**Shared Trauma During the COVID-19 Pandemic: Psychological Effects on Israeli Mental Health Nurses**

Abstract

Mental health nurses, tasked with constant care of patients undergoing mental health treatment, have faced unique challenges arising from the uncertain outcomes of the global COVID-19 pandemic. The psychological effects of the shared trauma on mental health nurses arising from the pandemic is the subject of this study. An online survey was used to examine personal levels of anxiety and concern, personal and national resilience, and posttraumatic growth among 183 mental health nurses. Overall, the study revealed moderate levels of concern and relatively low levels of anxiety, with significant negative correlations between personal resilience and levels of concern and anxiety. Higher levels of national resilience were related to lower levels of concern and anxiety, and there was a significant positive correlation between assessments of personal resilience and national resilience. A significant positive correlation was found between personal and national resilience and post-traumatic growth. Higher religiosity was associated with higher resilience, and higher professional seniority was related to higher posttraumatic growth. This study emphasizes the need for mental health policy supervisors to support mental health nurses by encouraging them and being attentive to their concerns. Special attention should be given to mental health nurses who have immigrated to Israel, are non-Jews or have less professional experience.

Keywords: shared trauma, COVID-19, mental health nursing, national resilience, posttraumatic growth.

Introduction

On March 11, 2020, The World Health Organization (WHO) declared COVID-19 a pandemic. By March 30, the disease had spread to much of the world (WHO 2020).

The COVID-19 pandemic has been experienced as a global traumatic event (Forte et al. 2020), and has caused a heavy psychological impact among medical workers and the public (Lai 2020). Like other medical personnel, mental health nurses have responded diligently to the special challenges posed by the pandemic.

Background

Mental health nurses routinely face concrete stressors and professional challenges in their workplace (Foster et al. 2019). Their stress is a product of their inherently demanding vocation, which involves being exposed to verbal and physical violence and other threats, and having to cope with patients’ suicidal ideations (Foster 2020).

 During the pandemic, mental health nurses found themselves in an unparalleled situation, defined as a shared traumatic reality, in which patients and therapists are simultaneously exposed to the same traumatic event (Baum 2010). This differs from mass trauma events that many have experienced, such as violent conflicts or terrorist attacks, with each person’s level of risk depending on their geographical location. In the current global pandemic, the level of risk of infection is similar for therapists and patients alike, and consequently the levels of personal distress are similar.

Shared traumatic reality can cause damage, but it can also induce change, with studies showing that a shared experience of a traumatic reality can lead to both positive and negative outcomes (Baum 2014). While nurses working in a shared traumatic reality may perceive their work as stressful and even traumatic, this reality may also spur posttraumatic growth (Lev-Wiesel et al. 2009), defined as positive psychological change, reported by an individual as a consequence of struggling with stressful life events’ trauma or highly challenging life situations (Tedeschi & Calhoun 2004; Tedeschi et al. 1998).

Kalaitzaki et al. (2020) reported that posttraumatic growth and resilience (defined by a lack of post-traumatic stress disorder following trauma) are personal assets and resources that empower people to cope.

Resilience has variously been constructed as an individual or collective capacity, or an interactive process between the person and the environment (Foster 2019).

National resilience is a much broader concept than individual resilience, relating to the sustainability and resilience of the larger society in a wide range of fields (Kimhi 2016). The National Resilience Index is based on four main social components: trust in the integrity of the government; trust in national institutions; belief in social solidarity; and patriotism (Ben-Dor et al. 2002).

To the best of our knowledge, this study represents the first time the psychological effects of the COVID-19 crisis on mental health nurses, who faced a shared traumatic reality and a stressful work environment, has been examined.We hypothesize that, as with other traumatic events, the COVID-19 crisis has had negative and positive psychological effects on mental health nurses in this shared traumatic reality.

In this study, negative psychological effects were assessed through analysing mental health nurses’ concerns and anxiety, and positive effects through analysing their personal resilience, national resilience, and post-traumatic growth.

**Methods**

Research Design

A cross-sectional study was carried out between from April 1 and 30, 2020. STROBE reports for cross-sectional studies (Vandenbroucke et al. 2007), were used in this study.

Participants: The research sample included 183 mental health nurses, all members of the Psychiatric Nursing Association in Israel. The participants worked at Israeli mental health centres, in psychiatric wards at general hospitals, and as community mental health nurses. Their ages ranged from 24–66 years old (M = 47.37, SD = 10.71) (Table 1).

