CORRELATION BETWEEN EMOTIONAL INTELLIGENCE AND CRITICAL THINKING DISPOSITION AMONG NURSING STUDENTS AT UNIVERSITY OF BENIN, BENIN CITY, EDO STATE.

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IN PARTIAL FULFILLMENT OF THE AWARD OF THE DEGREE OF BACHELOR OF NURSING SCIENCES (BNSC), UNIVERSITY OF BENIN,

BENIN CITY, EDO STATE.

JANUARY, 2026

DECLARATION

This is to declare that this research project titled **"Correlation Between Emotional Intelligence and Critical Thinking Disposition Among Nursing Students at University of Benin, Benin City, Edo State."** was carried out by **EBOIGBE IRENE IZIEGBE** is solely the result of my work except where acknowledged are being derived from other person(s) or resources.

MATRICULATION NUMBER: _____

FACULTY/COLLEGE: NURSING SCIENCES, COLLEGE OF MEDICAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY.

Signature: _____

Date: _____

CERTIFICATION/APPROVAL

This is to certify that this research titled **"Correlation Between Emotional Intelligence and Critical Thinking Disposition Among Nursing Students at University of Benin, Benin City, Edo State."** was carried out by **EBOIGBE IRENE IZIEGBE** with matriculation number **BMS2001863** has been examined and approved for the award of **BACHELOR IN NURSING SCIENCES CERTIFICATE.**

DR. (MRS.) N. E. OYANA **DATE**
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ABSTRACT

Emotional intelligence and critical thinking disposition are essential competencies required for effective nursing education and professional practice. This study examined the correlation between emotional intelligence and critical thinking disposition among nursing students at the University of Benin, Benin City, Edo State. A cross-sectional correlational design was adopted, and a total of 255 students from 200 to 500 levels were selected using a stratified random sampling technique. Data were collected using validated structured questionnaires measuring emotional intelligence and critical thinking disposition. Analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 26.0. Descriptive statistics such as frequencies, percentages, and means were used, while Pearson Product Moment Correlation served as the inferential statistical tool. Findings showed that the majority of participants were female (77.6%), with a mean age of 21.6 ± 3.26 years, and most respondents (94.1%) had a GPA of 3.0 and above. Emotional intelligence levels were generally high, with 52.16% of respondents scoring in the high category, 36.08% in the moderate category, and 11.76% in the low category. The overall mean emotional intelligence score was 55.9 ± 12.7. Critical thinking disposition also ranked high among respondents, with 52.55% classified as high, 33.73% moderate, and 13.73% low. The overall mean score for critical thinking disposition was 117.3 ± 33.2. Correlation analysis revealed statistically significant positive relationships between all dimensions of emotional intelligence and critical thinking disposition, with correlation coefficients ranging from $r = +0.185$ to $r = +0.212$ ($p < 0.01$). Overall emotional intelligence also showed a weak but significant positive correlation with critical thinking disposition ($r = +0.210$; $p = 0.003$), leading to the rejection of the null hypothesis. The study concludes that higher emotional intelligence is associated with a stronger disposition toward critical thinking among nursing students, underscoring the need for educational strategies that promote both emotional and cognitive development within nursing training.

Keywords: Correlation, Critical Thinking Disposition, Emotional Intelligence, Nursing Students. Correlation Study.

DEDICATION

I, **EBOIGBE IRENE IZIEGBE** dedicate this project work to God almighty for his mercy and grace, to be able to complete this project work successfully.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The nursing profession is a noble profession, where nurses face various emotional distress, as such managing one's own emotions as well as interpreting others is the most essential and required prerequisite in this profession. This requires not only emotional intelligence but critical thinking needs to be integrated during nursing practice. According to Pradhan et al. (2021), Emotional intelligence encompasses the ability to recognize and assess one's own emotions as well as those of others, distinguish between different emotions, and utilize this awareness to direct thinking and behaviour. Thus, contributing to academic growth. Emotional intelligence measures understanding of and control over reactions to the internal and external environment of nursing students who are open to new ideas, approaches and knowledge, therefore making students more successful on standardized examinations if they have higher emotional intelligence and can think critically (Gold, 2023).

Nursing students with effective emotional intelligence demonstrate greater adaptability and optimistic attitudes, which results in better relationships and improved values (Louwen, 2023). Emotional intelligence reflects a person's ability to integrate intelligence, emotions, and empathy to enhance their thinking and awareness of personal changes (Okafor & Oyana, 2023). Emotional intelligence encompasses key aspects of personal relationships to enhance self-management abilities, such as adaptability, temperament control, and stress reduction, which in turn can boost individual performance. Consequently, there is growing recognition of the crucial role emotional intelligence plays in fostering academic success, professional development, and clinical practice. Rehman et al. (2021) found that emotional intelligence encompasses an

individual's beliefs, thinking abilities, and noncognitive skills, highlighting the importance of enhancing these capacities to effectively tackle challenges.

