ABSTRACT

**Background:** Nursing shortages have been an issue for decades; however, shortages have been on the rise in recent years. The COVID-19 pandemic only exacerbated the issue and brought to light many of the challenges that nurses are facing in the workforce. A common theme has been overworked nurses that are now experiencing burnout, which is causing them to take a break from nursing or leave the field permanently.

**Objective:** The aim of this research study is to understand if a lack of adequate breaks is causing a decrease in job satisfaction among nurses.

**Methods:** A quality improvement research study was conducted over 8 weeks and included 17 registered nurses. A 10-question survey was distributed via SurveyMonkey.

**Data Analysis:** Microsoft Excel Data Analysis program and SurveyMonkey Analysis program were used for data analysis to quantify responses.

**Results:** Over 50% of the nurses surveyed do not have mandatory breaks during their 12-hour shifts. 94% of nurses are feeling some degree of burnout at their current jobs, with 76% of those nurses either contemplating leaving or undecided if they will leave.

**Conclusion:** The survey was able to identify that most nurses working 12-hour shifts in an acute care setting do not get adequate breaks. The cause of the lack of breaks was not studied; however, it showed that almost all the nurses surveyed were feeling burned out and a little more than half are contemplating leaving their jobs. There was a significant amount that said receiving mandatory breaks during their shift would improve the burnout they are facing.

**Keywords**
Nurse, Breaks, Rest Periods, Lunch, Burnout.
to burnout means keeping nurses at the bedside providing high quality care to patients. To give nurses adequate breaks is one factor that can significantly decrease fatigue and thus burnout [1].

**Research Question**

How is the nurses job satisfaction impacted by the quality and quantity of breaks received during each shift?

**Problem Statement**

Nurses play an integrative role in the healthcare system. They coordinate care and advocate for patients while balancing challenging workloads. They care for all aspects of the patient including physical, emotional, social, and spiritual. Nurses care for some of the most critically ill patients that require complex treatments and management. The COVID-19 pandemic has only increased the importance of the nursing profession and exacerbated the burnout that nurses experience. The increased patient workloads, responsibility, and stress make nurses feel fatigued and burned out. These challenges are leading to nursing shortages nationwide. Breaks during a shift are essential to nurses. A well-known fact historically is that nurses work without having opportunities for breaks. This problem is more evident during the recent pandemic. The lack of breaks decreases mental clarity and job satisfaction. The fatigue that nurses face is associated with a lack of breaks and frequent interruptions during their rest periods [2]. “On average, the total amount of time that nurses spent on break was only 26 minutes during their entire 12-hour shift” [2]. Breaks allow nurses to take care of basic needs such as eating, drinking, and using the restroom. When breaks are interrupted or non-existent, nurses cannot take care of their basic needs, which translates to poor job satisfaction. Job satisfaction retains nurses in the profession, and when basic needs such as breaks are not being met, it contributes to the nursing shortage. This quality improvement research study will explore the nurse’s experience regarding their breaks and how it affects their attitude toward job satisfaction.

**Research Aims and Goals**

The aim of this research study was to gain a better understanding of how breaks are affecting a nurse’s job satisfaction. The main goal for this study was to identify nurse’s feelings towards their break situation and to evaluate if this is an underlying cause of job dissatisfaction in the nursing workforce. This would hopefully lead to implementation of adequate breaks to improve burnout among nurses.

**Nursing Theorist**

Patricia Benner is a nursing theorist who pioneered practice principles for nurses across a skills continuum. Benner’s theory is practice-based and applicable to support nursing practice, education, leadership, evaluation, and professional development [3]. The theory helps to understand professional behavior and is used in hiring and retaining nurses. Benner has created five groups of nursing proficiency according to nursing experience. The five groups include novice, advanced beginner, competent, proficient, and expert. The novice nurse is a beginner with no experience, and rules help with performing tasks. The advanced beginner has gained expertise from actual situations and demonstrates acceptable performance. Competent nurse has gained 2-3 years of experience and is developing efficiency from experiences. Proficient nurses have improved decision-making based on holistic understanding. An expert nurse no longer relies on rules and guidelines to determine actions but uses expertise and intuition to be flexible and highly proficient [3]. The theory proves that support is necessary across the skills continuum to allow the nurses to perform and care for their patients. The lack of breaks during shifts leaves nurses unsupported and decreases the quality-of-care patients receive. Regardless of a nurse's clinical experience, breaks are important to decrease fatigue during a shift. Increased fatigue leads to burnout and reduced ability to retain nurses, which in turn leads to a decrease in nursing proficiency.

