas it was positively associated with coping skills and self-efficacy (Yu et al., 2019).

Based on numerous studies, it is known that nurses work in a high-stress environment,

which can lead to burnout quickly. The current pandemic, however, is a major stressor that

greatly affects the mental status and job satisfaction of nurses, which is examined in the

remaining studies. Labrague and de los Santos (2020) completed a cross-sectional study

involving 261 frontline nurses. Three 5-point Likert scales were used to complete the study: the

fear of covid-19 scale, the job stress scale, and the job satisfaction index. The statements "given

the current situation, I am thinking about leaving nursing as a profession" and "given the current

situation, I am thinking about leaving this healthcare facility" were used to assess the intent to

leave the professional and/or organization (Labrague & de los Santos, 2020). The results suggest

that a higher level of fear of COVID-19 is associated with "decreased job satisfaction, increased

psychological distress, and increased organizational and professional turnover intentions"

(Labrague & de los Santos, 2020). A study performed in Alabama recognizes five stressor

domains: stress from taking care of patients, stress from assignments and workload, stress from

personal life, friends, and colleagues, stress from lack of knowledge about COVID-19, and stress

from the environment (Ali et al., 2020). Results from the descriptive analysis suggest high

percentages of nurses reporting increased stress due to the pandemic, in relation to each stressor

domain. For example, "70% (n=76) of nurses are concerned about getting more infected

patients," "74% (n=81) of nursing staff are worried about getting infected," "82% (n=89) of

nurses are worried that their families will get infected," and "77% (n=84) of participants were

concerned with the lack of specific treatment for COVID-19" (Ali et. al, 2020).

One study emphasizes Karasek's model, which is a theoretical model that explains

occupational stress as an "imbalance between psychology and demands at work and the control

level or resources that the employee has" (Giménez-Espert et al., 2020). This imbalance has been

heightened during the COVID-19 pandemic, which is a current public health emergency and has

created more specific demands among nurses. The descriptive correlational study analyzes data

from a self-completed questionnaire of 92 nurses in Spain. The most statistically significant

correlations determine that resources, measures, and information correlated positively with job

satisfaction during the COVID-19 pandemic. A consistent finding is that when nurses are

provided with "frequent and evidence-based information from hospital management" they

expressed "less anxiety about the pandemic" (Giménez-Espert et al., 2020).

Multiple findings suggest that nurse resilience and coping strategies are associated with

"posttraumatic growth" (PTG) during the pandemic (Chen et al., 2021). Chen et al. conducted a

cross-sectional large-scale survey on posttraumatic growth related to the pandemic using the

Trauma Screening Questionnaire (TSQ), the Maslach Burnout Inventory-General Survey (MBI-

GS), and the Posttraumatic Growth Inventory-Short Form (PTGI-SF). Results from this study

revealed that 13.3% of the 12,596 surveyed nurses "had symptoms of trauma," while 15.2% of nurses working in intensive care units or COVID-19 units "exhibited symptoms of trauma" (Chen et al., 2021). Long-term posttraumatic stress is an increasing fear among nurses, which calls for active support from leaders, adequate staffing needs, and mental health resources. Cui et al. (2021) also studied PTG among nurses during the pandemic and concluded that nurses with over ten years of work experience, psychological intervention or training during the pandemic, confidence about frontline work, and "deliberate rumination" about their experience increased PTG (Cui et al., 2021).

This review of literature implies that the COVID-19 pandemic has heightened the stress, burnout, and challenges that nurses face daily; however, these challenges can lead to growth when organizations listen and respond to the needs of their nurses, rather than ignoring their concerns. It is essential that healthcare leaders and administration provide adequate resources, training, and communication to fulfill the requests of their staff in order to prevent severe psychosocial distress and to contribute to post-traumatic growth.