According to Hasan (2024), thinking skills are vital concepts discussed by various researchers. Improving and enhancing students' thinking skills has become a fundamental goal of educational systems. One key goal of education in the 21st century is to prepare learners to navigate the ever-changing society and the complexities of the information age. To achieve this, schools and educational centres must prioritize developing students' thinking skills. This goes beyond simply passing on information, it requires significant changes in curricula and shifts in teachers' perspectives on their roles (Gehlbach & Robinson, 2021). The focus of teaching should move toward empowering students to think critically and effectively.

Creative thinking skills (CTS) are essential for success in the 21st century, helping students tackle complex challenges in both their future careers and everyday lives (Albar & Southcott, 2021). These skills allow students to solve problems, innovate, and adapt to fast-changing environments (Berestova et al., 2021; Yang & Zhao, 2021). Education which promotes creative thinking helps students not only grasp subject material more effectively but also enhances their creativity, analytical thinking, and problem-solving abilities (Calavia et al., 2021). By fostering CTS, schools can prepare students to handle academic, professional, and personal challenges successfully (Thornhill-Miller et al., 2023). To achieve this, educational programs should focus on integrating creative thinking into the curriculum through innovative teaching methods, combining theoretical knowledge with practical experience, and aligning learning goals to support these skills (Akmam et al., 2024).

Currently, no research has been carried out on the correlation between emotional intelligence and critical thinking disposition among nursing students at the University of Benin. Therefore, this research study seeks to examine the correlation between emotional intelligence and critical thinking disposition among nursing students, this is essential in order to improve nursing students' accountability for the care of patients during their clinical practice.

1.2 Statement of problem

The increasing complexity of healthcare systems in the 21st century has increased the demand for nurses to possess both strong emotional intelligence (EI) and critical thinking disposition (CTD) in order to deliver high-quality, patient-centred care. Emotional intelligence enables nurses to regulate their emotions, communicate effectively, and empathize with patients, while critical thinking disposition is the internal inclination to employ critical thinking skills to select the best answer or approach. Therefore, developing strong critical thinking dispositions is imperative for nursing students to improve both the quality of healthcare and patient safety (Castelino et al., 2021; Thornhill-Miller et al., 2021). Research suggests that emotional intelligence (EI) is a crucial skill for building strong professional and personal relationships, particularly in healthcare, where effective communication is essential (Beck & Sierżantowicz, 2023). Additionally, studies show that not all nurses consistently demonstrate or apply EI in patient care. For instance, Al-Oweidat and Nashwan, (2023) study conducted in Jordanian governmental hospitals found that nurses often exhibited emotional responses to workplace pressures and patient care challenges, indicating variability in EI application. The study emphasized that nurses' ability to balance their emotions is crucial for providing safe and quality patient care, and a lack of EI can lead to negative attitudes affecting patient health and

experience. Fortunately, research highlights various training options available to help those who lack or underutilize EI in both academic and workplace settings (Anthony, 2022).

Nursing students often experience significant stress and anxiety during their transition from academia to clinical practice. This stress is exacerbated by the expectation to demonstrate critical thinking in high-pressure situations without adequate preparation for emotional and cognitive skills (Hwang et al., 2022). Studies have highlighted that low levels of emotional intelligence (EI) among nursing students negatively impact their critical thinking skills and ability to handle the interpersonal challenges of healthcare environments. For example, Panjizadeh et al. (2021) conducted a study showing that nursing students with lower EI struggled with clinical decision-making and teamwork, which are essential for effective patient care. Furthermore, gaps in nursing curricula often fail to address the interconnected nature of emotional intelligence (EI) and critical thinking disposition (CTD), leaving students ill-equipped to meet the dynamic and diverse challenges of modern healthcare. Ahmed et al. (2023) emphasize that while nursing programs often highlight these skills separately, there is a lack of integrative teaching approaches that connect emotional and cognitive competencies effectively.

The consequences of Inadequate emotional intelligence (EI) and critical thinking disposition (CTD) in nursing can significantly impair clinical competence, leading to poor patient outcomes and decreased satisfaction. Nurses with low EI often struggle to manage stress in high-pressure environments, increasing their risk of burnout and negatively affecting communication and teamwork (Al-Oweidat & Nashwan, 2023). Without effective emotional regulation, they may react impulsively, causing conflicts with colleagues and ineffective patient interactions. This emotional strain can further hinder critical thinking, reducing their ability to make sound clinical judgments and compromising patient safety. Additionally, low EI affects patient satisfaction, as

nurses may struggle to provide empathetic, compassionate care, leading to impersonal interactions and diminished trust in healthcare. Therefore, fostering both EI and CTD in nursing education and practice is essential for improving patient-centred care and overall healthcare quality.

Research focusing on the correlation between emotional intelligence (EI) and critical thinking disposition (CTD) has gained traction globally; however, there is limited empirical data in the Nigerian context. For instance, Okoh and Adejumo (2022) highlighted the scarcity of localized research addressing the interplay of EI and CTD in Nigerian nursing students, emphasizing the need for studies that consider the unique cultural and educational dynamics in this context. The University of Benin, a prominent institution for nursing education, serves as a microcosm for exploring these issues. While international studies suggest a positive relationship between EI and CTD, contextual factors such as cultural influences, educational resources, and clinical exposure may yield unique findings specific to Nigerian nursing students (John & Aluko, 2022; Ngwa et al., 2022). Additionally, understanding the local educational strategies and their impact on EI and CTD could inform curriculum enhancements tailored to the Nigerian healthcare system.

