

# **Experience Of Stress Among Undergraduate Nursing Students and The Coping Strategies That They Employed During Their Learning in The Clinical Practices in The ICU: Rapid Review**

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| Article Info                                                                                                                                                                          | ABSTRACT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>Article history:</b><br><br>Received 10 22, 2024<br>Revised 11 15, 2024<br>Accepted 12 03, 2024                                                                                    | <p>Aims to explore evidence that encapsulate current studies on the stress phenomenon experienced by undergraduate nursing students during their learning in the actual clinical settings, specifically the ICU. The objectives are to investigate how nursing students' cope with the stress of learning in the clinical settings, specifically ICU and identify strategies they undertaken in maintaining their resilience in learning. After creating a PICOT question, the next step is to create keywords for the PICOT question. The keywords that have been determined can then be used by researchers to search for various articles that are relevant to the topic being searched for using databases/online search engines. PRISMA allows researchers to find studies that fit the PICOT questions already developed. nursing students who are placed in clinical practice, especially ICU, experience various problems such as lack of confidence due to feeling less competent, pressure and fear of the new clinical environment. In caring for individual patients in clinical practice, nursing students do not have the same responsibilities as registered nurses, yet they experience many of the same stressors. Nursing students who have appropriate coping strategies can carry out clinical practice in the ICU better than nursing students who do not have good coping strategies.</p> |
| <b>Keywords:</b><br><br>Undergraduate Nurs<br>Student<br>Degree Nurs<br>Stress<br>Pressure<br>ICU<br>Intensive Treatment Unit<br>Coping Strategy<br>Coping Skill<br>Mental adaptation |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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## **INTRODUCTION**

Nursing is a very challenging profession so intense training is required from the early years of nursing education (Nebhinani et al., 2020). The clinical attachments or clinical trainings expose students to the actual clinical settings. This component of the students' nursing education is more demanding than acquisition of knowledge at the university, where students attend lecture and learn practical skills in the university classroom, skills laboratories and simulation clinical settings respectively (Ching et al., 2020). During the training period, students have to deal with various situations that increase stress. The inability of nursing students to overcome various stressors can cause psychological pressure and obstacles in further continuing and even completing their nursing education (Nebhinani et al., 2020).

Additionally, the clinical settings comprised of several areas, ranging from those acute settings such as the Outpatient Department and medical and surgical wards, to those High Dependency Units (HDUs) such as the Emergency Department (ED) or Emergency Room (ER) and the Intensive Care Unit (ICU). The stress encountered by nursing students are likely to be more intense in the HDUs in comparison with the acute settings. When students encountered excessive stress it can cause fatigue. Furthermore, if they are unable to cope with the stress, these will have a significant impact on their nursing education and can hinder their interest, hence ability to learn and achieve their learning objectives (Ching et al., 2020).

Despite the clinical training is an important opportunity for the nursing students to implement their knowledge and practical skills that they gained in the university to the clinical areas, they are also

bound to be stress due to encounter on the actual real-life experiences (Ching et al., 2020). Stress can be positive and negative. When stress is low, this can be useful for increasing students' motivation to learn and achieve future goals. However, it is different when stress is high, this may not be handled appropriately and can cause depression and hopelessness (Onieva-Zafra et al., 2020). Appropriate coping methods or strategies are imperative to overcome stress, moreover in the actual real-life clinical settings. Each undergraduate nursing student's perception of stress and ability to handle stress is determined by the coping style used by the student (Nebhinani et al., 2020).

This rapid review aims to explore evidence that encapsulate current studies on the stress phenomenon experienced by undergraduate nursing students during their learning in the actual clinical settings, specifically the ICU. The objectives are to investigate how nursing students' cope with the stress of learning in the clinical settings, specifically ICU and identify strategies they undertaken in maintaining their resilience in learning.

