EVALUATION OF POSITIVE REFLECTIONS IN CRITICAL CARE NURSING HUDDLES TO REDUCE NURSING BURNOUT

Doctor of Nursing Practice Project
Presented to the Faculty of MU Graduate Studies
University of Missouri

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Nursing Practice
by
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MAY 2024
Problem and Background

Nursing burnout occurs when the demands of a nurse exceed their capabilities and resources, leading to emotional and physical exhaustion (Saravana et al., 2023). Burnout has evolved to include chronically unmanaged workplace stress, resulting in the World Health Organization's (2019) creation of an ICD-11 code. Staff diagnosed with burnout have been found to have higher resting heart rates than those without a diagnosis of burnout \((F(5,200) = 2.30, p < .10)\) and a statistically significant increase in systolic blood pressure \((F(5,200) = 4.29, p < .01)\) (De Vente et al., 2003). Studies show that 76% of critical care nurses experience at least one symptom of burnout, and 53% of critical care nurses who experience burnout intend to leave their jobs and are twice as likely to leave their organization (Roney et al., 2022). Becker's Hospital Review (2023) shows that the United States is experiencing a nurse turnover rate of 22.5%. This results in a significant financial burden of $52,350 per bedside nurse, including overtime, retention salary increments, and travel and agency fees (NSI Nursing Solutions, Inc., 2023).

Patients are significantly impacted by nursing burnout, specifically in critical care settings. Studies have shown increased burnout rates among critical care nurses result in longer hospital stays, higher-than-average nurse turnover, and lower employee satisfaction (Mohr et al., 2021). Such burnout also manifests as decreased empathy towards patients and their families, reduced work morale, and decreased employee training related to turnover (Olaleye et al., 2022). In addition, high nurse-to-patient ratios can exacerbate burnout and reduce the time and quality of care that nurses can provide to each patient (Olaleye et al., 2022). These factors have a direct impact on patient satisfaction and can lead to an increase in medical errors, which ultimately affects hospital reimbursement rates.

In 2013, a study conducted by Bono et al. found that incorporating positive reflections during daily nursing huddles can effectively decrease nursing burnout and alleviate physical and mental health concerns among nursing staff. The study highlights the importance of introducing positive reflections in daily nursing huddles to significantly improve the overall well-being of nursing staff. It is, therefore, recommended that healthcare organizations adopt this practice to promote a healthy and positive work environment for their nursing staff.

Statement of Purpose, PICOT Statement, and Objectives

This project aimed to reduce critical care nursing burnout by evaluating Positive Reflections in adult critical care nursing huddles at an academic health system in Columbia, Missouri. The project objectives are related to the following PICOT question: In critical care inpatient nurses (P), how does sharing three positive things that happened from the previous shift (I), compared to no positive discussion from the previous shift (C), impact critical care nurse burnout (O) from January 2024 (T1) to March 2024 (T2) following implementation?

The primary objectives of this project were:

- 10% of critical care nurses participating in this project will have a decreased Burnout Assessment Tool (BAT) score four months post-implementation.
- 10% decrease in the turnover rate among critical care nurses in the participating units.

Review of Literature

An extensive literature search revealed three themes: barriers to positive reflections and interventions to create a positive culture.

Barriers to Positive Reflections
One barrier in five studies included the media in which employees’ positives were recorded. Green et al. (2023) found a dropout rate of 54% ($n = 37$) of study participants related to perceived “limited time” to fill out an online form. Chambers et al. (2023) had 71.4% ($n = 15$) complete the project of writing down Three Good Things on paper daily for eight weeks, while Rippstein-Leuenberger et al. (2017) had a 36% completion rate ($n = 32$). Cline et al. (2022) and Adair et al. (2020) changed the data collection technique in which surveys were sent via text messages, and 70% ($n = 49$) completed the two-week intervention for Cline et al. This barrier can be overcome by including Positive Reflections during a live huddle with a 100% participation rate.