Methodology

This mixed method study consists of a quantitative questionnaire and qualitative data collection consisting of interviews. IRB approval was obtained, and all participants agreed to participate in the survey and had the option to participate in a recorded interview. Participation was voluntary and participants had the right to withdraw at any time without penalty. Data was collected by surveying registered nurses who have worked during the COVID-19 pandemic. The survey was sent by email and included twenty-one survey questions from the post-traumatic growth survey. The post-traumatic growth survey includes five factors: relating to others, new possibilities, appreciation of life, personal strength, and spiritual change. Twenty-two

participants (n=22) responded on a 6-point Likert scale, 0 for no change and 5 for a great degree

of change. The total score for post-traumatic growth ranges from 0-105, with higher scores

indicating higher levels of post-traumatic growth. The complete survey is included in Figure 1.

Post Traumatic Growth Inventory

Client Name:_____ Today's Date:_____

Indicate for each of the statements below the degree to which this change occurred in your life as a result of the crisis/disaster, using the following scale.

0 = I did not experience this change as a result of my crisis.
1 = I experienced this change to a very small degree as a result of my crisis.
2 = I experienced this change to a small degree as a result of my crisis.
3 = I experienced this change to a moderate degree as a result of my crisis.
4 = I experienced this change to a great degree as a result of my crisis.
5 = I experienced this change to a very great degree as a result of my crisis.

Possible Areas of Growth and Change	0	1	2	3	4	5
1. I changed my priorities about what is important in life.						
2. I have a greater appreciation for the value of my own life.						
3. I developed new interests.						
4. I have a greater feeling of self-reliance.						
5. I have a better understanding of spiritual matters.						
6. I more clearly see that I can count on people in times of trouble. Text						
7. I established a new path for my life.						
8. I have a greater sense of closeness with others.						
9. I am more willing to express my emotions.						
10. I know better that I can handle difficulties.						
11. I am able to do better things with my life.						
12. I am better able to accept the way things work out.						
13. I can better appreciate each day.						
14. New opportunities are available which wouldn't have been otherwise.						
15. I have more compassion for others.						
16. I put more effort into my relationships.						
17. I am more likely to try to change things which need changing.						
18. I have a stronger religious faith.						
19. I discovered that I'm stronger than I thought I was.						
20. I learned a great deal about how wonderful people are.						
21. I better accept needing others.						

Figure 1.

The registered nurses also had the option to be interviewed. Those who agreed were then

interviewed over zoom or on a phone call using a semi-structured interview guide (Figure 2).

Figure 2.
Semi-structured interview guide:

1. I am going to ask you a few questions about your work as a nurse during the pandemic – your concerns, what leaders (hospital administration, nursing leaders, charge nurse) did to address your concerns and support you, and what you think would have been helpful.

2. Did you feel like that you were listened to? That your concerns based on your frontline experience and expert perspectives were considered?

3. Did you feel that adequate personal protective equipment, access to testing and vaccines, and resources to help you avoid taking the infection home to your family was provided?

4. Did you feel that you were provided with adequate training to prepare you to give competent nursing care?
5. Did you take on any new duties?
6. Did you think the communication provided was helpful and timely?

7. Did you feel that you received adequate support for your personal and family needs?
   Long work hours
   Uncertainty
   Exposure to patient with COVID-19
   School and/or day care availability

8. Did you feel that the organization did or would have cared for and supported you if you developed infection or needed to be quarantined?
9. What kind of support was needed?

Interviews were recorded and transcribed to determine common themes and requests from nurses

regarding support from organizations and hospital administration.

Results

Responses were received from twenty-two nurses with varying ages and years of experience

as a nurse. Ages ranged from 23 to 61 with the mean of 34 years. Years of experience ranged

from 1 to 38 years with a mean of 8.6 years. The mean PTG scores were as follows: Relating to

others 3.50; New possibilities 3.65; personal strength 4.0; spiritual change 3.05; appreciation of

life 4.04. The total PTG scores ranged from 22 to 96, with a mean 53.05 and standard deviation

20.1. Previous studies reported mean item scores ≥3 reached moderate and above levels of PTG

(Cui et al., 2021, Jansen et al., 2011).

