

Assessing Stress and Burnout in ICU Nurses

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Background

- Burnout syndrome is the presence of emotional exhaustion, the development of depersonalization, and a reduced sense of personal accomplishment.
- 40-50% of ICU nurses in one study met all of the symptoms on the MBI for burnout and up to 86% have at least one of the three symptoms of burnout.¹
- PTSD, is intrusion, avoidance, negative alterations in cognitions and mood, and marked alterations in arousal and reactivity.
- 22% and 29% of ICU nurses exhibiting symptoms of PTSD and 18% meeting the diagnostic criteria for PTSD²
- The activities that nurses perform at the bedside is unknown and could exacerbate stress

Methods

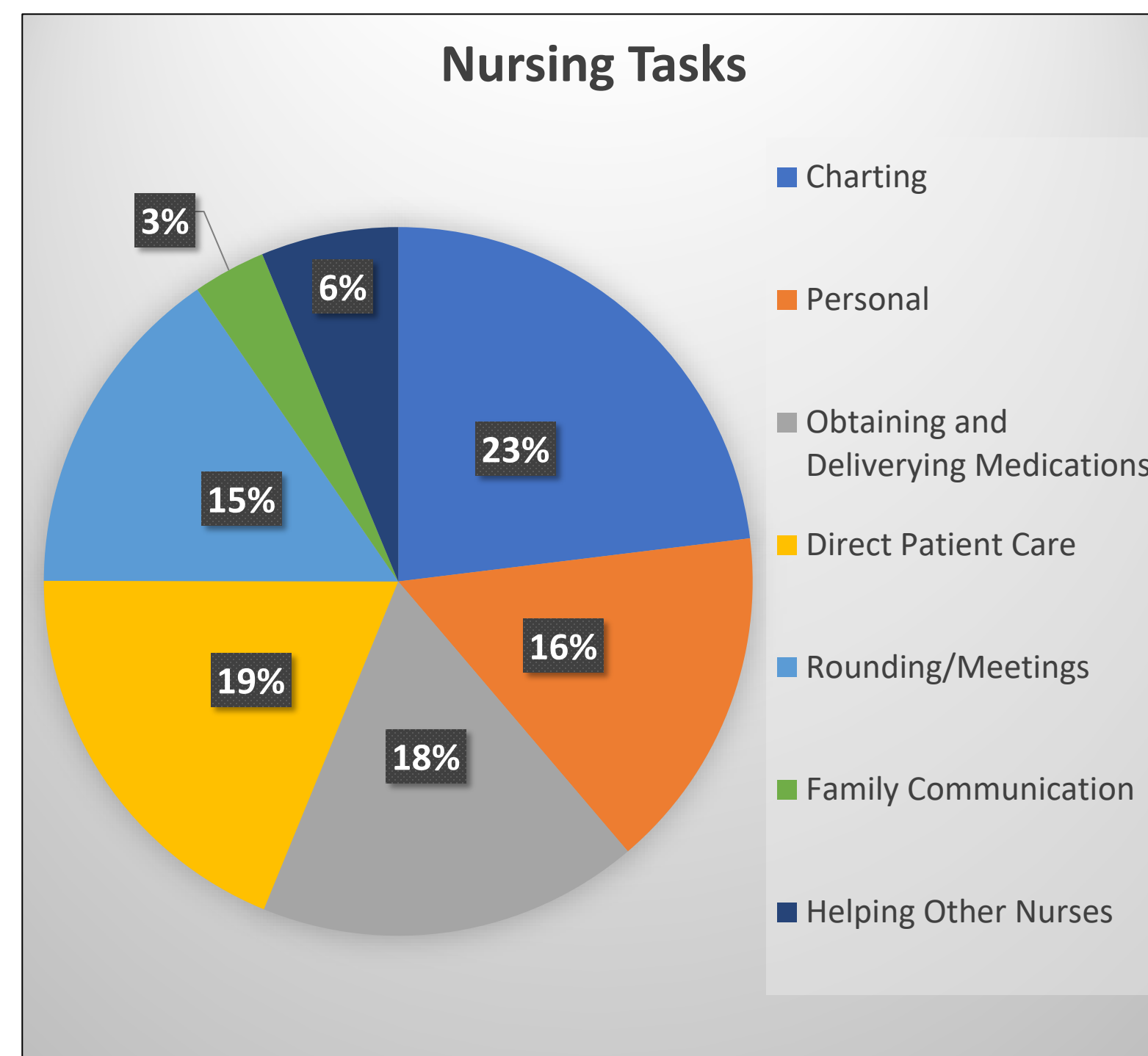
- 20 ICU nurses were observed for a 6-hour portion of their shift. Each nursing task and its length in the observation period were recorded
- After completing their observation period they were asked to complete 6 surveys: Demographic information, The Maslach Burnout Inventory (MBI), The Posttraumatic Diagnostic Scale (PDS), The Hospital Anxiety and Depression Scale (HADS), The Connor-Davidson Resilience Scale (CD-RISC), and Sensation Seeking Scale (SSS). 3 MICU nurses declined to take the surveys
- This study received COMIRB approval