Another barrier identified was an already established negative culture at the study sites. One study concluded that healthcare leaders start the negative culture shift by posing questions during walkthroughs, at the beginning of staff meetings, or at the beginning of huddles, asking employees to name one good thing so far during that week (Rippstein-Leuenberger et al., 2017). A qualitative study determined that a lack of respect, a lack of a feeling of value, and a lack of being acknowledged for their work were the themes that caused critical care nurses to leave their current positions (Van Osch et al., 2018). A study tested self-instability and pessimism and determined they were both significantly related ($b = .55, p < .01$), which recommends encouraging hiring managers to hire candidates less prone to pessimism to assist in developing a culture shift (Xu et al., 2018).

**Interventions for a Positive Feedback Culture**

As a sole intervention, individual positive feedback to coworkers did not show a decrease in healthcare burnout scores (3.61 to 3.74) (Green et al., 2023). However, the investigators concluded that positive feedback should be part of interventions to change an organization’s negative culture. Another intervention concluded that workers showed a decrease in after-work stress by listing at least one positive reflection ($\gamma = -.16, p < .01$) and reported fewer mental and physical health complaints ($\gamma = -.07, p < .05; \gamma = -.07, p < .01$) (Bono et al., 2013).

The eight studies in this literature review included qualitative and quantitative studies and were predominately of less evidence. The findings of this literature review support the use of Positive Reflections in critical care nursing huddles to assist in creating a positive work environment, and this project will evaluate establishing Positive Reflections in nursing huddles aimed at transforming the environment.

**Methods**

This quality improvement project utilized a pre-and post-test design to evaluate the impact of positive reflections during daily critical care nursing huddles on critical care nurses’ BAT scores and reducing turnover rates. The study collected data from January 2024 (T1) to March 2024 (T2) from the target population using a purposive convenience sample of critical nurses attending shift huddles at an academic healthcare facility in Columbia, Missouri. The program was performed in the Cardiac Intensive Care Unit (CICU) and Neuroscience Intensive Care Unit (NSICU), including all full-time adult critical care nurses whose home units are included in this study.

In December 2023, a comprehensive educational guide featured a detailed explanation of Positive Reflections, along with examples to help huddle leaders guide their huddle reflections. Each huddle ended with the huddle leader asking for three positives from the previous shift. Leaders were instructed to require another positive if any of the answers given were passive-aggressive, sarcastic, or negative.
Using a power of .80, $p = .05$, an effect size of .50, and $df$ of 1, a minimum sample of 32 completed surveys was needed, which was calculated using G*Power and a Chi-Square goodness of fit (Faul et al., 2007). However, only 14 completed both pre- and post-surveys. The BAT, free with permission from the creator, is a 23-item survey using a Likert scale on statements related to day-to-day burnout symptoms (Schaufeli et al., 2020). A 2020 study found that the BAT is a more reliable and comprehensive measure of burnout than the Maslach Burnout Inventory, previously considered the gold standard. The BAT has a higher level of content validity ($r = 0.90$) and reliability ($\alpha = 0.90$) (Schaufeli et al., 2020).

The primary outcome variable was changes in the BAT score at the end of T2. Secondary outcome variables included the percentage of huddles attended with Positive Reflections and the turnover rate at the end of T2.

Descriptive statistics were utilized to provide an overview of the project sample. Ratio level data was analyzed with the independent $t$-test. IBM SPSS Statistic version 24 (Chicago, IL) was used for statistical analysis. Statistical significance was defined as $p \leq .05$. Ordinal level data collected from the Likert scale BAT surveys were analyzed using the Wilcoxon signed-rank test. The Vargha and Delaney ($A$) effect size measures were utilized to determine the clinical significance of the Positive Reflections intervention, using values of small (.56), medium (.64), and large (.71). The Kruskal-Wallis Test was used to examine the relationship between the BAT scores and units.