Seven nurses agreed to participate in a semi-structured interview that involved nine questions

regarding work during the pandemic. Each nurse expressed their concerns and opinions on

provided support while working on the frontlines of the pandemic. Of the interviewees working

during the pandemic, two worked in nursing education, one worked in the emergency

department, two worked in the ICU, one worked the hematology/oncology unit, and one worked

as a wound care nurse. The years of experience in nursing ranged from 10 months to 14 years.

Four themes were identified from the interviews: learning on the go, need for PPE, better

compensation, and mental health resources.

Each nurse agreed that rules were constantly changing, and everyone was learning on the go

throughout the pandemic, which often led to abrupt changes in protocol and lack of

communication. Each nurse agreed that communication was helpful; however, at the beginning

of the pandemic new information was coming out daily, and everyone was constantly learning

new ways of treatment. Learning on the go led to a lack of specific training for COVID positive

patients. "As a very young nurse I was running a unit," said a nurse with a year of experience

under her belt when her manager decided to make her charge nurse on a COVID stepdown unit.

Another nurse explained how stressful it was to float in between COVID positive patients and

oncology patients with suppressed immune systems, who would most likely face severe

consequences if infected. Two of the nurses with less than a year of experience were caring for

COVID positive patients with one day of training. This lack of training led to feelings of doubt

and blaming themselves when things went wrong. Floating between units is another

commonality described by multiple nurses, which is a result of the staffing crisis. Floating also leads to uncertainty and unknown territory, on top of taking on a different acuity of patients.

The need for PPE was another theme noted by each nurse. Four nurses stated they were regularly provided with PPE; however, three nurses described the stress of reusing PPE at the beginning of the pandemic. One nurse had to wear the same N95 until it eventually became so thin you could see through it. The same nurse was also given an N95 that didn't fit her, but it was all the hospital could offer at the beginning of the pandemic. Most of the nurses agreed that adequate PPE and access to vaccines has been provided for the past six months to a year, but this was not always the case.

When asked their requests for support, each nurse illustrated the need for better compensation for the new roles and responsibilities they took on during the pandemic. Nurses took on extra loads of patients, had an increased risk of bringing the infection home to family, witnessed an increase in patient deaths, and often took on duties of respiratory therapists, housekeepers, and phlebotomists, without significant changes in compensation, making it hard to support themselves when they needed it most.

Lastly, mental health support is something that each nurse brought up in their interview. Two nurses stated that their workplaces offered a limited amount of free therapy services, which gave nurses the ability to talk with a psychiatrist and set goals for self-care during the pandemic. However, multiple nurses were unaware of any mental health resources available to them throughout the pandemic and did not feel that anyone cared to offer these types of resources.

Discussion

The survey results revealed PTG scores ranging from 22-96, on 0-105 scale. This range suggests that many factors may affect the level of PTG, including age, years of experience, and

perceived training/support/communication from organizations. After interviewing seven nurses, their concerns and requests for support were examined, suggesting multiple areas of improvement for organizational and administrative support. When throwing nurses into a "hero" role, it is important to provide financial, physical, and psychological resources that will compensate for all that they have taken on to support the country through this pandemic. Nurses were expected to show up to work when most of the world stayed at home. Nursing has continually been named the most trusted profession; however, this reputation and praise from the public has not been met with proper compensation and treatment.

Cui et al. (2021) suggests that more nursing experience allowed experienced nurses to feel proficient in their "skills and competencies to respond to clinical emergencies," suggesting a higher level of PTG among experienced nurses, and a need to focus on the psychological status and coping abilities of nurses with fewer years of working experience (2021). The nurses that started out working in the pandemic were developing basic nursing skills while simultaneously facing staffing shortages, caring for COVID positive patients, and floating to units other than their home units. More experienced nurses, although still facing new challenges, already felt proficient in basic nursing skills, which could contribute to the higher levels of PTG in experienced nurses.