Study Setting

Data collection: An online survey was sent to the registered members of the Israeli Psychiatric Nursing Association. This survey instructions included information on the purpose and significance of the study. Nurses were required to expressly agree to participate by clicking on the ‘Agree’ button before beginning the survey. Participation in the study was voluntary and anonymous. The study was approved by the IRB of XXX-XXXX Mental Health Medical Center (LH3/2020).

Analysis: To assess the negative effects of the COVID-19 pandemic on mental health nurses, we probed their concerns and anxiety. The questionnaire developed for this study assessed concern about the virus for themselves, for relatives, and for the larger economic and political situation. Examples items included: “How concerned are you about being affected by COVID-19?” and “How concerned are you for your ability to cope the disease if you get it?**”** (Cronbach’s α = 0.83). Eight questions were included, and answers were rated on a Likert scale of 1–5.

The degree of anxiety was assessed by with the seven-item Generalized Anxiety Disorder scale GAD-7 (scores ≥ 10 indicate likely generalized anxiety disorder) (Spitzer, Kroenke, Williams, & Löwe, 2006). In general, higher scores indicate higher anxiety levels. Scores were derived from the average response for all items (Cronbach’s α = 0.84).

To assess the positive psychological effects of the pandemic among mental health nurses, we examined personal resilience, national resilience and post-traumatic growth. We used the shorted version of the Connor-Davidson Resilience Scale (CD-RISC) (Campbell-Sills and Stein 2007), a self-report questionnaire of 10 items, using the Hebrew translation by Fridenzon (2011), to test for personal resilience. The questionnaire had convergent validity (Cronbach’s α = 0.88).

The National Resilience Questionnaire included 13 items on a scale ranging from 0, very low, to 5, very high. Example of items include: “In a national crisis, the entire Israeli society will be behind the decisions of the government and its leader” and “Israel is my home and I do not intend to leave it.” The internal reliability of the scale was measured at Cronbach’s α = 0.90. (Kimhi et al. 2019). The measure of national resilience was computed by the average score for responses.

Post-traumatic growth (PTG) was examined using the Questionnaire PTG-Inventory. The Hebrew translation by Laufer & Solomon (2006) of the original scale by Tedeschi and Calhhoun (1996) was used. This questionnaire, with 21 statements on the lifestyle and feelings of the examinee, evaluates positive changes reported by a respondent that occurred following exposure to a traumatic event. Responses to each statement indicate to what extent change has taken place in regard to a particular issue in the respondent’s life, on a 4-point Likert scale (1 = no change, 4 = significant change). The questionnaire has structural validity, internal consistency (for the overall score and for each scale separately), and test-retest reliability (Cronbach’s α = 0.92). The measure of post-traumatic growth was computed by the average of these items.

Data analyses were performed using SPSS Statistics 23 (IBM, 2015). We examined the descriptive statistics of the research sample and the main research variables. To test the research hypotheses, we used Spearman correlation analysis, one-way ANOVA analysis, and an independent sample t-test. To predict anxiety, personal and national resilience, post-traumatic growth, and the socio-demographic variables of the sample, a linear hierarchical regression analysis was performed.

Significance was set to *p* < 0.05.

**Results**

The results indicated that the level of concern for COVID-19 was moderate (M = 3.20), and the level of anxiety was relatively low (M = 1.50). The level of personal resilience was relatively high (M = 3.09), and the level of national resilience was moderately high (M = 3.44). The level of post-traumatic growth was moderate (M = 3.01) (Table 2).

Significant negative correlations were found between personal resilience and levels of concern (*rs* = -0.17, *p* < .05) and anxiety (*rs* = -0.24, *p* < .01), with a higher level of personal resilience associated with lower levels of concern and anxiety (Table 3).

In addition, significant negative correlations were found between national resilience and levels of concern (*rs* = -0.21, *p* < .01) and anxiety (*rs* = -0.14, *p* < .05).

Finally, we found a significant positive correlation between personal and national resilience (*rs* = 0.25, *p* < .01).

The results of a Spearman test on the relationships between personal and national resilience and post-traumatic growth are given in Table 4.

A significant positive correlation was revealed between personal resilience and post-traumatic growth (*rs* = 0.24, *p* < .01).