This research addresses a critical gap by examining the correlation between EI and CTD among undergraduate nursing students at the University of Benin. Understanding this relationship is essential for developing targeted interventions to enhance nursing education and prepare students for the demands of professional practice in a rapidly evolving healthcare environment. Moreover, the findings of this study can contribute to evidence-based recommendations for integrating EI and CTD training into nursing curricula, ensuring that graduates are better equipped to navigate the complexities of patient care and interdisciplinary collaboration.

1.3 Objectives of the study

General objective:

The main objective of this study is to assess if there is a correlation between emotional intelligence and critical thinking disposition among nursing students at the University of Benin, Benin City, Edo state and ways in which EI and CTD can be improved among nursing students for better patient outcomes.

1.4 The Specific objectives of this study are to:

1. Assess the level of emotional intelligence among nursing students at the University of Benin, Edo state.
2. Examine the critical thinking disposition among Undergraduate Nursing Students at the University of Benin, Edo state.
3. Determine the correlation between EI and CTD among Undergraduate Nursing Students at the University of Benin, Edo state.

1.5 Research questions.

1. What is the level of emotional intelligence among undergraduate nursing students at the University of Benin, Edo state?
2. What is the level of critical thinking disposition among undergraduate nursing students at the University of Benin, Edo state?
3. Is there a significant relationship between emotional intelligence and critical thinking disposition among undergraduate nursing students at the University of Benin, Edo state?

1.6 Hypothesis of the study

H0: There is no significant correlation between emotional intelligence and critical thinking disposition among undergraduate nursing students at the University of Benin, Edo state.

1.7 Significance of the study

The significance of this study lies in its ability to enhance and promote nursing education, practice, and research, ultimately contributing to the overall improvement of healthcare delivery in Nigeria.

- **To Patients and Families**

Nurses with high emotional intelligence (EI) and strong critical thinking disposition (CTD) are better equipped to provide empathetic and effective care, leading to improved patient satisfaction and outcomes. A study by Hasan and Noor (2024) found a positive correlation between EI and CTD among nursing students, suggesting that enhancing these skills can lead to better patient care.

- **To Nursing Profession**

Developing EI and CTD in nursing professionals enhances clinical decision-making and problem-solving abilities, which are crucial for effective nursing practice. This development leads to improved patient care and safety. Hasan and Noor (2024) highlighted that higher levels of EI and CTD contribute to better clinical performance among nursing students. Therefore, understanding the interplay between EI and CTD provides valuable insights into how these skills influence clinical reasoning, decision-making, and patient care.

- **To Nursing Education**

Integrating EI and CTD training into nursing curricula can produce more competent and reflective practitioners. Christodoulakis and Tsiligianni (2023) emphasized the importance of incorporating these skills into educational programs to prepare students for the complexities of healthcare environments. By exploring the correlation between EI and CTD among nursing students, the findings can guide curriculum designers and educators at the University of Benin and other institutions in Nigeria to develop more effective teaching strategies. Incorporating EI and CTD-focused training into nursing programs could ensure that students are better prepared for the demands of professional practice.

- **To Nursing Research**

Understanding the relationship between EI and CTD can inform the development of targeted interventions to enhance these competencies. This understanding can lead to improved nursing education and practice. The study by Sihaloho (2022) contributes to this body of knowledge by exploring the relationship between emotional intelligence (EI) and critical thinking (CT) among nursing students. This research contributes to the growing body of knowledge on the relationship between EI and CTD in nursing education. It offers a foundation for future studies to explore similar correlations in other populations or settings and to evaluate the effectiveness of interventions aimed at improving these competencies.

- **To Society and Nation**

Nurses with high EI and CTD contribute to a more efficient and compassionate healthcare system, leading to better public health outcomes and increased trust in healthcare services. This contribution benefits society and the nation as a whole. Hasan and Noor (2024) also highlighted that enhancing EI and CTD in nursing students can lead to improved healthcare delivery and patient satisfaction. Findings from this study could inform policies on nursing education and professional development in Nigeria. Policymakers may use the evidence to advocate for mandatory inclusion of EI and CTD training in nursing curricula, ensuring that nursing graduates are equipped with the skills needed to meet the evolving demands of the healthcare system.

1.8 Scope of the study

This study is delimited to a purposeful, convenient sample. The sample was focused on the context and situational circumstances in which participants had knowledge of what emotional intelligence and critical thinking disposition imply. Additionally, the sample was restricted to only undergraduate nursing students in the University of Benin, located in Ovia North East local government area in Benin City, Edo State. There is an additional opportunity to further investigate the correlation between emotional intelligence and critical thinking disposition among nursing students in other geographical locations as little study has been found concerning that.

