A Comprehensive Exploration of the COVID-19 Pandemic's Long Lasting Mental Toll on Registered Nurses

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Abstract

Objective: This investigation aims to analyze the impacts the COVID-19 pandemic has had on nurses' mental health in New England in terms of changes in stress and depression levels and the role of demographic and occupational factors in said changes.

Study Design: This project was completed by using an online anonymous survey, which contained demographic questions and validated measures such as the Brief Nursing and Stress Scale (BNSS) and Section 5 of the COVID Experiences (CovEX) Survey. Registered nurses fluent in English were invited to participate, regardless of age, gender, race, or ethnicity. The collected data was then analyzed using SAS 9.4.

Results: The analysis of mean depression scores indicated a notable increase during the pandemic period compared to pre-pandemic levels, with a slight decrease post-pandemic from peak pandemic levels, but still not decreasing to pre-pandemic levels. This trend was observed across all age groups; additionally, younger nurses experienced a discernibly greater rise in depression levels as compared to older, more experienced nurses.

Conclusion: We observed a significant increase in nurse depression rates during the pandemic, indicative of the profound impact of the crisis on their mental well-being. Notably, despite the gradual easing of pandemic-related restrictions, depression levels did not return to pre-pandemic levels post-crisis. This persistent elevation in depression underscores the enduring psychological distress experienced by nurses, necessitating a critical examination of the long-term effects of the pandemic on their mental health. Furthermore, our findings emphasize the urgency for targeted interventions and long-term support mechanisms to address the enduring mental health challenges faced by nurses. These insights highlight the need to prioritize workplace conditions which facilitate nurse well-being in the ongoing and future challenges posed by public health crises.

Background and Objectives

Background: Many health professionals, including nurses, faced negative mental health ramifications due to the COVID-19 pandemic. Even now, nurses are still facing many residual occupational challenges. Few investigations have explored the levels at which nurses are experiencing negative mental health impacts after the peak of the pandemic.

Objective: This study aims to answer the question, what are the long-term impacts of the global COVID-19 pandemic on the mental health of nurses who worked through the pandemic in terms of stress and depression levels? Additionally, what is the role of various demographic and occupational factors associated with the aforementioned stress and depression levels?

Hypothesis: Nurses have been known to face more significant mental health impacts, considering the high burden of stress already associated with the profession. Thus, it is reasonable to hypothesize that nurses' mental health have been significantly impacted by the pandemic, especially in terms of an increase in stress and depression levels as compared to pre-pandemic.

Study Design

This study was completed through an online survey aimed towards registered nurses who had worked as a nurse during the pandemic and were fluent in reading and speaking English, with no exclusions by gender, race, or ethnicity. Participants completed the surveys on their own time through a secure link attached to a QR code flier that was distributed. They were greeted by an explanation of the questions that were to follow. They then completed an Information Sheet consent, and were given access to the questionnaire once they agreed to participate. The questionnaire included validated measures (demographic questions, a modified and shortened version of the COVID Experiences Survey (COVEX) Section 5, and the Brief Nursing Stress Scale). In addition, a mental health resource list was provided in the survey should participation be triggering to the patient in any way. Participants were allowed to skip any questions they were not comfortable answering. The risk of this study was loss of privacy, and to mitigate this risk, the survey was completely anonymous, with no potentially identifying data stored. The data was analyzed using SAS 9.4, the CORR and the TTEST procedures.
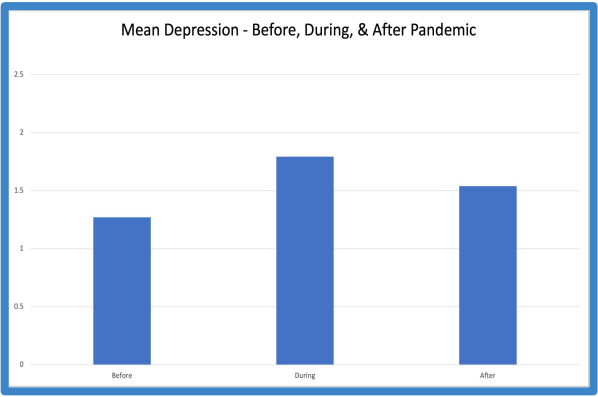
Results