The burnout, turnover, and decreased job satisfaction of nurses discussed in the literature review has been emphasized by the toll of the pandemic. To combat these negativities, psychological and financial support were among the top requests of each interviewee. The public may not take into consideration the amount of stress, sadness, and loss that nurses have witnessed during the pandemic, leaving nurses to internalize these feelings. Nurses need ways to debrief and talk about their experiences to promote psychological growth and prevent burnout

and psychological trauma. Cui et al. (2021) illustrates the need for psychological intervention to "stimulate nurses' sense of mission and professional responsibility, generate positive psychological experience and help them achieve growth from frontline work." As mentioned in the literature review, resilience is a trait that is positively associated with coping skills and self-efficacy, both of which contribute to higher levels of PTG. (Yu et al., 2019). Psychological interventions, such as access to a psychiatrist or life coach to develop coping mechanisms, debrief experiences, and promote positive reflection can contribute to posttraumatic growth. Overall, the purpose of this study was to gain insight into ways that nurses have felt supported during the pandemic, or ways that they would've liked to be supported in order to promote PTG. The pandemic has been a turning point for the nursing profession, and it is time for hospitals and organizations to provide realistic support services and compensate for increased responsibilities to contribute to a more positive outlook on the nursing profession as a whole and prevent the burnout that many nurses are facing.

Limitations

The sample size of this study (n=22) was small in relation to the population of nurses, so results cannot be generalized for the entire population. The limited time frame of this study limited the number of responses received from the survey and the ability to interview a larger number of nurses. The COVID-19 pandemic is a newly researched topic within the last two years; therefore, the literature is constantly changing, which is another limitation of this study. There is still more to research to be done regarding the association between perceived support and PTG as nurses continue to work through the pandemic.

References

Ali, H., Cole, A., Ahmed, A., Hamasha, S., & Panos, G. (2020). Major stressors and coping strategies of frontline nursing staff during the outbreak of coronavirus disease 2020 (COVID-19) in Alabama. *Journal of multidisciplinary healthcare*, *13*, 2057–2068. https://doi.org/10.2147/JMDH.S285933

Chen, R., Sun, C., Chen, J., Jen, H., Kang, X. L., Kao, C., & Chou, K. (2020). A large-scale survey on trauma, burnout, and posttraumatic growth among nurses during the COVID-19 pandemic. *International journal of mental health nursing, 30*(1), 102-116. doi:10.1111/inm.12796

Cui P.P., Wang P.P., Wang K., et al. (2021). Post-traumatic growth and influencing factors among frontline nurses fighting against COVID-19. *Occupational and Environmental Medicine,78*: 129-135.

Fain, J. A. (2017). *Reading, understanding, and applying nursing research* (5th ed.). Philadelphia, PA: F.A. Davis Company.

Friganović, A., Selič, P., Ilić, B., & Sedić, B. (2019). Stress and burnout syndrome and their associations with coping and job satisfaction in critical care nurses: A literature review. *Psychiatria Danubina*, *31*(Suppl 1), 21–31.

Giménez-Espert, M., Prado-Gascó, V., & Soto-Rubio, A. (2020). Psychosocial risks, work engagement, and job satisfaction of nurses during COVID-19 pandemic. *Frontiers in public health*, *8*, 566896. https://doi.org/10.3389/fpubh.2020.566896

Jansen, L., Hoffmeister, M., Chang-Claude, J. *et al.* (2011) Benefit finding and post-traumatic growth in long-term colorectal cancer survivors: prevalence, determinants, and associations with quality of life. *British Journal of Cancer, 105*: 1158–1165

https://doi.org/10.1038/bjc.2011.335

Jennings, B. M. (2008). Work stress and burnout among nurses: Role of the work environment and working conditions. *Patient safety and quality: An evidence based handbook for nurses* (26). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK2668/

Labrague, L. J., & de Los Santos, J. (2020). Fear of COVID-19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of nursing management*. https://doi.org/10.1111/jonm.13168

Maslach C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory (3)*.

Shanafelt, T., Ripp, J., & Trockel, M. (2020). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *JAMA: Journal of the American Medical Association*, *323*(21), 2133–2134. https://doi.org/10.1001/jama.2020.5893

Yu, F., Raphael, D., Mackay, L., Smith, M., & King, A. (2019). Personal and work-related factors associated with nurse resilience: A systematic review. *International journal of nursing studies*, *93*, 129–140. https://doi.org/10.1016/j.ijnurstu.2019.02.014