1.9 Operational definition of terms

Correlation: In the context of this research, correlation refers to the statistical relationship and degree of association between emotional intelligence and critical thinking disposition among the study participants.

Critical Thinking Disposition (CTD): Critical thinking disposition refers to the habitual inclination of nursing students to engage in seasoned reasoning, problem-solving, and decision-making in clinical and academic settings, with a view to improving their academic performance as assessed through a standardized CTD.

Emotional Intelligence **(**EI**)**: Emotional intelligence in this study refers to the ability of undergraduate nursing students to recognize, understand, manage, and influence their own emotions and the emotions of others, as measured using a validated emotional intelligence scale.

Undergraduate Nursing Students: This term refers to individuals enrolled in the Bachelor of Nursing Science (B.N.Sc) program at the University of Benin, spanning from second-year introductory classes of nursing courses to final-year clinical practice.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews the literature relevant to emotional intelligence and critical thinking disposition among nursing students with a focus on the conceptual review, theoretical framework and empirical review. Understanding the existing body of information regarding this topic is important to identifying gaps and guiding the methodology and analysis of the current study.

2.1 CONCEPTUAL REVIEW

2.1.1 Concept of Emotional Intelligence

The nursing profession is deeply intertwined with complex and intense emotional interactions involving students, colleagues, and patients. Nurses frequently navigate challenging interpersonal situations that are both unavoidable and inherent to their role. These encounters require emotional resilience, effective communication, and the ability to manage stress while providing compassionate care. Developing strong emotional intelligence is therefore essential for nurses to handle these demanding scenarios, thereby maintaining professional relationships, and ensuring high-quality patient care (Ndawo et al., 2021). Emotion is a key motivator for nursing decision-making and actions, and therefore, every nursing decision and intervention is affected by the emotional ability of nurses which is known as EI (Dou et al., 2022). Emotions play a central role in our lives. Although we may not always be fully aware of them, we experience emotions frequently, and they can be influenced to achieve specific goals or lead to impulsive actions. People often choose to conceal their emotions for various reasons, influenced by personal values and cultural norms. Many believe that controlling emotions is necessary to be socially accepted, appear rational, perform effectively, and live a successful life. However, becoming aware of and managing emotions is challenging, as individuals are not always

conscious of them or fully understand them. As a result, people actively seek ways to improve their emotional awareness and regulation by reading books, attending training programs, or seeking guidance from professionals. The formal connection between emotions and intelligence was relatively new until the 1990s when researchers began recognizing its value in personal, educational, and professional contexts (Edara et al., 2021). The concept of EI emerged in nursing literature around 2000, gaining interest in education, practice, leadership, and patient care. EI was integrated into nursing due to its impact on both individuals and social interactions. From a nursing perspective, EI reflects a nurse's ability to develop self-awareness, self-management, social awareness, and relationship management (Napolitano et al., 2023).

Until recently, intelligence quotient (IQ) was widely considered the golden standard for measuring student success and was often used in higher education admissions. However, many highly intelligent individuals struggle with stress and social interactions, leading to challenges in both their personal and professional lives. As a result, EI emerged as a key factor in assessing overall development and success (Budler et al., 2022). Educational activities that emphasize students' emotions play a crucial role in enhancing their critical thinking skills. In nursing education, the link between emotions and cognitive processes is essential, especially in nursing education.

The concept of emotional intelligence has existed for over 20 years and continues to play a crucial role in today's competitive world (Jose & Bijay, 2024). Emotional intelligence can be defined as the ability to regulate and overcome negative emotions like fear, anxiety, and low self-esteem, replacing them with positive feelings such as self-confidence, empathy, and friendship (Back, 2023). Understanding people on a deeper level involves recognizing personal feelings, self-awareness, the role of emotions in relationships, and how they should be managed

effectively. Emotional intelligence focuses on three key aspects which include; motivation, empathy, and social skills which significantly impact one's ability to connect with others. It can be better understood through the following points: the ability to accurately identify emotions in oneself and others, use emotions to support reasoning, understand personal feelings, manage emotions effectively, and respond to emotional situations fairly (Anil et al., 2022).

Emotional Intelligence (EI) is essential for both personal and professional success. It involves self-awareness, self-management, social awareness, and relationship management. This mental ability supports individuals in various areas, including personal interactions, social engagements, work responsibilities, communication, and financial decisions. It enhances skills such as time management, decision-making, customer service, accountability, empathy, presentation abilities, stress management, trust-building, and effective communication. In healthcare teams, strong communication is vital for accurate diagnosis, patient care, and effective treatment (Khademi et al., 2021). It is believed that emotional intelligence is the pipeline for improving the relationships and channels of communication among nurses. Emotional intelligence is acknowledged as an influence that contributes to working cooperatively and improving staff well-being because individuals who are more socially aware are more competent in distinguishing the best ways to act in different social circumstances. Furthermore, nurses have always been expected to keep a professional distance and hide their true emotions. But now, being open to communication is appreciated in healthcare settings because it leads to improving health outcomes for the patient and the performance of nurses (Al-Hamdan et al., 2021). EI is often reflected in the ability to empathize with and care for others. People with high EI typically respond appropriately to various situations, even when it challenges their comfort or convenience. They may recognize that making small or temporary sacrifices can contribute to a greater overall benefit. This could

explain why those with higher EI have a deeper understanding of relationships, community, and collective efforts. Nursing is a complex profession that involves both physical and emotional challenges. Therefore, applying EI in patient care and professional interactions should be seen as a key job requirement. Many people assume that healthcare professionals, especially nurses, naturally demonstrate and practice EI. Some believe it comes as effortlessly as breathing, while others view it through the lens of the nature versus nurture debate (Anthony, 2022).