References

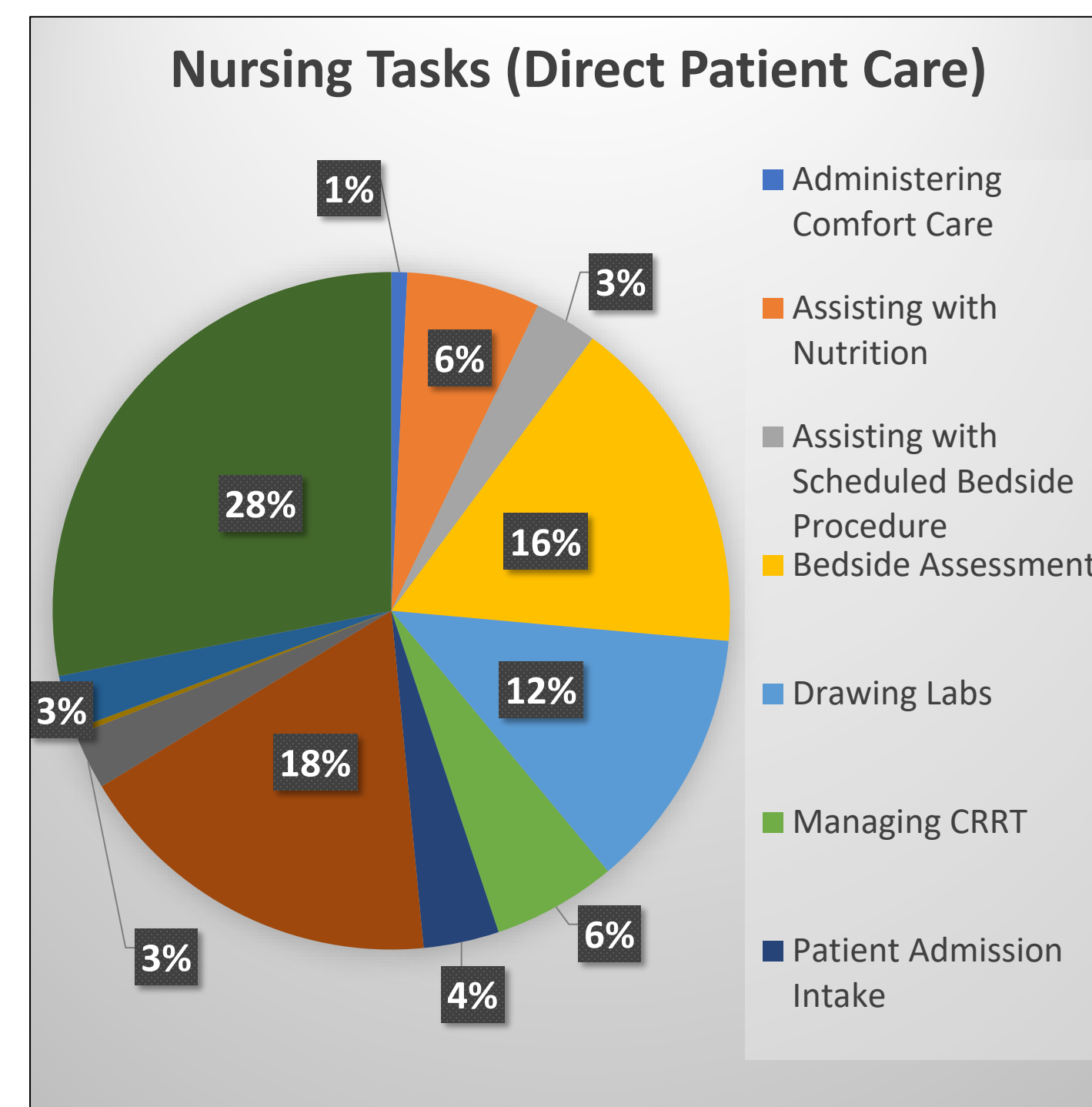
1. Guntupalli, K. K., Wachtel, S., Mallampalli, A., & Surani, S. (2014). Burnout in the intensive care unit professionals. *Indian journal of critical care medicine: peer-reviewed, official publication of Indian Society of Critical Care Medicine*, 18(3), 139–143.
2. Guttormson, J. L., Calkins, K., McAndrew, N., Fitzgerald, J., Losurdo, H., & Loonsfoot, D. (2022). Critical Care Nurse Burnout, Moral Distress, and Mental Health During the COVID-19 Pandemic: A United States Survey. *Heart & Lung: the journal of critical care*, 55, 127–133.
3. Va.gov: Veterans Affairs: How Common is PTSD in Veterans? (2018, July 24). https://www.ptsd.va.gov/understand/common/common_veterans.asp#:~:text=At%20some%20point%20in%20their,of%20100%2C%20or%206%25
4. Vahratian A, Blumberg SJ, Terlizzi EP, Schiller JS. Symptoms of Anxiety or Depressive Disorder and Use of Mental Health Care Among Adults During the COVID-19 Pandemic — United States, August 2020–February 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:490–494. DOI: <http://dx.doi.org/10.15585/mmwr.mm7013e2external icon>