**Results**

In the CICU and NICU, 80 nurses were potential participants. Sixty-eight were disqualified due to incomplete surveys or part-time employment. Of the 14 remaining participants, 11 were from the CICU (78.6%), and 3 were from the NICU (21.4%). The age range was 18 to 60+, with a mean age category of 31-45. The sample had 93% female participants ($n=13$) and 7% male participants ($n=1$). The education level was predominately a bachelor's degree ($n=8, 57\%)$, while $28.6\%$ ($n=4$) held an associate's or diploma degree, and $14.3\%$ ($n=2$) held a master's degree. Participants' mean range of years in nursing was 3-4 years, ranging from 0-15+ years.

**Statistical Findings**

When comparing the BAT scores at the time points, the Wilcoxon signed-rank test revealed a large statistically significant decrease in the statement, “At the end of the working day, I feel mentally exhausted and drained” ($p=.03, A=3.2$). The remaining statements from the BAT scores are shown in Appendix A.

The mean BAT scores decreased from 51.14 ($sd=14.0$) on the pretest to 47.8 ($sd=12.9$) on the post-test ($t(13) = 1.33, p < .21$). The turnover rate in the CICU decreased by 18.9% from 2.97% (T1) to 2.41% (T2) and decreased by 7.61% in the NSICU from 2.89% (T1) to 2.67% (T2).

In examining the pre-and post-survey results related to gender, the Independent-Samples Kruskal-Wallis Test detected a statistically significant difference between the units and their BAT scores prior to the intervention. The NSICU nurses reported being less mentally exhausted prior to the intervention ($p = .05$) when compared to the CICU nurses, and the NSICU nurses reported being less physically exhausted after the intervention ($p < .05$) when compared to the CICU nurses.

Of all 80 potential participants, 14 completed the pre- and post-surveys included in the analysis. The results show that 42.9% ($n = 6$) of participants “agreed” this intervention was good
and wanted to continue the process, 28.6% (n = 4) “strongly agreed,” and 28.6% (n = 4) either “disagree” or “strongly disagree.”

The CICU’s turnover decreased by 18.9% from 2.97% (T1) to 2.41% (T2), and the NSICU’s turnover rate decreased by 7.61% from 2.89% (T1) to 2.67% (T2).

**Conclusions**

The QI project aimed to improve burnout amongst critical care nurses and decrease turnover through Positive reflections. The primary objective of a 10% decrease in the BAT scores among those who participated was not met; however, it did sustain a 6.5% decrease (51.1 to 47.8, \( p < .21 \)). The secondary objective of a 10% decrease in turnover was partially met. The CICU’s turnover rate decreased by 18.9% from (2.97% to 2.41%) and the NSICU’s turnover rate decreased by 7.61% (2.89% to 2.67%). In addition, 71.5% (n = 10) either “agreed” or “strongly” agreed that this was a good intervention and thought it should be continued.

**Recommendations**

Positive Reflections in critical care nursing huddles have shown positive effects on reducing burnout and turnover. The statement, “At the end of the working day, I feel mentally exhausted and drained,” had a statistically significant improvement in burnout reduction. Positive Reflections in nursing huddles can be extended to all nursing huddles and even non-nursing teams that suffer from burnout. It is reasonable to perform Positive Reflections in huddles as it takes a few minutes to perform and does not have a cost associated with it except for the reduction in costs from turnover.

**Strengths and Limitations**

A strength of this QI project is the statistical and clinical significance exhibited by the critical care nurses who feel exhausted and drained at the end of their shifts. The use of convenience samples, lack of long-term practice of Positive Reflections, and the lack of Positive Reflections in all huddles are noted limitations.

In summary, this QI project contributes to a greater understanding of Positive Reflections for reducing burnout in critical care nurses and decreasing turnover rates. More studies are needed, including a longer period of time for the intervention and increased compliance in the huddle leaders, which would allow for a deeper understanding of the effects of Positive Reflections.
References