We also found a significant positive correlation between national resilience and post-traumatic growth (*rs* = 0.29, *p* < .01).

**Predictive model**

A linear hierarchical regression analysis was performed to predict anxiety, personal and national resilience, post-traumatic growth, and socio-demographic variables (Table 5).

Some socio-demographic variables could significantly predict national resilience (*F* (8, 176) = 6.10, *p* < .01). The regression coefficients show that predictors of religion and religiosity had a significant positive contribution, adding 18% to the model variance. Being Jewish and having higher religiosity were related to higher national resilience.

The regression for the prediction of post-traumatic growth and socio-demographic variables was significant (*F* (8, 176) = 3.61, *p* < .01). Religiosity and professional seniority had a significant positive contribution, adding 15% to the model variance. Higher religiosity level and higher professional seniority were related to higher post-traumatic growth.

**Differences in concern, anxiety, personal and national resilience, and posttraumatic growth by country of origin**

Differences in concern, anxiety, personal and national resilience and posttraumatic growth between participants according to whether they were born in Israel or elsewhere were examined with an independent sample t-test (Table 7).

We found significant differences between participants according to their birthplace within or outside of Israel in posttraumatic growth (*t* (181) = 2.44, *p* < .05). The level of posttraumatic growth was significantly higher among participants who were born in Israel than among those born elsewhere. There were no significant differences in concern, anxiety or personal/national resilience according to this factor.

**Discussion**

The COVID-19 pandemic presents an unprecedented opportunity to study the experience of mental health nurses experiencing a simultaneous dual trauma. These nurses must face both the pandemic’s stressors and occupational stressors. They fear for their own personal well-being as well as for the health of those close to them. Nurses are trapped between the desire to work, continuing with their routine, and fulfilling the role that defines them and gives them meaning, in spite of the stresses of the workplace, and the desire to care for their children, parents and those left at home. Shared traumatic reality has both negative and positive outcomes (Baum 2014), and this study examines both. We found that the COVID-19 crisis had negative and positive psychological effects on mental health nurses in this shared traumatic reality.

Thus, in April 2020, in the middle of the first COVID-19 wave in Israel, when public and health workers were expressing significant concerns about a new pandemic outbreak, the level of concern among Israeli mental health nurses was moderate, and their level of anxiety was relatively low. Their level of personal resilience was relatively high, the level of national resilience was moderately high and the level of posttraumatic growth was moderate.

Our findings differ from those of a study also conducted in Israel at the same time, which examined 503 Israeli citizens (Shapiro et al. 2020). However, that study included the general population and did not focus on health care workers. In that study, almost a quarter of the sample expressed high or very high levels of anxiety or worry (Shapiro et al. 2020), although levels of anxiety and worry specifically among mental health nurses during the actual pandemic were not evaluated. Moreover, similar to our results, Dekel and Baum (2010) found that the level of distress among hospital social workers who provided emergency mental treatment to victims after terrorist attacks in Israel was significantly lower than that in the general Israeli population. A similar trend was found among nurses and social workers in times of war (Lev-Wiesel et al. 2009). These findings may be related to the fact that mental health nurses, as mental health professionals, have sufficient therapeutic tools to enable them to cope with psychological stressors.

Focused coping strategies (*positive re-evaluation*, *positive approach*, *problem solving*, and *seeking social support*) were the ones most commonly used by mental health nurses working in public psychiatric hospitals (Tasaras et al. 2018).

Pruginin et al. (2017) found that mental health professionals who shared a traumatic reality when under missile attack in Israel developed adaptive coping mechanisms to ensure functioning. Self-care was linked to a strong individual concept of resilience (Foster 2019). Itzhaki et al. (2015) showed that resilience is an important factor in mental health nurses’ ability to cope with stressful situations.

Our results showed that higher levels of personal and national resilience are related to lower levels of concern and anxiety. Although national resilience has not been examined among mental health nurses, our findings are comparable to those of Kimhi et al. (2020), who found a negative correlation between three resilience scales scores (individual, community and national resilience) and anxiety among the Israeli Jewish public following intense periods of terror attacks. National resilience was significantly and negatively correlated with distress symptoms during the COVID-19 crisis (Kimhi et al. 2020). A comprehensive review of international literature examining resilience among mental health nurses has also found a negative correlation between personal resilience and anxiety in mental health nurses (Foster et al. 2019).