Previous research on EI has shown that higher EI levels enhance problem-solving abilities, boost self-efficacy, improve spiritual well-being, increase motivation, and support better social and emotional adjustment (Dugué et al., 2021). Researchers have emphasized that EI and CT skills are essential traits for nurses, impacting work quality, clinical decision-making, and reasoning, as well as supporting evidence-based and knowledge-based practices. However, findings revealed that at the beginning of their program, participants' EI did not correlate with their critical thinking skills (Hasan et al., 2024). Emotional intelligence has been frequently recognised as a vital psychological component for improving human prosperity and advancing healthy living (Gyandoh, 2021). Emotional intelligence theory highlights its importance in emotion regulation, interpersonal relationships, career development, and mental well-being, making it a key factor in personal growth and success. Notably, emotional intelligence is also linked to stress experienced in higher education (Xu et al., 2023).

Emotional intelligence (EI) is a crucial factor in the success of nursing students (Cox, 2022). Thomas et al. (2021) defined EI as the ability to understand emotions, recognize their connections, and use them for reasoning and problem-solving. They identified five key components of EI: self-awareness, emotional management, motivation, empathy, and conflict resolution. According to their research, nursing students are considered emotionally intelligent

and successful when they can effectively adapt to these five dimensions. A high level of emotional intelligence is essential for the nursing profession, as it enables nurses to manage their emotions effectively while responding empathetically to patients, families, and colleagues. Emotional intelligence has evolved into a crucial set of competencies required in the workplace, particularly in healthcare, where interpersonal interactions and decision-making play a vital role. Nurses with strong emotional intelligence can navigate stressful environments, build trust with patients, and collaborate efficiently with healthcare teams, ultimately improving patient outcomes and workplace harmony. There is growing recognition of the importance of emotional intelligence in shaping and strengthening the structure of nursing education programs (Crawford et al., 2021).

Emotional intelligence consists of five key components: self-awareness, self-regulation, motivation, empathy, and relationship management (Gransberry, 2022). Self-awareness enables individuals to understand their strengths and weaknesses, which is vital for reflective healthcare practice. According to Li and Shi (2022), it can be developed through reflection-in-action (real-time thinking) and reflection-on-practice (reviewing past experiences). Self-regulation involves managing and redirecting one's emotions by considering the potential consequences before reacting impulsively (Okafor & Oyana, 2023). Motivation fosters a commitment to personal growth, encouraging nurses to enhance their emotional awareness (Pranata & Zebua, 2023). Empathy enables nurses to connect with patients' emotions, through recognizing and understanding the feelings of others (Wibowo & Paramita, 2022). By genuinely engaging with patients' concerns, nurses can better address their health needs and improve patient care (Nnate et al., 2023). According to Napolitano et al. (2023), Emotional intelligence enhances the ability to manage emotions and their outcomes. Effective emotion management is essential in nursing

practices, both in interactions with colleagues and in relationships with patients and their families, and therefore, should be developed among healthcare workers. Dou et al. (2022) also suggested that Emotional intelligence can be developed through education and training, influencing nursing students' learning quality, ethical decision-making, and critical thinking. It also enhances evidence-based practice, improves patient care, and leads to better patient outcomes.

2.1.2 Concept of Critical Thinking Disposition

Disposition reflects an individual's willingness or attitude toward practising critical thinking, which is positively correlated with critical thinking itself. Without the willingness to engage in critical thinking, students cannot effectively develop or apply critical thinking skills. Therefore, Critical thinking disposition reflects an individual's attitude and tendency to think critically. Those with a strong disposition toward critical thinking are more likely to develop and apply advanced critical thinking skills effectively (Tseng et al., 2022). Critical thinking is the ability to apply reasoning and logic to ideas, discussions, and new situations, allowing for a comprehensive evaluation of concepts from multiple perspectives. It is a complex process that requires advanced reasoning to achieve meaningful outcomes (Vasli et al., 2023). Critical thinking is an essential tool required of nurses in a complex healthcare setting, as it enhances clinical judgment and problem-solving abilities. Critical thinking involves careful and reflective decision-making, allowing nurses to accept, reject, or delay judgment. It enables them to integrate work experience, research findings, and education to enhance patient care. As a fundamental professional responsibility, nurses must develop critical thinking skills, making it essential to incorporate critical thinking into nursing education to improve healthcare services and problem-solving (Mousazadeh et al., 2021).