**Literature Review**

A literature review was conducted to assess research pertaining to nurse’s breaks, nurse job satisfaction, and burnout. The database CINAHL and the Simmons University Library were used for the literature review search. The keywords for the literature review search included: nurse, nurses, nursing, breaks, rest periods, and lunch were used in the literature review search. Academic articles published between the years of 2017-2023 were utilized to achieve relevance, which further narrowed down the number of articles. There were 566 articles listed for the initial search. Further inclusion criteria for the articles included English language and only full text articles. Articles not including the above-mentioned key words were excluded from the literature review search. The final number of articles for the literature review was 210. Of the 210 articles, 10 were selected and reviewed based on the relevance of the articles to our study.

**Fatigue during Shifts**

Fatigue plagues nurses during long shifts, mainly due to their all-around responsibility to the patient and any care that is delivered. Fatigue is known to decrease the alertness of nurses. It was found that with each consecutive decision that is made or hour that passes without a break, the nurse’s decision-making reduces in
efficiency. The nurse becomes fatigued without adequate breaks, which causes less critical thinking regarding patient care [4].

Longer shifts such as a 12-hour shifts are attractive to nurses and financially motivating for hospital systems. Nurses are choosing to work longer shifts to allow for more days off from work but with the side effects of increased fatigue. With the high level of psychological and physical stress nurses go through, the longer breaks are necessary for recovery for breaks are identified to be a major factor for recovery from fatigue [5]. Although breaks are considered effective for recovery from fatigue, it is not associated with less fatigue [1].

Impact When Lacking Breaks
A known fact about overworked nurses is that when they get busy, they don’t take their breaks. This leads to unhealthy habits of the nurses, which leads to concerns for patient safety. A lack of breaks can cause unhealthy habits such as dehydration and compromises personal wellbeing and patient safety [6]. Several of the studies report a high rate of missed, interrupted, or delayed breaks during a shift. Breaks relate to better physical and mental health of the nurses [7]. Outside factors also contribute to fatigue and is exacerbated by lack of breaks. Fatigue during shift and recovery during intershift breaks correlated with previous night sleep, the workload, and time constraints [8].

Leadership and Shift Breaks
Nurse leaders must encourage breaks. With breaks and fatigue impeding proper patient care, nurse leaders should get more involved. Nursing management should monitor nurse fatigue as it can negatively affect performance and jeopardize patient care. Article 10. Several of the studies report a high rate of missed, interrupted, or delayed breaks during a shift. Breaks relate to better physical and mental health of the nurses [7]. It takes nurse leaders to set the example and push to implement that all nurses should be getting adequate breaks. It should be considered an adverse event if a nurse is unable to take a break [6].

Theory to Recovery
Nurses sacrifice their energy to put forth extensive effort to meet the demands of patients and their medical needs. Meijman and Mulder’s (1998) effort-recovery model highlights the importance of replenishing the energy to the levels which nurses came in with prior to their shifts. Acute fatigue can be lowered using breaks to decrease fatigue. This theoretical model suggests that taking regular rest breaks at work will lower fatigue experienced during a shift [1]. Uninterrupted breaks provide an opportunity to detach from the acute stress of the job and can enable recovery, replenish energy, and promote accuracy in job performance.

Methodology
Design
The study design chosen for this project was a quality improvement design. Quality improvement is defined as “Systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups” [9]. The strength of the quality improvement study design focuses on identifying and correcting system problems to improve outcomes. This is done by minimizing the opportunity for human error, standardizing work processes, and utilizing data-driven decision-making [9]. These ideas remain the foundation of quality improvement, in which quality improvements are made today in healthcare. Data gathering was voluntary and may not reflect the thoughts of the whole population of nurses working a twelve-hour shift in an acute care setting, which is a limitation of the study. IRB approval was obtained from Simmons University. The survey included 10 questions that include demographic questions such as if they are an RN, if they work in acute care, do they work 12-hour shifts, and what state is the participant located. Other questions in the survey ask if nurses are getting a lunch break or other breaks, if their breaks are interrupted, and if the nurse is burned out and considering leaving their job. Consent was listed at the beginning of the survey, and it mentions that there is no compensation to doing the survey, it is completely anonymous, there is no risk to filling out the survey, and that it is completely voluntary. If the participant continues the survey, they consented.