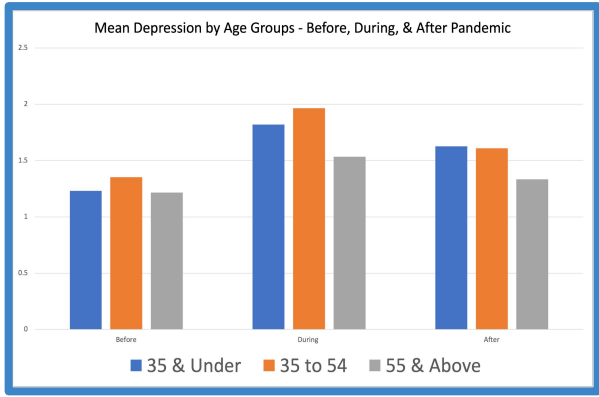**Figure 1:** Mean Depression Of The Sample Before, During, and After the Pandemic

Figure 2: Mean Depression By Age Group Before, During, and After the Pandemic
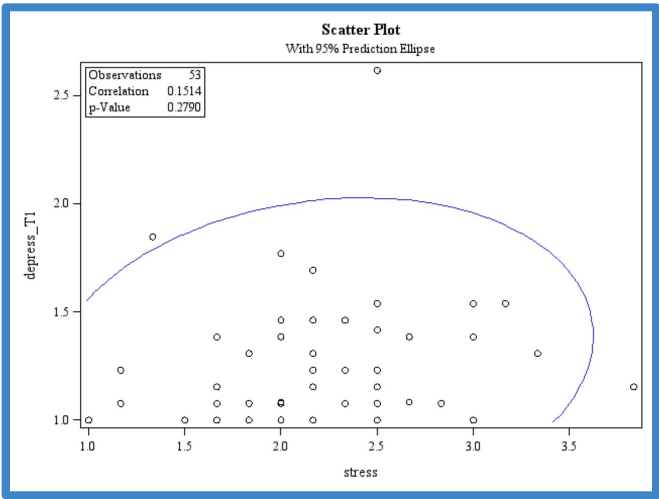

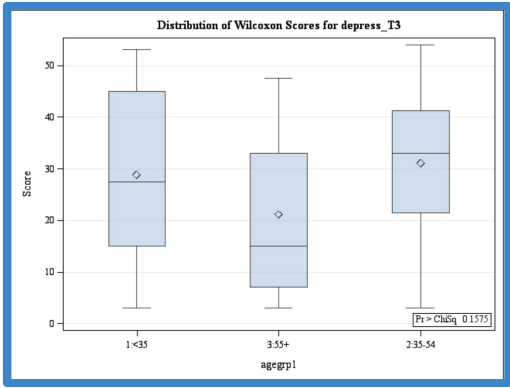**Figure 3:** Depression Levels in Relation to Stress Levels Before, During, and After the Pandemic
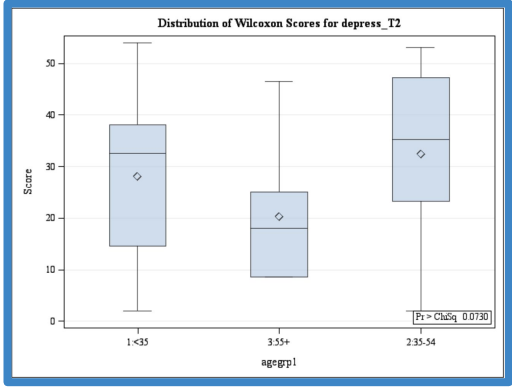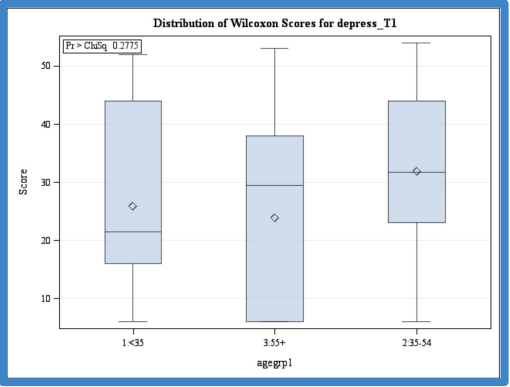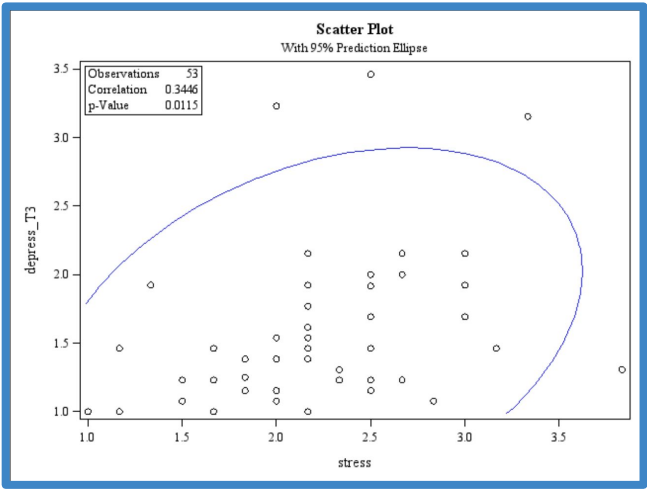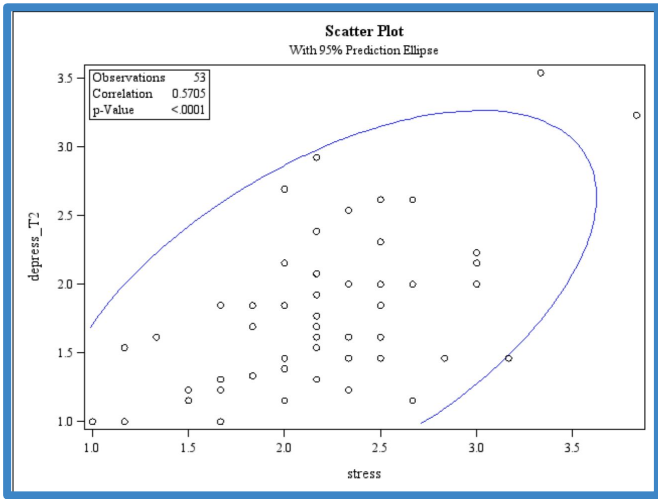