Critical thinking has increasingly been recognized as a crucial multidisciplinary component of nursing education, equipping nurses with the essential skills needed to fulfil their professional responsibilities (Sözen & Karabulut, 2021). Given the complexity of healthcare services across various settings, the ability to think critically has become indispensable for nurses, enabling them to adapt to evolving clinical conditions, effectively address patient needs, and make swift, informed decisions. Furthermore, critical thinking supports professional development, advances nursing practices, promotes public health, and improves the quality of life, autonomy, and professional identity within the nursing field (Ciftci et al., 2021). As a vital competency, critical thinking encompasses effective communication and problem-solving skills, both of which are key indicators of success in nursing education (Sözen et al., 2021). Thus, plays a significant role in enhancing patient care quality and strengthening clinical decision-making

Nurses encounter diverse patient backgrounds and unpredictable situations, requiring them to apply critical thinking and develop creative interventions. Thus, critical thinking helps to bridge the gap between theory and practice, enhances clinical judgment, and improves patient outcomes. It is an active, structured mental process that fosters self-awareness, considers different perspectives, and translates knowledge into practice. Additionally, critical thinking involves affective traits such as intellectual skills, curiosity, adaptability, self-confidence, and objectivity (Baş et al., 2022).

He also stated that nursing students educated in an environment that fosters creativity and critical thinking are better equipped to handle challenging and unforeseen situations while experiencing less stress from academic demands. Nursing as a science requires effective skills in the care of patients and at such must move beyond routine nursing activities and acquire creative thinking skills to make the right decisions. According to Christodoulakis et al. (2023), Critical thinking

enhances the diagnostic process, improves decision-making, and speeds up problem-solving in clinical practice. Given its many benefits, healthcare professionals should develop critical thinking skills during their education and apply them in their practice.

Critical thinking involves understanding assumptions, concepts, biases, inferences, and arguments. It enables individuals to reflect critically and solve problems by connecting new ideas with their prior knowledge (Asigigan et al., 2021). Critical thinking enables nurses to navigate complex healthcare settings with autonomy and self-reflection (Boso et al., 2021). According, to Kaczkó, et al. (2023), Critical thinking is linked to creative divergent thinking and effective convergent problem-solving. With the growing burden of diseases, rapid technological advancements, and complex situations requiring sound decision-making in healthcare, nurses must develop critical thinking skills.

According to Mousazadeh et al. (2021), Critical thinking is essential for decision-making in complex and emergency situations, directly influencing the quality and efficiency of nursing care. Therefore, critical thinking (CT) is a key outcome expected from nursing programs, especially nursing degree courses. CT consists of two main components: critical thinking dispositions (CTDs) and CT skills. CTDs involve personal traits such as truth-seeking, intellectual integrity, perseverance, self-confidence, open-mindedness, and curiosity, which encourage critical thinking. These dispositions are also known as habits of mind or critical thinking attitudes. On the other hand, CT skills involve cognitive abilities such as information-seeking, interpretation, analysis, inference, evaluation, and reasoning. The development of CT skills is closely connected to CT dispositions.

However, research shows that having CT skills does not necessarily mean an individual will use them unless they are inclined or internally motivated to think critically (Sultana et al., 2021).

Critical thinking disposition is linked to critical thinking skills, as those with this mindset are more likely to use these skills for sound clinical decisions. It involves habits that encourage focused decision-making and problem-solving, motivating individuals to think critically when facing challenges. According to Altun et al. (2023). it can be said that critical thinking skills and critical thinking dispositions complement each other, and both must be possessed adequately in an individual in order to be a good critical thinker. As a result, Taiwan's Nursing Accreditation Council recommended that nursing graduates should develop critical thinking skills to enhance patient safety (Cheng, 2021).

Today, the primary goal of education is not just to provide basic knowledge but to develop individuals who can think critically and learn independently (Kaeppel, 2021). Every human being naturally possesses basic thinking abilities, which are fundamental to individual cognition. However, relying solely on basic thinking skills limits one's ability to interpret their environment and solve problems. Without higher-order thinking skills, a person's reasoning may become biased, incomplete, or flawed (Orhan, 2022). Higher-order thinking skills are essential for effective reasoning, equipping individuals with the competencies needed to adapt to modern advancements and innovations. Individuals who develop these skills play an active role in their thought processes, take responsibility, conduct research, solve problems, make logical decisions, and create original ideas.

Therefore, a key objective of education in the 21st century is to enhance individuals' thinking abilities (Al-Zou'bi, 2021). According to Wayan et al. (2021), critical thinking allows students to reach well-founded conclusions by applying logic, evaluating evidence, and maintaining intellectual integrity. Critical thinking is a key learning and innovation skill crucial for academic and career success. It plays a vital role in logical reasoning, decision-making, and problem-

solving (Altun et al., 2023). Therefore, cultivating strong critical thinking dispositions is essential for developing effective critical thinking skills. Enhancing critical thinking skills and dispositions among nursing students is crucial for their education, practice, and knowledge. Critical thinking disposition reflects an individual's internal tendency to apply critical thinking skills in selecting the best approach. Thus, fostering strong critical thinking dispositions is essential for improving healthcare quality and ensuring patient safety (Chaisuwan et al., 2021). However, when nurses lack a critical thinking disposition, they often fail to thoroughly analyze the issues they encounter, which can result in inaccurate clinical judgments and compromise patient safety Wu and Tsay, (2023).