Sampling
Convenience sampling was utilized to recruit participants for the research study. A snowball sampling method was also utilized to get the survey to more participants. Researchers asked the original sample members to refer the survey to other people who meet the eligibility criteria. The survey is brief and is trying to identify if nurses are suffering from a lack of breaks and if that is causing some of their burnout. Some of the questions to help identify the problem nurses are facing include if they feel they are burned out, if they receive breaks and if they are uninterrupted, and the last questions are trying to identify if changing the break situation would improve their burnout. The specific questions of the survey are listed in appendix B. The participants were reached via social media (Facebook and Instagram), and a link was sent to them that allowed for anonymous responses. The sample size selected is 17 participants with the criteria that they were registered nurses working 12 hours shifts in an acute care setting anywhere across the nation. The sampling technique is nonprobability sampling, which is less likely to produce representative samples when compared to probability sampling; however, most studies in healthcare rely on nonprobability sampling [10].

Data Collection
Data collection was initiated through the social media platforms Facebook and Instagram where we recruited nurses to use the SurveyMonkey platform to answer the survey questions. Data files were encrypted before transferring to a data analysis platform to ensure security. The data collection occurred from November 2022 - January 2023. This survey was anonymous, providing confidentiality for more truthful answers. The collected data was printed and will be stored for three years at the researchers home in a locked drawer in their personal office.
Data Analysis
Microsoft Excel Data Analysis program and SurveyMonkey Analysis program were used for data analysis to quantify responses. Graphs and charts were created using Microsoft Excel to visually identify relationships and compare the data. Themes are presented upon data analysis. The researchers analyzed the data to assess patterns from the survey to determine statistically significant reasoning for burnout relating to intra-shift breaks.

Data were analyzed using numerical responses to aid with data analysis. For example, to analyze the question “How often do you get at least a 30-minute uninterrupted lunch break during your shift,” we assigned one point to answer “a” (always), 2 points to answer “b” (usually), 3 points to answer “c” (sometimes), 4 points to answer “d” (rarely), and 5 points to answer “e” (never). This numerical assignment of responses allowed for direct interpretation and analysis of results.

Limitations
The biggest limitation of this study was the time constraint that was given to survey nurses. It took a few weeks longer than expected to obtain IRB approval, which provided less time to be able to survey nurses. A larger sample population would yield more accurate results to represent the whole population of nurses working 12-hour shifts in an acute care setting. Another limitation of the study is that it did not specify what area of nursing the participant worked in, only that they worked in a hospital setting. This is a limitation because different departments in a hospital could yield different results. Comparing answers of participants to the area of medicine they work in would provide more data and understanding to the results.

Results
Seventeen participants were surveyed, everyone surveyed were registered nurses working 12-hour shifts in an acute care setting. The survey participants stemmed from multiple states, including California, Hawaii, Idaho, Montana, North Carolina, Oregon, Texas, and Utah. The participants work for various types of hospital systems. The following charts are a breakdown and analysis of their responses. The themes that emerged are lack of mandatory breaks versus burnout and interrupted breaks versus burnout.

This First Chart Compares Participants and Required Mandatory Breaks at their Facility. Only Eight of the 17 Participants are Required to take Mandatory Breaks.

Nurses are Feeling Overburdened and Burnt out at Work. The Majority of the Participants Stated Feeling Burnt-Out. Only one of the Participants Conveyed the Lack of Burnout at Work.

Frequency of Uninterrupted 30 Minutes Lunch Breaks

<table>
<thead>
<tr>
<th>Uninterrupted 30-Minute Breaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>Mode</td>
</tr>
<tr>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Sample Variance</td>
</tr>
<tr>
<td>Kurtosis</td>
</tr>
<tr>
<td>Skewness</td>
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<tr>
<td>Range</td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Sum</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

1 = Always, 2 = Usually, 3 = Sometimes, 4 = Rarely, 5 = Never
Eight of the 17 Surveyed are Contemplating Leaving their Job, with Five Undecided. Four Participants are not Considering Leaving their Job Due to Burnout.