#### Formulating Research Question (PICOT)

The word PICOT is a mnemonic that contains a clinical research question – patient, intervention, comparison, outcome and (sometimes) time. It starts with a case scenario, and questions are asked to obtain answers (Tnstate.libguides.com, 2024). Each element of PICOT can help to develop well-structured questions so that after PICOT is implemented researchers can look for evidence that will help answer the question (Onlinenursing.duq.edu, 2020).

|              |                                           |
|--------------|-------------------------------------------|
| Population   | Undergraduate Nursing Student             |
| Intervention | Experience of stress in ICU               |
| Comparison   |                                           |
| Outcome      | Coping strategies                         |
| Time         | During the learning in clinical practices |

By using the framework, the research question that can be developed is: What are the experience of stress among undergraduate nursing students (P) and the coping strategies (O) that they employed during their learning in the clinical practices (T) in the ICU (I)?

#### Keywords from PICOT research question

After creating a PICOT question, the next step is to create keywords for the PICOT question. Keywords are words that will be entered into a database/search engine to find articles that are relevant to the PICOT question that has been created. PICOT questions have a relationship

between one another, perhaps each author will express each topic of the PICOT section with different words-synonyms. The database/search engine will only retrieve what is typed. The right keywords will capture all articles related/relevant to the topic of the PICOT question being created. (Libguides.sdsu.edu, 2023). Keywords that can be developed from the PICOT research question are:

| PICOT                  | Focus                                     | Keywords                                                |
|------------------------|-------------------------------------------|---------------------------------------------------------|
| P (patient/population) | Undergraduate nursing student             | Undergraduate nursing student*; degree nursing student* |
| I (intervention)       | Experience of stress in ICU               | Stress; pressure; ICU; intensive treatment unit         |
| C (comparison)         | -                                         | -                                                       |
| O (outcomes)           | Coping strategies                         | Coping strategy*; coping skill*; mental adaptation      |
| T (time)               | During the learning in clinical practices | Clinical practices; placement; internships              |

#### Online Databases Used

The keywords that have been determined can then be used by researchers to search for various articles that are relevant to the topic being searched for using databases/online search engines. A database is a computer-generated structure that contains a collection of logically related data or records. Databases that can be accessed over a network, such as the Internet, are known as online databases. This is not the same as having a local database on a personal computer or internal storage such as a Disk Drive. Many database products are currently hosted databases and are offered as Software-as-a-Service. The main difference is that online databases are mainly delivered through a web browser and are often included in annual/monthly subscriptions, with shared collaboration features and email notifications (Hase et al., 2021).

Compared to manual searches using physical books and magazines, this feature saves a lot of time and effort. Most major online databases include content that has gone through a rigorous peer-review process. The highest level of academic integrity is maintained by academic journals and publishers through strict quality control measures. Another important aspect of online databases is the speed at which new research and information is added to the

database pool. Some databases provide tools for scholars to communicate and engage with each other, including discussion forums, comment sections, or citation tracking (Gaikwad & Bilawar, 2023). Some examples of online databases are: Web of Science (WOS); EBSCO; ELSEVIER Science Direct; Springer Link; ABI/INFORM; Scopus. LISA; etc. (Hase et al., 2021).

Each database has its own user interface and search functions. During the scoping process, researchers searched journal articles in the ScienceDirect, Wiley, Taylor & Francis Online and PubMed databases to identify articles that met inclusion and exclusion criteria. An extensive database of biomedical articles, PubMed contains millions of results in the medical field and other related fields relevant to healthcare. A comprehensive scientific database, ScienceDirect offers a variety of research articles from various scientific fields (Gaikwad & Bilawar, 2023). The Wiley Database provides an evidence-based medicine (EBM) database designed to give healthcare professionals access to the right information at the right time. Along with a growing commitment to an evidence-based approach, these databases provide timely and unbiased medical information, speeding diagnosis, and improving patient care through better outcomes (Onlinelibrary.wiley, 2024). A large collection of peer-reviewed journal articles, both leading and highly respected, is published on Taylor & Francis Online with the support of Routledge. A variety of scientific research topics are available for reading by Taylor & Francis (Uws-uk.libguides, 2022).

These databases are used because they have many journal articles related to keywords from various authors. Apart from that, this database can also be accessed for free through institutions and is also free to download, making it easier for researchers to search for articles relevant to the research topic.