Consistent with Kimhi and Eshel (2009), we found a significant positive correlation between personal resilience and national resilience. Higher levels of personal resilience were related to higher levels of national resilience. Kimhi and Eshel (2009) indicated that personal resilience and national resilience significantly predicted both stress symptoms and posttraumatic recovery (Kimhi and Eshel, 2009). This positive correlation is important both theoretically and practically, enabling the preparation of the population for future pandemics and other catastrophes and the planning of large-scale interventions (Kimhi 2016).

Another positive result of this study that contributes to the literature is its finding of a relationship between personal resilience and posttraumatic growth. Studies of nursing students (Yıldız 2021) and healthcare workers (Kalaitzaki et al. 2021) in this pandemic have also revealed a positive correlation between resilience and posttraumatic growth. However, Itzhaki et al. (2015) did not find a correlation between resilience and posttraumatic growth among mental health nurses who were exposed to violence. Westphal and Bonanno (2007) argue that most people are resilient in the face of trauma, and resilient outcomes typically provide little need or opportunity for posttraumatic growth. A similar result was found Levine et al. (2009), who examined the interrelationships between resilience and posttraumatic growth in Israel.

To the best of our knowledge, the current study is the first to show a positive connection between national resilience and posttraumatic growth. Kimhi and Eshel (2009) argue that national resilience is the best predictor of post-traumatic recovery. A review of the literature indicates a rather small number of empirical investigations of national resilience and its association with antecedent variables (Kimhi and Eshel 2019). Tedeschi and Calhoun (1996) suggested that increased numbers of traumatic experiences would result in more positive changes reported by people. In line with Tedeschi and Calhoun (1996), we suggest that the more traumatic experiences a nation has, the more positive changes their citizens report. Israel has experienced many traumatic events over the years, which may contribute to greater national resilience.

This study’s finding of a moderate level of posttraumatic growth among nurses is consistent with the findings of several studies on nurses in a shared traumatic wartime reality (Lev-Wiesel et al. 2009), mental health nurses with exposure to violence (Ithaki et al. 2015) and frontline nurses during the COVID-19 pandemic (Chen et al. 2021; Pan Cui et al. 2021). Their role of being helpers, responsible for others, and needed by their patients at times of crisis, in addition to being acknowledged as an essential profession by the authorities and public, all served as sources of growth (Lev-Wiesel et al. 2009). Our results indicate that experiencing positive psychological change can coexist with a unique emergency situation like the COVID-19 pandemic.

In addition, our study found that the posttraumatic growth of mental health nurses is generally affected by religiosity and professional seniority. Although posttraumatic growth among mental health nurses is seldom examined, our findings are comparable to those of a meta-analysis that found clear relationships between religiosity and posttraumatic growth (Shaw et al. 2005), as well as those of a recent study conducted among nurses fighting COVID-19 that showed relationships between professional seniority and posttraumatic growth (Pan Cui et al. 2021). This could be attributed to additional years of abundant nursing and life experience, and of greater self-confidence and appreciation of life (Ogińska-Bulik et al. 2021). Shaw et al. (2005) highlighted the social support function of religious participation. According to Pargament (1997), religious coping contributes a special element that helps support a healthy response to situations in which subjects comes face to face with their limits and where their strength and degree of control are confronted with vulnerability and limitations, such as during the recent pandemic.

Finally, significantly greater posttraumatic growth was reported among participants born in Israel than among those born in another country. This association is consistent with the findings of Shapiro et al. (2020) who found that immigrants were more likely to both report anxiety and seek professional mental health services than were native-born Israelis during the COVID-19 pandemic. Bleich et al. (2006) also found that immigrants were less resilient to traumatic stress than native-born Israelis when facing long-term terrorism. Alternatively, the lower level of post-traumatic growth among immigrant mental health nurses may be influenced by the trauma of migration, which is always accompanied by a loss of social support. Understanding the unique nature of immigration trauma is essential to developing effective strategies for enhancing posttraumatic growth (Berger & Weiss 2003).

**Limitations**

Data collection occurred at the height of the first wave, when the subjects under the height of their work pressure, work, and therefore, their responsiveness was relatively limited.