### Burnout at Work

<table>
<thead>
<tr>
<th>Mean</th>
<th>1.529411765</th>
</tr>
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<tbody>
<tr>
<td>Standard Error</td>
<td>0.151406326</td>
</tr>
<tr>
<td>Median</td>
<td>1</td>
</tr>
<tr>
<td>Mode</td>
<td>1</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.62464273</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>0.389705882</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.222712709</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.749561602</td>
</tr>
<tr>
<td>Range</td>
<td>2</td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
</tr>
<tr>
<td>Maximum</td>
<td>3</td>
</tr>
<tr>
<td>Sum</td>
<td>26</td>
</tr>
<tr>
<td>N</td>
<td>17</td>
</tr>
</tbody>
</table>

1=Yes, 2=No

### Contemplating Resignation From Burnout

<table>
<thead>
<tr>
<th>Mean</th>
<th>1.764705882</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Error</td>
<td>0.2016369</td>
</tr>
<tr>
<td>Median</td>
<td>2</td>
</tr>
<tr>
<td>Mode</td>
<td>1</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.831370237</td>
</tr>
<tr>
<td>Sample Variance</td>
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</tr>
<tr>
<td>Kurtosis</td>
<td>-1.350797588</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.496488735</td>
</tr>
<tr>
<td>Range</td>
<td>2</td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
</tr>
<tr>
<td>Maximum</td>
<td>3</td>
</tr>
<tr>
<td>Sum</td>
<td>30</td>
</tr>
<tr>
<td>Count</td>
<td>17</td>
</tr>
</tbody>
</table>

1 = Yes 2 = Undecided, 3 = No, 4 = Not Applicable

The Last Two Chart Data Indicate An Improvement In Burnout With Uninterrupted 15- And 30-Minutes Breaks.

### Lack of Mandatory Breaks and Burnout

The data collected shows a discrepancy between the law's requirement for break frequency and the breaks received. Once they do receive their break, only 1 of 17 participants stated they always receive uninterrupted breaks. Lack of breaks is leading to burnout, with 16 of the 17 participants saying they are burnt-out.

### Interrupted Breaks and Burnout

Employees should expect to receive uninterrupted breaks during their workday. Shift breaks are necessary to reset and unwind. It is even more essential in a high-stress work environment such as a hospital or acute care setting. Burnout in the nursing field in acute care is correlated with not receiving uninterrupted breaks.

### Implications to Nursing

The results of this studied concluded the immense burnout that is being experienced in nurses in healthcare. Conditions such as a lack of adequate breaks is something that is significantly contributing to the burnout of nurses, which is ultimately going to cause nurses to leave their jobs or healthcare altogether. If change to the workforce of nursing does not happen, there is the potential for the nursing shortage to surge, which would be detrimental to all areas of healthcare. This serious issue needs to be addressed to improve burnout and keep experienced nurses working.

### Conclusion

This purpose of this study was to answer if the quality and quantity of breaks received by nurses working 12-hour shifts in an acute care setting, had an impact on their job satisfaction. Nurses...
working in this type of setting were surveyed and it did show that there the lack of breaks nurses receive is affecting their degree of burnout. While there could be a myriad of other reasons that nurse is experiencing burnout, this study concluded that if the break situation improved including things like uninterrupted lunch time as well as the addition of other 15-minute breaks, nurses felt like that would help them not be so dissatisfied with their jobs. Over half of the nurses surveyed reported contemplating or thinking about leaving their jobs. 82% of those nurses surveyed reported that the addition of 15-minute mandatory breaks throughout the shift would improve their burnout.

This study provided an inside look as to one area that is specifically causing nurses to be dissatisfied with their jobs. With nursing shortages on the rise, it will take a major effort on the administration staff to put into place a plan to help retain nurses. This study showed that improving the break situation would in turn help nurses want to stay in their jobs and continue working in healthcare. A more specific study that would shed light on other aspects causing burnout to nurses as well as assessing unit specific experiences would provide more comprehensive answers and a look into what else can be improved to help nurses.