## PRISMA

PRISMA allows researchers to find studies that fit the PICOT questions already developed. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement was created to help systematic reviewers explain the reasons for conducting the review, what the authors plan to do, and the findings in a transparent manner. PRISMA is useful for ensuring all relevant information/studies are captured when planning or conducting a systematic review (Page et al., 2021). PRISMA is useful for ensuring all relevant information/studies are captured when planning or conducting a systematic review. The PRISMA flow diagram shows the screening process of the articles (figure 1).

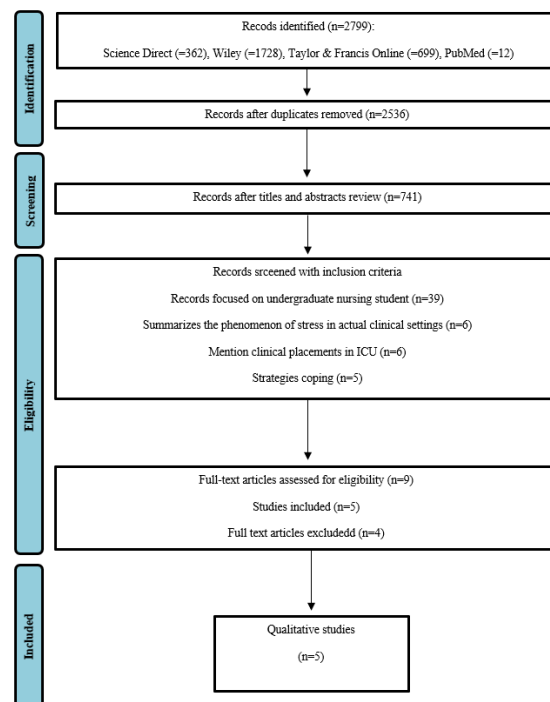


Figure 1. Prisma Flow Chart

## Search Strategy

Effective searching in online databases can help users obtain more accurate and relevant data. After determining the right keywords, the next step is to use Boolean operators as search rules on computers because computers understand mathematical logic. There are three main operations that can be performed, namely AND, OR, NOT. AND is used to narrow search results by connecting words, for example “(Undergraduate nursing students) AND (Experience) AND (Stress) AND (Coping strategies) AND (Clinical practices)”, OR is used to expand search results with synonyms, for example “(ICU) OR (Intensive care unit)”, while NOT is used to narrow search results by telling the database not to include that word (Libguides.sdsu.edu, 2023). When searching for a specific set of words or phrases, users can use quotation marks to indicate the phrase. The database is instructed to search for specific phrases, not random words that appear throughout the text. By using truncation symbols and wildcards, the search is expanded to include a wide range of keywords. Online databases often provide restrictions and filters to limit search results based on certain criteria. Categories that may need to be considered are publication date range, language use, document type, peer-reviewed articles, or specific databases within a broader collection (Gaikwad & Bilawar, 2023). In addition, researchers need to establish inclusion and exclusion criteria. The inclusion and exclusion criteria for the literature search are presented in table 1.

**Table 1.** Inclusion and Exclusion Criteria

| Inclusion Criteria                                              | Exclusion Criteria                                                                                     | Rationale                                                                                    |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Studies published between 2020 to 2024                          | Studies published before 2020                                                                          | To gather information that's up to date and is related to the keywords that are being looked |
| Studies reported in English                                     | Studies that were not reported in English                                                              | To avoid any error when translating and deciphering information                              |
| Studies included undergraduate nursing students as participants | Staff nurses or graduate nurses or any other students                                                  | Targets the proper populace of the study                                                     |
| Studies regarding experience of stress in ICU and coping        | Studies that do not mention clinical placements in ICU, do not mention experience of stress and coping | Targets the significance of the aiming subject                                               |