De Vente, W., Olff, M., Van Amsterdam, J. G. C., Kamphuis, J. H., & Emmelkamp, P. M. G. (2003). Physiological differences between burnout patients and healthy controls: Blood pressure, heart rate, and cortisol responses. *Occupational and Environmental Medicine, 60*(1), i54-i61. https://doi.org/10.1136/oem.60.suppl_1.i54


https://doi.org/10.1111/nuf.12810


### Appendix A

#### Exhaustion Domain

<table>
<thead>
<tr>
<th>Item</th>
<th>Pre (n=14)</th>
<th>Post (n=14)</th>
<th>Neg</th>
<th>Pos</th>
<th>Tie</th>
<th>p</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. At work, I feel mentally exhausted.</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>.26</td>
<td>2.8</td>
</tr>
<tr>
<td>2. Everything I do requires a great deal of effort.</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>1.0</td>
<td>1.9</td>
</tr>
<tr>
<td>3. At the end of the day, I find it hard to recover my energy.</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>.96</td>
<td>3.3</td>
</tr>
<tr>
<td>4. I feel physically exhausted.</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>5. When I get up in the morning, I lack the energy to start a new day</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>6. I want to be active, but somehow, I am unable to manage.</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>.60</td>
<td>2.6</td>
</tr>
<tr>
<td>7. When I exert myself, I quickly get tired.</td>
<td>2</td>
<td>1.5</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>.08</td>
<td>2.7</td>
</tr>
<tr>
<td>8. At the end of the working day, I feel mentally exhausted and drained.</td>
<td>3.5</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>6</td>
<td>.03</td>
<td>3.2</td>
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#### Mental Distancing Domain

<table>
<thead>
<tr>
<th>Item</th>
<th>Pre (n=14)</th>
<th>Post (n=14)</th>
<th>Neg</th>
<th>Pos</th>
<th>Tie</th>
<th>p</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. I struggle to find enthusiasm for my work.</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>.60</td>
<td>2.6</td>
</tr>
<tr>
<td>10. At work, I do not think much about what I am doing, &amp; I function on autopilot</td>
<td>1.5</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>1.0</td>
<td>1.9</td>
</tr>
<tr>
<td>11. I feel a strong aversion towards my job.</td>
<td>1</td>
<td>1.5</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>.48</td>
<td>2.3</td>
</tr>
<tr>
<td>12. I feel indifferent about my job.</td>
<td>1.5</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>.93</td>
<td>2.3</td>
</tr>
<tr>
<td>13. I’m cynical about what my work means to others.</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>.48</td>
<td>2.4</td>
</tr>
</tbody>
</table>

#### Cognitive Impairment Domain

<table>
<thead>
<tr>
<th>Item</th>
<th>Pre (n=14)</th>
<th>Post (n=14)</th>
<th>Neg</th>
<th>Pos</th>
<th>Tie</th>
<th>p</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. At work, I have trouble staying focused.</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>.48</td>
<td>2.4</td>
</tr>
<tr>
<td>15. At work, I struggle to think clearly.</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>.20</td>
<td>2.1</td>
</tr>
<tr>
<td>16. I’m forgetful &amp; distracted at work.</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>.48</td>
<td>1.5</td>
</tr>
<tr>
<td>17. When I’m working, I have trouble concentrating.</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>1.0</td>
<td>1.6</td>
</tr>
<tr>
<td>18. I make mistakes in my work because I have my mind on other things</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>.71</td>
<td>2.3</td>
</tr>
</tbody>
</table>

#### Emotional Impairment Domain

<table>
<thead>
<tr>
<th>Item</th>
<th>Pre (n=14)</th>
<th>Post (n=14)</th>
<th>Neg</th>
<th>Pos</th>
<th>Tie</th>
<th>p</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. At work, I feel unable to control my emotions.</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>.41</td>
<td>1.2</td>
</tr>
<tr>
<td>20. I do not recognize myself in the way I react emotionally at work</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>.56</td>
<td>1.2</td>
</tr>
<tr>
<td>21. During my work, I become irritable when things don’t go my way.</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>11</td>
<td>.10</td>
<td>2.8</td>
</tr>
<tr>
<td>22. I get upset or sad at work without knowing why.</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>9</td>
<td>.66</td>
<td>2.3</td>
</tr>
<tr>
<td>23. At work I may overreact unintentionally.</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>.53</td>
<td>2.3</td>
</tr>
</tbody>
</table>