References

Appendix A

<table>
<thead>
<tr>
<th>Article 1</th>
</tr>
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<tbody>
<tr>
<td><strong>Problem/Purpose:</strong> To determine if nurses become more likely to make conservative decisions the longer they go without taking a break during the work shift.</td>
</tr>
<tr>
<td><strong>Study design:</strong> Analyze 4000 calls that were made to 150 nurses that work for a medical helpline to determine if the longer the nurse goes without a break the more likely they are to make a conservative decision such as referring to another provider, which is often an inefficient decision.</td>
</tr>
<tr>
<td><strong>Sample:</strong> 150 participants</td>
</tr>
<tr>
<td><strong>Methods:</strong> Observational, repeated-measures study</td>
</tr>
<tr>
<td><strong>Instruments/Tools (reliability, validity):</strong> Analyses utilized mixed-effect logistic regression</td>
</tr>
<tr>
<td><strong>Theoretical Framework:</strong> Cognitive fatigue</td>
</tr>
<tr>
<td><strong>Findings:</strong> Summary of major themes: It was found that with each consecutive decision that is made or hour that passes without a break, the nurse’s decision-making reduces in efficiency. The nurse becomes fatigued without adequate breaks which causes less critical thinking regarding patient care.</td>
</tr>
<tr>
<td><strong>Implications:</strong> Implementing regular breaks during the shift allows for better critical thinking skills of nurses which in turn leads to better patient care.</td>
</tr>
<tr>
<td><strong>Evaluation:</strong> Major strengths and weaknesses: One of the strengths of the article is the larger sample size. The study analyzed 150 nurses and 4,000 phone calls. Another strength is that the data replicated the decision fatigue phenomenon that is observed in other professions. A weakness of the study is that it is observational. This made it difficult to experiment with manipulating the frequency and timing of the breaks the nurses could take and the phone call content was not available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Article 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem/Purpose:</strong> Nurses working in a hospital environment are at risk for burnout. The purpose of this study is to determine if burnout decreases if nurses take their breaks in an outdoor garden environment compared to the in-hospital unit breakroom.</td>
</tr>
</tbody>
</table>
3. **Study design:** Nurses were randomly assigned to take their breaks either in the outdoor garden or in the unit breakroom for a period of 6 weeks. Each group used the Maslach Burnout Inventory at the beginning and end of the 6 weeks to assess burnout.

4. **Sample:** 29 nurses participated, with 21 of those nurses completing the questionnaire at all time points.

5. **Methods:** This prospective cross-over study was performed over 2 summers to provide adequate weather conditions. A convenience sample of nurses were invited to participate. The study was approved by the hospital’s IRB and nurses provided written consent prior to participation.

6. **Instruments/Tools (reliability, validity):** The Maslach Burnout Inventory (MBI) is a validated and reliable questionnaire that is considered the gold standard to measure burnout in healthcare workers. It has 22 items on the questionnaire, which the nurses filled out at the start and end of the 6-week trial period.

7. **Theoretical Framework:** Not applicable.

8. **Findings: Summary of major themes:** Nurses on average spent less time in the garden than those that took their breaks indoors (20.5 vs 24.4 minutes). Even though the breaks were shorter for those that went outside, the garden had a greater reduction in burnout. There was significant improvement between the two environments regarding emotional exhaustion (4.5 vs -0.2; P<.001) and depersonalization (1.8 vs 0.0; P=.02). However, there was not an improvement for personal accomplishment (-0.6 vs -0.0; P=.55).

9. **Implications:** There is a correlation between nurses taking breaks in an outside environment and the amount of burnout they experience.

10. **Evaluation: Major strengths and weaknesses:** One of the weaknesses of the study includes having a relatively small sample size. Another limitation was that 8 of the nurses did not follow up with the survey. A strength of the study was the population of nurses that came from different units of the hospital.

**Article 3**

1. **Article full citation (in APA format) and retrievable link, if available:** Scammell, J. (2018). Do you take your breaks? How to influence change in the workplace. *British Journal of Nursing, 27*(9), 514. [https://doi-org.ezproxy.simmons.edu/10.12968/bjon.2018.27.9.514](https://doi-org.ezproxy.simmons.edu/10.12968/bjon.2018.27.9.514)

2. **Problem/Purpose:** Nurses are skipping or shortening breaks when busy which has become the norm. The purpose of this article is to show the importance of making breaks a necessity not a luxury.

3. **Study design:** Surveyed nursing staff and implemented a campaign to ‘rest, rehydrate, and refuel’ based on the results of the survey that 60% of nursing staff reported insufficient breaks.