**Conclusions**

The COVID-19 pandemic has added new challenges to the already stressful workplace, relational dynamics, and mechanisms of coping of mental health nurses. Little research has been published on this issue, and it would be useful for future research to focus on these nurses’ experiences and how they are affected by a shared traumatic realty.

Overall, this study describes the psychological effects of the COVID-19 pandemic among mental health nurses. These results highlight the importance of assessing psychological effects among mental health nurses, who are providing psychological assistance to patients who are themselves under severe psychological stress, intensified by the pandemic.

Health organizations should be sensitive to their nurses’ needs during crises, providing ongoing supervision and encouraging group support (Lev-Wiesel et al. 2009). Itzhaki et al. (2015) indicate the importance of enhancing staff resilience by increasing mental health nurses’ mutual support and commitment to each other.

Mental health nurses, like other health care workers, need mental support to enable them to care for their patients. To provide positive and constructive working conditions when under extreme stress, such as during the current pandemic, hospital and ward managers should encourage staff, support them, and be attentive to their concerns and needs, particularly those who are immigrants or non-Jews, and those with little professional experience. Ultimately, nurses cannot help patients rebound from adversity if they themselves are consumed by it themselves (McGee 2006).

Relevance for Clinical Practice

This study highlights critical factors in the work of mental health nurses during the major traumatic event of the COVID-19 pandemic. It is essential for clinical practice to learn and develop additional therapeutic coping tools to increase resilience and posttraumatic growth. Doing so can better equip mental health nurses to care for themselves and their patients during times of a shared traumatic experience. Establishing and implementing more effective policies in the workplace may contribute to the development and implementation of more effective responses to traumatic events for mental health nurses and their patients.

Funding Statement

This study was conducted without any outside funding.

Acknowledgment

The authors thank the mental health nurses who participated in this study.

Conflict of interest statement:

The authors declare no conflict of interest.

Author Contributions:

SD, GL and RS provided the conception and design, the data acquisition and the analysis and interpretation of data and agree to be accountable for all aspects of the work, ensuring that questions regarding the accuracy or integrity of any part of the work are appropriately investigated and resolved. SD and GL drafted the manuscript. SD and RS acquired, analysed and interpreted the data. SD, GL and RS critically revised the manuscript for important intellectual content and gave ﬁnal approval to the submitted version.

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‏ **Table 1: Characteristics of the sample of** **mental health nurses (N = 183)**

|  |  |  |
| --- | --- | --- |
|  |  | ***Characteristic*** |
| ***%*** | ***N*** |  |  |
|  35.0%65.0% | 64119 | MaleFemale | Gender |
|  |  |  |  |
| 55.7%37.7%3.8%1.6%0.5%0.5% | 102697311 | IsraelFormer USSRAmericaEuropeAsiaOther | Country of origin |
| 10.9%2.2%70.5%13.7%2.7% | 204129255 | SingleLives with a partnerMarriedDivorcedWidow | Family status |
| 55.7%4.9%8.7%47.5%1.09% | 69916872 | RNRN+ clinical course AcademicAcademic+ clinical course RN, MA | Nurse Education |
| 55.7%21.3%22.9% | 1023942 | Staff NurseDeputy Nurse or Head NurseNursing Director | Job description |
| 75.4%16.9%3.3%0.5%3.8% | 13831617 | JewishMuslimChristianDruzeOther | Religion |
| 62.3%28.4%6.6%2.7% | 11452125 | SecularTraditionalReligiousOther  | Religiosity |
|  14.8%7.7%6.6%13.1%15.3%19.7%23.0% | 27141224283642 | Up to 5 years6-1011-1516-2021-2526-3030+ | Professional seniority |

**Table 2: Descriptive statistics of the main research variables**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Scale** | **M** | **SD** | **Range** |
| **Concern** | 1-5 | 3.20 | 0.82 | 1.13-5.00 |
| **Anxiety** | 1-4 | 1.50 | 0.49 | 1.00-4.00 |
| **Personal resilience** | 0-4 | 3.09 | 0.61 | 1.10-4.00 |
| **National resilience** | 1-5 | 3.44 | 0.66 | 1.23-5.00 |
| **Post-traumatic growth** | 0-5 | 3.01 | 0.81 | 0.64-4.77 |