### Justification of peer-reviewed research

The studies chosen were using qualitative studies. A type of research that examines real-world problems and provides deeper insight into these problems. Participants' perceptions, experiences and behavior are the focus of qualitative research studies (Tenny et al., 2022). In this case, the exposure is mostly about experience, stress, and coping. One study was conducted in 2020 (Ching et al., 2020). Then two studies were conducted in 2021 (Sağlam et al., 2021) and (Hood & Copeland, 2021). One study included was from 2022 (Gómez-Moreno et al., 2022). And the last research is the latest research carried out in 2023 (Gandossi et al., 2023). Completing an internship in an intensive care unit (ICU) was rated as a beneficial practice by the intern nurses in this study, despite challenges. The most common emotions participants felt were stress and overwhelm. These things are caused. Anxiety, awareness of one's role as a care provider, seeking opportunities for evaluation, hesitancy/inability to provide care, miscommunication with the patient and care team, ambivalent feelings about death, and adjustment to the clinical environment. In this research, it can be seen that when students adjust

their expectations and face the demands of the clinical environment (namely the demands of practicing in a crowded hospital ward, working hard to look for learning opportunities, and facing social rules/accluturation processes), it turns out stress triggers occur. However, all parties are trying to overcome it as best as possible. According to this research, students with high resilience and low burnout scores have goals that they can set for themselves and achieve using self-regulation strategies. People with low resilience and high burnout use other-oriented and self-blaming strategies.

### Types of Literature Review

The type of literature review used is only qualitative. By utilizing non-numerical data such as interviews, observations and text analysis, qualitative literature reviews review and synthesize existing research. The aim is to understand the significance, experiences and views of individuals or groups within a particular social environment (Shazz, 2024).

### Rationale for Chosen Critical Appraisal Tool

The selected critical appraisal tool used was the Joanna Briggs Institute (JBI) critical appraisal tool. The JBI critical appraisal tool is freely available, custom-designed, and constantly updated. Critical appraisal tools need to be updated and revised to keep up to date with the latest science that may be biased (Barker et al., 2023). The JBI critical appraisal tool is useful for assessing the methodological quality of research and determining the extent to which studies address potential biases in design, implementation, and analysis. This assessment can be used to summarize and interpret the results of the study (JBI Global, 2017).

### Table of Summary

Data displayed in Table 2 includes the name of the authors, the year of publication, the country of origin, sample size, objectives, methodology, and key findings.

**Table 2.** Summarization of Literature

| Title and Author(s)                                                                                                     | Key Findings                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Student Nurses' Experiences of Critical Events in the Clinical Setting: A Grounded Theory<br><br>Hood & Copeland (2021) | Variables Measured: Explored pre-service nursing students' experiences of crisis events in the clinical environment, before and after crisis events, methods of preparation and support, and experiences of psychological distress and psychological recovery. |

| Title and Author(s) | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <p>Measurement method: Interview and using Strauss and Corbin's Grounded Theory methodology.</p> <p>Participants: 14 nursing students from a university in the western United States were interviewed.</p> <p>Results: Nursing students require active support from instructors and staff during critical events, and require advance explanation when possible. Debriefing had a positive effect on students' post-event stress response, and lack of debriefing was associated with post-event psychological distress. Support for students who experience a critical incident during their clinical experience should continue in the days, weeks and months following the incident. Clinical educators should be prepared to provide this support. All teachers should monitor their students for signs of psychological distress to better support their students' mental health and emotional well-being.</p> <p>Limitations: The results of the study were limited to a small sample of ADN and BSN students who had prelicensure from a four-year advanced nursing school in the Midwest of the United States. These students</p> |

| Title and Author(s)                                                                                                             | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                 | <p>were very diverse in age, occupation, education, and life experiences, which impacted on their individual treatment and support needs. It is possible that participants' memories of the event have changed over time. In any case, interpretations can only be made based on the participants' perceived comfort of communication.</p> <p>Gaps: The study focused not only on clinical experiences in the intensive care unit but also clinical experiences in other units.</p>                                                                                                                                         |
| <p>How Do Nursing Students Perceive Moral Distress? An Interpretative Phenomenological Study</p> <p>Gandossi et al., (2023)</p> | <p>Variables Measured: Analyzed the M.D. episodes experienced by nursing students during end-of-life care of patients with oncology and hematology diseases in the hospital, and describe their involvement in decision-making, coping strategies, consideration of outcomes, and the impact on their profession and career as nurses in the future.</p> <p>Measurement method: The interpretive paradigm was used to conduct the interviews in this study, and the data was analyzed using the principles of interpretive phenomenological analysis.</p> <p>Participants: There were 17 nursing students who agreed to</p> |