4. **Sample:** Unspecified

5. **Methods:** Quality improvement

6. **Instruments/Tools (reliability, validity):** Survey was given to nursing staff but no specifics of the survey are mentioned such as the number of questions and the type of questions.

7. **Theoretical Framework:** PESTLE (political, economic, social, technological, legal, and environmental)

8. **Findings: Summary of major themes:** One of the major themes of this article is that it has become the culture that when nurses get busy, they don’t take their breaks. This leads to unhealthy habits of the nurses which leads to concerns for patient safety. The other major theme of the article is that it takes nurse leaders to set the example and push to implement that all nurses should be getting adequate breaks. It should be considered an adverse event if a nurse is unable to take a break.

9. **Implications:** Breaking the culture of break dissatisfaction takes nurse leaders to set the example and show the importance of ensuring nurses get adequate breaks. A lack of breaks can cause unhealthy habits such as dehydration and compromises personal wellbeing and patient safety.

**Article 4**


2. **Problem/Purpose:** To identify factors impeding or enhancing recovery from fatigue in shift working nurses.

3. **Study design:** Surveys and interviews were utilized in the 31 studies to collect data

4. **Sample:** 31 studies were included in this scoping review.

5. **Methods:** Scoping literature review methodology was utilized to recognize key concepts about recovering from fatigue in nurses working shift work hours and to identify what is contributing to the fatigue.

6. **Instruments/Tools (reliability, validity):** Multiple instruments and surveys were used throughout many of the studies. The most used tools were the Occupational, Fatigue Exhaustion, Recovery (OFER) survey. This survey was utilized in eighteen of the studies.

7. **Theoretical Framework:** Arksey and O’Malley

8. **Findings: Summary of major themes:** Nurses are choosing to work longer shifts to allow for more days off from work; however, this is leading to increased fatigue. With the high level of psychological and physical stress nurses go through, the longer breaks are necessary to recover from that. In this study, breaks were identified to be a major factor for recovery from fatigue.

9. **Implications:** There is a correlation between fatigue and the
length and frequency of breaks in nurses working shift work. Adequate break schedules can help decrease fatigue and improve patient safety.

10. **Evaluation: Major strengths and weaknesses:** One of the weaknesses of this review is that the main variables of fatigue and shift working nurses were often measured differently and sometimes inconsistent between studies. One of the strengths of this study is that it identified factors that help to facilitate recovery from work fatigue such as work and shift control and breaks.

**Article 5**


2. **Problem/Purpose:** The purpose of the study is to identify how breaks help prevent the strain of work and reduce errors in nursing practice.

3. **Study design:** Scoping review

4. **Sample:** 36 studies

5. **Methods:** Electronic literature databases were used and yielded an initial 9845 articles, which the authors further excluded articles due to relevance and duplication down to a final 36 articles.

6. **Instruments/Tools (reliability, validity):** Not mentioned.

7. **Theoretical Framework:** Arksey and O’Malley framework

8. **Findings: Summary of major themes:** Several of the studies report a high rate of missed, interrupted, or delayed breaks during a shift. Breaks relate to better physical and mental health of the nurses.

9. **Implications:** Managers should schedule rest breaks into their nurses’ daily shift to keep the staff healthy. Educating nurses on the importance of breaks, reminding nurses to take breaks, and informing patients about nurses’ breaks are all ways to help incorporate better breaks for nurses.

10. **Evaluation: Major strengths and weaknesses:** One of the weaknesses of this review is that it analyzes the impact breaks have on the physical and mental well-being of nurses; however, performance-related outcomes are inconclusive. A major strength of this review is how thorough it is, and the data supports the high prevalence of missed or interrupted breaks in nursing, which can help implement changes in the quantity and quality of rest periods during each shift.

**Article 6**


2. **Problem/Purpose:** This study explores whether 30-min rest breaks were as effective at lowering acute fatigue among 12-hr shift hospital nursing staff in care environments with COVID patients as among those who did not.

3. **Study design:** Cross-sectional study

4. **Sample:** Study was conducted between May and June of 2020. The sample included 338 nursing staff members who reported working 12-hr shifts who provide direct patient care.

5. **Methods:** Data was collected on the following: sociodemographics, work and rest breaks, and subjective measures of fatigue, psychological distress, sleep, and health. To explore the relationships between rest breaks and acute fatigue among nursing staff groups and without COVID-19 patient care, a hierarchical multiple linear regression followed by stratified analysis was conducted.