Individuals with a strong critical thinking disposition tend to be proactive, inquisitive, and highly observant, demonstrating a strong desire to seek the truth (Mafumo et al., 2022). Nursing students with these traits are more likely to be self-motivated learners, which aids in their professional development. Nurses with well-developed critical thinking skills can assess and analyze clinical challenges, evaluate evidence, draw logical conclusions, and implement effective interventions (Rababa & Al-Rawashdeh, 2021). Throughout this process, they must also consider the potential consequences of their actions to ensure optimal decision-making in patient care.

Critical thinking involves both critical thinking dispositions and skills. It requires the ability to evaluate reasons effectively, as well as the willingness to base decisions and actions on rational justifications. Critical thinking dispositions are habits or tendencies that motivate individuals to respond thoughtfully. They influence how one approaches critical thinking. Additionally, critical thinking skills, also known as higher-order processing skills, enable individuals to connect

knowledge, information from various sources, and experiences, leading to a broader perspective and deeper understanding (Fikriyatii et al., 2022).

According to Álvarez-Huerta et al. (2022), Critical thinking consists of two key dimensions: skills and disposition. The skill dimension involves the ability to analyze, interpret, and develop reasoned solutions to problems. The dispositional dimension is the willingness to use these skills when faced with a problem or decision. Therefore, without a strong disposition to think critically, these skills are less likely to be applied effectively. Critical thinking is viewed as a combination of skills and dispositions that empower individuals to make reasoned, value-based decisions and think independently (Jiménez-Aleixandre & Puig, 2021). It is also seen as a dialogic practice that encourages students to engage in and develop a habit of critical thinking (Puig et al., 2021). Hasan et al. (2024) stated that students must possess critical thinking skills in order to succeed in the 21st century.

Despite its importance, Abu-Odah & AlKhaldi, (2022) indicated that nurses face significant barriers to integrating research into practice and these barriers include a lack of time to conduct research or review research reports, limited authority to implement research findings, and insufficient knowledge or experience in research methodologies. Additionally, a lack of awareness regarding available research resources, increased workload, and a lack of managerial support for research initiatives further hinder the application of critical thinking in evidence-based practice (Sözen & Karabulut, 2021). To address these challenges, fostering critical thinking dispositions should be a priority throughout nursing education. Research indicates that coursework focused on critical thinking positively influences students' critical thinking tendencies and overall cognitive development (Dur & Erkin, 2023). Since critical thinking disposition is one of the most discussed and fundamental aspects of nursing education, it should

be systematically developed and reinforced to ensure that nursing students graduate with the ability to think critically, apply evidence-based practices, and improve patient outcomes (Ciftci et al., 2021; Zhang & Chen, 2021).

2.1.3 Correlation between critical thinking and emotional intelligence of nursing students

As a result of an examination of nursing students' critical thinking and emotional intelligence, it is possible to argue that there is a link between these two important personality traits. Emotional intelligence and critical thinking are essential skills that influence decision-making when carrying out nursing interventions for patient care, ultimately impacting the quality of a nurse's work (Dou et al., 2022). An individual who has a high level of critical thinking and strong emotional intelligence skills is able to make accurate decisions, evaluate those decisions and regulate their emotions to enhance their abilities. Emotional intelligence and critical thinking complement each other in medical settings, aiding healthcare professionals in making patient care decisions, establishing strong patient relationships, collaborating effectively with medical teams, and managing workplace stress. Li et al. (2021) supported this argument by stating that there is a connection between emotional intelligence and critical thinking. Given the importance of critical thinking skills in nursing students, enhancing both emotional intelligence and critical thinking is crucial for success in the profession. Strengthening these skills enables nurses to make sound clinical judgments, effectively manage patient care, and navigate complex healthcare situations with confidence and empathy.

Sulastri et al. (2023) stated that emotional intelligence is one of the key factors that influence critical thinking. It represents an individual's ability to recognize, regulate, and manage emotions effectively, which is essential when encountering various situations. Emotional intelligence plays a crucial role in controlling emotions, allowing individuals to navigate challenges with clarity

and composure. A strong emotional intelligence enables individuals to process emotional information more efficiently, fostering higher levels of critical thinking.

Research suggests that individuals with well-developed emotional intelligence demonstrate strong analytical skills, improved decision-making, and a greater ability to evaluate situations objectively (Thuc, 2023). Emotional intelligence not only enhances critical thinking but also supports creativity, academic achievement, mental well-being, and cognitive performance (Shengyao & Ishak, (2024). Therefore, by developing emotional intelligence, individuals can improve their ability to think critically, solve problems effectively, and adapt to complex situations with confidence. Emotional intelligence aligns emotions with thoughts, fostering self-confidence and enhancing the development of critical thinking skills in students during their learning process (Hasan et al., 2024).