Figure 4: Distribution of Wilcoxon Scores for Depression Levels By Age Group Before, During, and After the Pandemic

Our sample size was n = 53. Mean depression score analyses revealed a notable increase during the pandemic (mean: 1.79392) compared to pre-pandemic levels (mean: 1.27149). While depression levels decreased somewhat after the pandemic (mean: 1.5387), they remained elevated compared to the pre-pandemic baseline. Scores increased across all age groups during the pandemic, persisting post-pandemic. The 35 and under group saw a rise (0.5881) in depression levels, followed by a slight decrease (0.1919703) post-pandemic. The 35 to 54 group increased (0.6134615) during the pandemic, with subsequent decreases (0.3567308) afterward. The 55 and above age group saw a discernible increase (0.3179484) during the pandemic, followed by a decrease (0.2000) post-pandemic. Stress levels remained unchanged, with a mean of 2.2107 and SD of 0.55.

Conclusions & Future Research

There was a significant increase in nurse depression rates during the pandemic, highlighting the profound impact of COVID-19 on their mental well-being. An interesting finding was that stress levels amongst the sample remained unchanged despite the increased depression levels, suggesting that, while nursing has been a consistently mentally taxing profession, the relationship between stress and depression in nurses due to the pandemic may be more complex than once thought. Of particular significance is the finding that depression levels did not revert to pre-pandemic levels post-crisis, signaling the persistence of psychological distress and prompting further critical examination of the long-term effects of the pandemic on nurse mental health in order to better respond to further crises. This discrepancy highlights the need for more understanding of the connection between stressors and depression in the nursing profession, which can inform more targeted interventions to support nurse mental health. Additionally, it was observed that nurses with greater professional experience experienced lower levels of depression, suggesting that experienced nurses may possess more psychological resources acquired through years of clinical practice, enabling them to navigate challenging circumstances with greater mental stability. The observed persistence of elevated depression levels post-pandemic underscores the need for targeted interventions and long-term support mechanisms to address the enduring mental health challenges faced by hospital nurses. However, these results may be limited by the size of the sample population and the survey's geographical reach.

References

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