| Title and Author(s)                                                                  | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                      | <p>participate, consisting of 15 females and 2 males, with an average age of 22.1 years.</p> <p>Results: The research team identified eight themes: causes of moral distress; Factors that exacerbate or influence the experience of moral distress; Feelings and emotions during morally stressful events; Morally regrettable events and consultations; Strategies for coping with moral distress; Recovering from morally stressful events; End-of-life support; Clinical internship training and nursing curriculum.</p> <p>Limitations: This study did not analyze the data based on possible subcategories that could influence an individual's opinion of M.D., including gender, religious beliefs, and past personal experiences related to participants' end-of-life experiences. In addition, as this is a qualitative study, the results cannot be duplicated as the topics, experiences and contexts are different.</p> <p>Gaps: The study mainly focused on nursing students caring for oncology and hematology patients and not other patients.</p> |
| Challenge, fear and pride: nursing students working as nurses in COVID-19 care units | Variables Measured: Explored: 1) The experiences of last year's nursing students who worked as aid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Title and Author(s)         | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gómez-Moreno et al., (2022) | <p>workers in hospitals in response to the COVID-19 crisis in Spain; 2) How this experience has impacted their learning process; 3) How they experienced the role change; and 4) Their emotions during the process.</p> <p>Measurement method: The research used a descriptive phenomenological method. Data was collected in two stages: 1) two focus groups and 2) 10 in-depth semi-structured personal interviews from July to August 2021.</p> <p>Participants: 22 nursing students from the Faculty of Nursing of the University of Madrid participated.</p> <p>Results: All of them worked in the COVID-19 inpatient unit, and six worked in the intensive care unit. Four main categories were identified. Transition, learning, hospital integration, and emotions between students and professional nurses.</p> <p>Limitations: Due to the size and nature of the study, the results cannot be generalized to nursing students elsewhere or to students of other health professions who have worked during the COVID-19 pandemic. Similarly, the interviews and group discussions were conducted via an</p> |

| Title and Author(s)                                                                                          | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                              | <p>online digital platform taking into account health conditions, thus changing the number, nature and subtlety of face-to-face interactions between participants and researchers, and this may have affected the results.</p> <p>Gaps: The study mainly focused on nursing students caring for COVID-19 patients and not other patients.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>Intensive care experiences of intern nurse students: A qualitative study</p> <p>Sağlam et al., (2021)</p> | <p>Variables Measured: Describing the experiences of nurse interns in an ICU or intensive care unit</p> <p>Measurement method: Four focus group interviews (one with four different groups of nursing interns). Using a semi-structured interview form.</p> <p>Participants: Twenty-five participants from nurse interns in Turkey in two different intensive care units (ICUs) at a university hospital participated in this study.</p> <p>Results: Seven themes emerged in this study: anxiety, awareness of the nurse's role, seeking opportunities for self-improvement, difficulties in providing nursing care, and communicating with patients and the nursing team, feeling ambivalent towards death and adaptation to the clinical environment.</p> <p>Limitations: This study was conducted at the</p> |

| Title and Author(s)                                                                                                                                                 | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                     | <p>Faculty of Nursing of a university located in western Turkey. The findings of this qualitative study cannot be used as a comprehensive guide for Turkish nursing students.</p> <p>Gaps: The study mostly describes the experience of internship students in ICU or intensive care, only slightly discussing coping strategies or how to handle stress on themselves.</p>                                                                                                                                                                                                                                                                                                                                                                           |
| <p>Stressors and coping of nursing students in clinical placement: A qualitative study contextualizing their resilience and burnout</p> <p>Ching et al., (2020)</p> | <p>Variables Measured: Understanding the stressors and coping mechanisms of nursing students with different levels of resilience and burnout during clinical placements.</p> <p>Measurement method: The interview guide was semi-structured and ten focus group interviews were conducted.</p> <p>Participants: The final year nursing students consisted of 24 individuals aged between 21 and 25 years.</p> <p>Results: Two main themes were identified in the data analysis: a) stressors that arise when students adjust their expectations to the demands of clinical practice (i.e. demands of practice in crowded wards, difficulties in finding learning opportunities, facing social rules); b) coping as a process of adaptation to the</p> |