Results

| Participant Demographics | |
|---------------------------|---|
| Sex | (n=5) 29% Male (n=12) 71% Female |
| Age | 36.5 Average |
| Marital Status | (n=9) 53% Married (n=7) 41% Single (n=1) 6% Domestic |
| Children | (n=12) 71% No children (n=5) 29% Have Children |
| Degree | (n=16) 94% BSN (n=1) 6% Other |
| Years as Nurse | 8 years Average |
| Years as ICU Nurse | 6 years Average |



| Sensation Seek Scale Correlation with Survey Outcomes | | | |
|---|-----------------------|-----------------------|------|
| Sensation Seeking Scale | High | MBI Burnout | High |
| | | CD-RISC Total | Low |
| | | HADS Anxiety Score | High |
| | Low | HADS Depression Score | High |
| | | PDS Total | High |
| | | MBI Burnout | Low |
| | CD-RISC Total | High | |
| | HADS Anxiety Score | Low | |
| | HADS Depression Score | Low | |
| | PDS Total | Low | |



- 31% of ICU Nurses in the study met the MBI scores consistent with burnout however, 50% met at least 1 category consistent with severe burnout
- The average CD-RISC score was 74.9 meaning they were at higher risk of developing PTSD after a traumatic event
- 43% of ICU Nurses met the HADS score for considerable anxiety and 19% met the score for considerable depression
- 47% scored moderate to severe PTSD on the PDS survey

Conclusions

- ICU nurses are spending just 19% of their time involved in direct patient care. This included the categories in the graph titled “Nursing Tasks (Direct Patient Care)
- The rate of burnout of ICU nurses was similar to that found in other studies
- ICU nurses had higher rates of anxiety than the US average (36.9%) and lower rates of depression (30.2%)⁴
- Rates of PTSD in this study for ICU nurses (20%) was greater than that of veterans (7%)³
- There was a direct correlation between the SSS and the MBI, HADS, and PDS which was concluded using correlation coefficients
- An indirect correlation between SSS and CD-RISC was also identified using correlation coefficients

Implications

- ICU nurses spend the majority of their time on the computer charting or pertaining to non-patient facing activities
- Charting refers to HER use documenting interactions, medications, as well as communication with other providers. This reduces the amount of time available for bedside nursing.
- With the high PTSD rates found in this study it is evident that more research and resources need to be allocated to understand and mitigate traumatic experiences from having a lasting effect
- Those who had increased risk-taking behaviors were more likely to have worse burnout, more anxiety/depression, less resiliency, and more severe PTSD

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