6. **Instruments/Tools (reliability, validity):** This research project used the OFER-15, PHQ-4, and The Maslach burnout Inventory-Human Services Survey. All these tools have good psychometric properties indicating good internal consistency.

7. **Theoretical Framework:** Based on Meijman and Mulder’s (1998) effort-recovery model with focus on work shift recovery.

8. **Findings: Summary of major themes**

9. **Implications:** Rest breaks are effective strategies in lowering fatigue. Although rest breaks were not associated with less fatigue. Rest breaks should be encouraged.

10. **Evaluation: Major strengths and Weakness:** Major strengths and weaknesses: Further evaluation will be beneficial to assess the sufficiency of rest breaks during high work demands.
Article 8
2. Problem/Purpose: There are many challenges to providing compassionate care by health care professionals. This study explores delivery of compassionate care and the health care provider’s own health and wellbeing in relation to providing compassionate care.
3. Study design: Qualitative study
4. Sample: The sample for this study included twenty-three qualified a student health care providers.
5. Methods: A phenomenological approach was used and individual semi-structured interviews were conducted.
6. Instruments/Tools (reliability, validity):
7. Theoretical Framework: The Leading change, Adding Value framework was cited in the article to identify how compassionate care is taught to health care providers. It includes the six C’s which are care, compassion, competence, communication, courage, and commitment.
8. Findings: Summary of major themes: Four major themes were constructed: Keeping it real and authentic, takes time to deliver compassionate care, compassionate care is sacrificial, and does anyone care about the compassionate care provided. A common theme of self-care deficit was identified while providing compassionate care.
9. Implications: This study is suggesting an initiative to improve the care and support of health care providers. Lack of breaks at work with decreased self-compassion, self-care, and health behaviors.
10. Evaluation: Major strengths and weaknesses: Strength of this study is that research participants were questioned outside of the hospital setting leading to a more genuine answer and decreased anxieties of being in a hospital setting. Limitation of this study is that a more diverse population of genders may cause deviation from data and analysis.

Article 9
2. Problem/Purpose: The aim of this study is to assess fatigue and identify the associated demographic factors of nurses working 12 hours shifts in the intensive care unit.
3. Study design: Cross sectional survey
4. Sample: 67 nurses working 12-hour shifts in the Intensive Care Unit at two different hospitals.
5. Methods: The methods used for analysis are Occupational Fatigue Exhaustion/Recovery Scale (OFER), Spearman’s correlation, ANOVA, t-tests, and Chi-Square.
6. Instruments/Tools (reliability, validity): The reliability and validity of the OFER scale had satisfied internal reliability, while the significant correlations between the scale and subscales prove a strong construct validity.
7. Theoretical Framework: Not applicable
8. Findings: The level of fatigue is strongly correlated with the age of the nurse. Other factors include frequency of 12 hours shifts, exercise habits, and experience of nurses.
9. Implications: A hospital in New Zealand has limited 12 hours shifts in some clinical areas due to identified risks and unsafe issues.
10. Evaluation: Major strengths and weaknesses: The strength of this study is that it surveyed nurses from two different organizations, proving fatigue in the nursing profession is not an organization issue, rather a global issue. The weakness of this study is the size of the sample size, limiting the statistical significance.

Article 10
2. Problem/Purpose: To identify perceived shortcomings in nursing performance, monitor worker fatigue due to low intershift recovery time and develop targeted action plans of improving nursing care.
3. Study design: Descriptive cross-sectional Study
4. Sample: 77 nurses who spoke and understood the English language providing bedside care at a Lebanese teaching hospital.
5. Methods: Packets with surveys were presented to participants, which they completed within two weeks and mailed to the researchers. Scales used for this study are Occupational Fatigue Exhaustion Recovery (OFER 15) Scale and Nursing Performance Instrument (NPI)
6. Instruments/Tools (reliability, validity): The reliability and validity of the OFER scale had satisfied internal reliability, while the significant correlations between the scale and subscales prove a strong construct validity.
7. Theoretical Framework: Not applicable
8. Findings: The themes under research are fatigue, job performance, and adequacy of breaks. Fatigue during shift and recovery during intershift breaks correlated with previous night sleep, the workload, and time constraints.
9. Implications: Nursing management should monitor nurse fatigue as it can negatively affect performance and jeopardize patient care.
10. Evaluation: Major strengths and weaknesses: The strength of this study is that it chose a group of nurses who are prone to fatigue due to their work environment, and performance is necessary for patient health outcomes. There were many limitations to this study. The study was in English and did not
provide a translation to Arabic. The NPI scale reliability might have been hindered due to removal of two questions. Finally, the cross-sectional study design cannot fully demonstrate causality between fatigue and performance.