| Title and Author(s) | Key Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <p>culture of the environment. Students who are more resilient and have lower levels of burnout are able to have self-directed goals and use self-regulatory strategies to achieve them. Those with low resilience and high fatigue used other-oriented and self-blame strategies.</p> <p>Limitations: The interview process is conducted through focus group interviews, which can influence students' willingness to talk. One of the universities in Hong Kong is where this study was conducted. In other countries, nursing students may have different experiences of stress and coping during clinical placements.</p> <p>Gaps: The study focused on stress and coping strategies, did not specify the place of clinical placement, and did not describe the experience of clinical placement in ICU or intensive care.</p> |

### Summary of methodological critiques

This research includes a type of research that is qualitative research. The research was conducted in various countries, namely the United States, Italy, Spain, Turkey and Hong Kong. Most of the studies describe and explore the experiences of nursing students during internships/clinical practice, especially in the ICU, as well as other variables such as students' feelings of stress, and how to overcome them/coping strategies undertaken. These studies used interview techniques to obtain data. One study had a much larger number of participants than another. The average number of participants in these studies was around  $\pm 20$  participants. Despite these minimal limitations, all other methodological aspects of the papers deemed rigorous and the findings provide rich qualitative data.

### Synthesis of Evidence

Three themes were identified to discuss the results found in the research after reading each article in more depth connecting the research question keywords.

Theme 1: Nursing students' feelings during clinical placement in ICU.

In research Ching et al. (2020), stated that the source of stressors comes from the expectations of nursing students to be able to meet the criteria as a nurse who can work quickly and precisely, the diversity of practice in various hospitals, optimization of services, and the difficulty of working with several mentors. Most participants experienced feelings of emotional "shock" or acute distress due to feeling inadequate, distrustful, not having time to process, feeling uncomfortable, time slowing down, mental and physical fatigue, self-blame, guilt, regret, second-guessing, anger, frustration, and sadness (Hood & Copeland, 2021). Similar to study Gómez-Moreno et al. (2022), all participants reported feeling nervous before starting work, stressed, and sad at work due to the high burden of care.

In study Sağlam et al. (2021), students stated that they experienced confusion because the ICU environment was different from the environment in other units, complicated patient diagnoses, different physical appearances of patients, many devices attached to patients, different sounds coming from different devices in the environment, and the different medical equipment they encountered during their first treatment were among the reasons behind the anxiety and fear felt by the students. Some students felt pressured to participate in a role that they did not enjoy. For the participants in this study, when staff became anxious, students often became anxious, and vice versa. Nursing students experience distress when patients or family members or both, are unaware of terminal clinical conditions due to lack of clear communication by clinicians (Gandossi et al., 2023). In addition, researcher Sağlam et al. (2021), also mentioned that the main problem of students was the difficulty in communicating effectively with unconscious, intubated, or aphasic patients in the ICU, which made them feel incompetent.

Theme 2 : Nursing students' coping strategies to overcome stress

Research Gómez-Moreno et al. (2022), shows that talking and crying with family and friends, sometimes through video conferencing is one of the most commonly used methods of coping with stress. Psychotherapy and tranquilizers may be required in the most severe cases. Research Gandossi et al. (2023), shows that advice from attentive placement

assistants creates a sense of support and understanding, allowing students to cope better with discomfort. On the other hand, other participants reported that consulting unsympathetic colleagues or training assistants, did not facilitate the resolution of ethical dilemmas. It is not uncommon for nursing students to avoid talking to others for fear of criticism or lack of courage.

Research Hood & Copeland (2021), shows that talking about events helps students process their thoughts and feelings and often provides validation and reduces feelings of isolation. In addition, in study Gómez-Moreno et al. (2022), nursing students coped by taking breaks or even taking time off. Study Sağlam et al. (2021), stated that the support of nurses working with students, other members of the care team, and responsible academic staff helped students' adaptation process to the clinical process. According to research Ching et al. (2020), students often use avoidance as a strategy. such as being alone, ignoring problems, sleeping, browsing the internet, etc. Students' coping strategies are implemented by adapting the principle of independence and focusing on overcoming problems. Lack of time to think due to a busy schedule may be an obstacle in coping. Students' coping outcomes are professionally reflected in their satisfaction with nursing, and personally have high awareness.