**Table 3: Relationship between** **personal and national resilience, levels of concern, and anxiety (N = 183)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **4** | **3** | **2** | **1** |  |
|  |  |  | **---** | **1. Personal resilience** |
|  |  | **---** | **.25\*\*** | **2. National** **resilience**  |
|  | **---** | -.**21\*\*** | -**.17\*** | **3. Concern** |
| **---** | **.42\*\*** | -.**14\*** | -.**24\*\*** | **4. Anxiety** |

*p* < .05\*, *p* < .01\*

**Table 4: Relationship between** **personal and national resilience, and posttraumatic growth (N = 183)**

|  |  |  |  |
| --- | --- | --- | --- |
| **3** | **2** | **1** |  |
|  |  | **---** | **1. Personal resilience** |
|  | **---** | **.25\*\*** | **2. National** **resilience**  |
| **---** | .**29\*\*** | **.24\*\*** | **3. Posttraumatic growth** |

*p* < .01\*\*

**Table 5: Hierarchical regression for the prediction of national resilience and the socio-demographic variables**

|  |  |  |
| --- | --- | --- |
|  |  | **Predictors** |
| *R2* | ***p*** | ***t*** | ***β*** | ***SE*** | ***B*** |  |
| 0.18 | 0.320.240.230.010.020.370.32 | -0.981.17-1.19**2.72\*\*****2.45\***0.890.98 | -0.070.15-0.090.230.200.110.07 | 0.110.010.100.130.080.040.10 | -0.110.01-0.120.370.210.040.10 | Gender (1 = male)AgeBirth country (Israel)Religion (Jewish)ReligiosityProfessional seniorityAdministrative (1 = yes)\_\_\_\_\_\_\_\_\_\_\_ |

*p < .01\*\**

**Table 6: Hierarchical regression for the prediction of posttraumatic growth and socio-demographic variables**

|  |  |  |
| --- | --- | --- |
|  |  | **Predictors** |
| *R2* | ***p*** | ***t*** | ***β*** | ***SE*** | ***B*** |  |
| 0.15 | 0.350.590.840.560.000.040.60 | 0.92-0.520.19-0.58**3.60\*\*****2.04\***0.51 | 0.07-0.070.02-0.050.300.260.04 | 0.130.010.120.160.100.050.14 | 0.12-0.010.02-0.090.380.100.06 | Gender (1 = male)AgeBirth country (Israel)Religion (Jewish)ReligiosityProfessional seniorityAdministrative (1 = yes)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

*p < .01\*\**

**Table 7: Differences in concern, anxiety, personal and national resilience, and posttraumatic growth by country of origin (N = 183)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Born in another country** **N = 81** | **Born in Israel****N = 102** |  |
| **T** | **SD** | **M** | **SD** | **M** | **Measure** |
| 1.39 | 0.83 | 3.10 | 0.80 | 3.27 | **Concern**  |
| 0.03 | 0.44 | 1.50 | 0.53 | 1.50 | **Anxiety** |
| 0.69 | 0.66 | 3.05 | 0.57 | 3.12 | **Personal resilience** |
| **-**1.39 | 0.61 | 3.52 | 0.70 | 3.38 | **National resilience**  |
| **2.44\*** | 0.85 | 2.85 | 0.76 | 3.14 | **Posttraumatic growth** |

*p* < .05\*, *p* < .01\*\*

Dear Prof. Kim Usher,

Editor, *International Journal of Mental Health Nursing*

Attached please find our original manuscript “Shared Trauma During the COVID-19 Pandemic: Psychological Effects on Israeli Mental Health Nurses.”

In our study, we focused on the psychological effects on Israeli mental health nurses’ dealing with mental health patients during the COVID-19 pandemic. We foundsignificant correlations between personal resilience and levels of concern and anxiety. Higher levels of national resilience were related to lower levels of concern and anxiety, and a positive correlation was found between personal resilience and national resilience. A significantly positive correlation was found between personal resilience and posttraumatic growth. In addition, a positive correlation was found between national resilience and posttraumatic growth. Finally, higher religiosity was connected to higher national resilience, and higher professional seniority was related to higher posttraumatic growth. This paper provides new insights into mental health nurses’ shared trauma during the COVID-19 pandemic.

We believe that this article will be of interest to researchers, educators, and health care policy-makers in the clinical fields of mental health and welfare.