Appendix B
Survey Questionnaire
Nursing Job Satisfaction
This form will tell you important information about a research study. We are Alicia Jorgensen and Anup Varghese from Simmons University in Scholarly Inquiry 2 and are doing a study to learn more about nursing job satisfaction and how it relates to breaks. We are inviting you to be part of the study to determine if your break situation is affecting your job satisfaction because so many nurses are getting burned out from their jobs. In this study, we want to learn more about the effects of poor break habits and how it is affecting a nurse’s job satisfaction. During this study, we will ask you to complete a survey. If you decide to join this research study, you will be asked to respond to 10 questions through SurveyMonkey, which is an anonymous survey platform, and this is not expected to take more than 2 minutes. Data files will be encrypted before transferring to a data analysis platform to ensure security. We will be asking 17 people to join the study, which will last for 6 weeks. Participants must be 18 years or older to participate. We hope to learn more about the break situation nurses are experiencing to help improve the quality and quantity of breaks nurses are receiving, which in turn will improve nurse burnout. We cannot promise you will benefit in any way from being part of this research study. We do not believe there will be any harm to you as a result of this study. You may find some questions are hard to answer. There is a chance you may not want to answer some questions because they make you feel uncomfortable. You may refuse to answer questions at any time during the survey. We do not expect you to bear any costs to be part of this study other than spending some of your time on it. Any information about you will be confidential to the extent possible by law. Your name and personal information will never be asked for in this study. No one will be able to identify your personal information when the project is finished and when we share what we found. Please feel free to ask any questions you may have about the study or your rights in the research project. If you have questions about the research, please contact Alicia Jorgensen at Alicia.jorgensen@simmons.edu. Also, you may contact my faculty advisor, Professor Abigail Mitchell at mitchela@dvc.edu. If you have questions about your rights as a research participant, please contact the Human Protections Administrator in the Office of Sponsored Programs at Simmons University at irbprotocols@simmons.edu. Completion of the survey implies your consent to participate. Thank you for participating in this survey.

1. Are you a registered nurse?
   - Yes
   - No

2. Do you work 12-hour shifts?

3. Do you work in an acute care setting?
   - Yes
   - No

4. In what state do you currently work?
   - Alabama
   - Alaska
   - Arizona
   - Arkansas
   - California
   - Colorado
   - Connecticut
   - Delaware
   - Florida
   - Georgia
   - Hawaii
   - Idaho
   - Illinois
   - Indiana
   - Iowa
   - Kansas
   - Kentucky
   - Louisiana
   - Maine
   - Maryland
   - Massachusetts
   - Michigan
   - Minnesota
   - Mississippi
   - Missouri
   - Montana
   - Nebraska
   - Nevada
   - New Hampshire
   - New Jersey
   - New Mexico
   - New York
   - North Carolina
   - North Dakota
   - Ohio
   - Oklahoma
   - Oregon
   - Pennsylvania
   - Rhode Island
   - South Carolina
   - South Dakota
   - Tennessee
   - Texas
   - Utah
   - Vermont
   - Virginia
   - Washington
   - West Virginia
5. How often do you get at least a 30-minute uninterrupted lunch break during your shift?
- Always
- Usually
- Sometimes
- Rarely
- Never

6. Aside from your lunch break, do you get other mandatory breaks or rest periods throughout your shift?
- Yes
- No

7. Do you feel burned out from work?
- Yes
- Somewhat
- No

8. Are you contemplating leaving your job due to burn out?
- Yes
- Undecided
- No
- Not applicable

9. Would getting a 30-minute uninterrupted lunch break help improve your burn out?
- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely

10. Would having mandatory 15-minute breaks throughout each shift improve your burn out?
- Very likely
- Likely
- Neither likely nor unlikely
- Unlikely
- Very unlikely