#### Theme 3 : Impact of clinical practice experience in ICU

Research Hood & Copeland (2021), shows that a negative impact of clinical practice in the ICU is the feeling of isolation. Participants said they often felt lonely, felt that no one understood them, did not want to ask for help, and got emotional in front of others. Students experience various psychological reactions ranging from recovery to trauma. Students who received direct debriefing from clinical nurses or active instructors were more likely to experience psychological recovery. Flashbacks and sleep disturbances are the most commonly discussed trauma reactions.

Research Gómez-Moreno et al. (2022), shows that students view this as a unique and once-in-a-lifetime learning opportunity that increases their confidence and maturity. Because of this situation, they became more emotionally open with family and friends. Research Sağlam et al. (2021), showed that working in the intensive care unit was able to increase students' interest in nursing, encourage student learning, increase self-confidence, make them feel like professional clinical nurses, and increase job satisfaction. In their clinical practice, student participants reported working alongside many nurses whom they considered to be role models. They stated that they had a clearer

understanding of the roles and responsibilities of nurses.

#### Discussion

From the findings summarized in the 3 themes above, it shows that nursing students who are placed in clinical practice, especially ICU, experience various problems such as lack of confidence due to feeling less competent, pressure and fear of the new clinical environment. According to Liu et al. (2023), ICU is an exclusive inpatient option for patients with critical conditions that require full attention. Thus, nurses who work/students who practice in this department often experience higher levels of stress compared to other departments. In caring for individual patients in clinical practice, nursing students do not have the same responsibilities as registered nurses, yet they experience many of the same stressors. Examples include relationships with other professionals, conflicts in patient care with family members, the way they handle the death of the patients they care for, and other stressors such as academic programs and their role as nursing students (Onieva-Zafra et al., 2020).

The lack of support from people around makes it difficult for nursing students to face clinical practice in the ICU. Students who have high stress levels and are unable to deal with situations effectively can lead to various physical and psychological health problems (Nebhinani et al., 2020). Proper coping strategies are needed, not holding it to yourself and being more open as telling stories and expressing feelings to others is an easy way to deal with stress. There needs to be self-awareness, get up, and think positively so as not to continue to drag on in stress. Clinical practice in the ICU can have various impacts, such as the emergence of a sense of self-isolation due to feeling traumatized and there is no comfortable place to tell stories, reimagining sad things during clinical practice, and difficulty sleeping are early symptoms of trauma experienced by students. However, clinical practice in the ICU also has positive impacts such as the emergence of enthusiasm for learning, increasing self-confidence, and awareness of the importance of the clinical environment for the future to become a great nurse.

#### Limitations from literature

This study involved nursing students from different countries with a qualitative study, which led to the findings being more general to the research question. The findings are not necessarily applicable to other countries and may not apply to Brunei Darussalam itself. Furthermore, most of the studies involved a much larger number of women than men. The sampling of the studies was not equal between women and men, as physiological and psychological aspects may differ between women and men. Of all the studies, none were detailed and focused in

explaining the experience of clinical practice in the ICU, stress and coping strategies carried out by nursing students. In addition, the interview questions for each study were different, so the findings may be different if the same assessment scale and questions were asked.

### Implications

This review shows that further research such as measuring how high the stress experienced by Brunei Darussalam nursing students in the clinical environment, especially ICU in male and female nursing students is interesting to do. And also examining coping strategies according to gender needs to be done to find the right and appropriate coping strategies so that nursing students can undergo clinical practice, especially in the ICU well without any physiological and psychological problems.

### CONCLUSION

Clinical practice, especially in the ICU or intensive care unit is one of the challenging clinical practice places for nursing students so that many of the nursing students experience stress problems. Nursing students who have appropriate coping strategies can carry out clinical practice in the ICU better than nursing students who do not have good coping strategies. This can result in prolonged trauma for nursing students. If the coping strategies carried out by nursing students are appropriate, this can have a positive impact such as increasing learning motivation, self-confidence, and awareness of the importance of clinical practice for the future to shape themselves into great nurses later when graduating and working.

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