None of the data has been previously published or is under consideration for publication elsewhere. As the principle author, I declare full responsibility for the data, the analyses and interpretation and the conduct of the research, and that I have the right to publish any and all data. This study was performed with the approval of the IRB of Lev-Hasharon Mental Health Center, as stated in the Methods.

We thank you for considering our manuscript as an original article for publication in *International Journal of Mental Health Nursing.*

Sincerely,,

Sagit Dahan, Galit Levi and Dr. Ronen Segev

STROBE Statement—Checklist of items that should be included in reports of ***cross-sectional studies***

|  |  |  |
| --- | --- | --- |
|  | **Item****No** | **Recommendation** |
| **Title and abstract** | 1 | 1. “The study reporting using the EQUATOR recommendations for quantitative cross-sectional research (STROBE).”
2. “Survey conducted anxiety and concern degree, personal and national resilience and post traumatic growth.” “Significant negative correlations revealed between personal resilience and levels of concern (*rs* = -0.17, *p*<.05) and anxiety (*rs* = -0.24, *p*<.01). Higher level of national resilience was related to lower levels of concern (*rs* = -0.21, *p*<.01) and anxiety (*rs* = -0.14, *p*<.05). Significant positive correlation was found between personal resilience and national resilience (*rs* = 0.25, *p*<.01). A significant positive correlation was found between personal resilience and posttraumatic growth (*rs* = 0.24, *p*<.01). In addition, a positive correlation was found between national resilience and posttraumatic growth (*rs* = 0.29, *p*<.01).”

  |
| **Introduction** |  |  |
| Background/rationale | 2 | “In the current global pandemic, the level of risk of infection is similar for the therapists and patients, and consequently the level of personal distress. Shared traumatic reality can cause damage, but it also has the potential for change. Studies have shown that a shared traumatic reality can lead to both positive and negative outcomes (Baum, 2014).” |
| Objectives | 3 | “We hypothesize that, as in other traumatic events, covid-19 crisis will have negative and positive psychological effects on mental health nurses in shared traumatic reality.” |
| **Methods** |  |  |
| Study design | 4 | “A cross-sectional study was carried out” |
| Setting | 5 | “The study carried out between April 1st to 30th, 2020.” |
| Participants | 6 | “Research sample included 183 mental health nurses, all members of the Psychiatric Nursing Association in Israel. Participants were mental health nurses from Israeli mental health centers, psychiatric wards in general hospitals, and community mental health nurses.” |
| Variables | 7 | “Survey conducted anxiety and concern degree, personal and national resilience and post traumatic growth”. |
| Data sources/measurement | 8 | All questionnaires, their sources and their reliabilities are described in the methods section. |
| Bias | 9 | Potential biases are described in the study limitations section. |
| Study size | 10 | The number of participants depended on the number of nurses interested in responding to the survey. The survey was sent anonymously to all nurses, so sample size was not calculated prior to the study. |
| Quantitative variables | 11 | Each questionnaire received a score, and the scores were used in the analyses. |
| Statistical methods | 12 | Data analysis were performed using SPSS Statistics 23 (IBM, 2015). We examined descriptive statistics of the research sample and of the main research variables. In order to examine the research hypothesis, we used a Spearman correlation analysis, One-Way ANOVA analysis, and an independent sample t-test. In order to predict anxiety, personal and national resilience, post-traumatic growth and the socio-demographic variables of the sample, a linear hierarchical regression analysis was performed. A significance level of p = 0.05 was used. |
| **Results** |  |  |
| Participants | 13 | Because the study took place at only one time point, no dropouts were reported.  |
| Descriptive data | 14 | Demographic data are described in the first part of the results. All participants completed the entire survey; no data were missing. |
| Outcome data | 15 | Outcome events are described in the first part of the results. |
| Main results | 16 | The main results are found in the results section. |
| Other analyses | 17 | A hierarchical regression was completed and is described in the last part of the results. |
| **Discussion** |  |  |
| Key results | 18 | “As we expected, we found that COVID-19 crisis had negative and positive psychological effects on mental health nurses in shared traumatic reality.” |
| Limitations | 19 | “Data collection occurred at the height of the first wave in which the nurses were at the peak of their work and therefore responsiveness was relatively limited.” |
| Interpretation | 20 | This is presented in the discussion. |
| Generalizability | 21 | This is described in the presentation of the relevance of the study for clinical practice. |
| **Other information** |  |  |
| Funding | 22 | No funding was provided for this study. |