Education which goes beyond imparting knowledge and values; also plays a crucial role in fostering emotional stability in students (Arias et al., 2022). Emotions significantly influence how individuals think, make decisions, and take action. Since emotional awareness is essential in shaping one's choices, the inability to regulate emotions can hinder one's ability to make sound and effective judgments, ultimately affecting overall efficiency and decision-making quality (Teoh & Liau, 2021). In the modern world, effective learning requires both critical thinking and emotional intelligence (Sakdiyyah & Rokhmani, 2022). When individuals encounter stressful situations, their intelligence is influenced by emotional dynamics, which are further shaped by personal beliefs, including spiritual and religious perspectives. After graduating and entering the nursing profession, it is essential for nurses to utilize emotional intelligence and critical thinking in decision-making to provide high-quality patient care. Additionally, they must draw on their resilience to effectively manage workplace stressors (Connelly et al., 2022). Emotional

intelligence plays a crucial role in shaping students' critical thinking abilities by helping them manage emotions effectively. A person's ability to think critically is not only determined by their intellectual capacity but also by their emotional state and how they process their emotions. This suggests that emotional intelligence, which fosters emotional stability, is essential for enhancing learning, cognitive development, and overall academic success (Gudnanto et al., 2021). This suggests that individuals with a high level of emotional intelligence are more likely to make logical decisions and think critically (Mardi et al., 2021). And critical thinking enhances communication, teamwork, and innovative learning (Atwa et al., 2022).

According to Ndawo (2021), emotional intelligence is the capacity to identify, regulate, and utilize emotional information in daily decision-making and behaviour. It plays a crucial role in shaping thought processes and reasoning, ultimately influencing rational decision-making and effective problem-solving. By guiding emotions constructively, emotional intelligence enhances one's critical thinking ability to navigate challenges, build relationships, and respond thoughtfully to various situations, leading to better personal and professional outcomes. A deficiency in emotional intelligence hinders an individual's ability to manage emotional challenges effectively, reducing their overall effectiveness and impairing their capacity to maintain emotionally healthy relationships. Consequently, this limitation weakens their ability to make rational decisions and address complex real-life problems, as strained relationships with important individuals further impact their judgment and problem-solving skills. According to ALmegewly et al. (2022), Emotional intelligence serves as a fundamental pillar in both education and healthcare, playing a crucial role in professional and personal development. It is recognized as more than just a set of skills or competencies; rather, it shapes students' ability to understand, regulate, and effectively manage their emotions. This, in turn, enhances their

capacity to navigate academic challenges, think critically, and interact meaningfully with peers and educators, while developing resilience in high-pressure environments such as healthcare settings.

A comprehensive literature review highlights the connection between critical thinking and emotional intelligence. Li et al. (2021) emphasize that students with high emotional intelligence will effectively regulate both their own and others' emotions, and experience growth in critical thinking skills. Thus, as their emotional intelligence improves, undergraduate nursing students gain a significant advantage in achieving academic success. Elnouby et al. (2024) stated that Students' emotional intelligence reflects their critical thinking skills, influencing their ability to solve problems and regulate emotions during the learning process. Fereidouni et al. (2024) found a strong positive correlation between critical thinking and emotional intelligence. Sönmez et al. (2023) suggest that individuals with high emotional intelligence can process emotional information more efficiently and effortlessly, which enhances their ability to engage in high-order critical thinking. As a key predictor of critical thinking, emotional intelligence enables individuals to consistently demonstrate advanced reasoning and problem-solving skills. This highlights the importance of integrating targeted educational programs to enhance these skills among nursing students. Students' emotional intelligence offers insight into their critical thinking abilities, helping them navigate problem-solving and regulate their emotions throughout the learning process (Nurhayati et al., 2021). Given the crucial role nurses play in patient care, improving their ability to think critically and manage emotions effectively can lead to better clinical decision-making, stronger interpersonal relationships, and improved patient outcomes. Therefore, nursing education programs should prioritize the development of both critical thinking and emotional intelligence to enhance the overall quality of healthcare delivery. To

enhance learning outcomes, education should prioritize both cognitive and emotional skill development alongside memory-based learning (Soheiti et al., 2021). Hasan & Noor (2024). stated that emotional intelligence (EI) and critical thinking (CT) are essential traits for nurses, directly impacting work quality. These skills enhance clinical decision-making, reasoning abilities, and the ability to apply evidence-based and knowledge-based practices in patient care. Emotional intelligence and critical thinking can be developed through active, student-centred learning methods such as brainstorming, concept mapping, mind mapping, team teaching, self-learning, Socratic questioning, and role modelling in nursing education (Mohamed & Abdel-Azeem 2022; Ndawo, 2021). Understanding the connection between emotional intelligence and critical thinking is essential for recognizing its impact on nursing students' academic success and their future effectiveness in professional nursing practice (Knaack, 2023). Enhancing these skills enables nurses to critically evaluate their experiences, apply reflective thinking in healthcare services, accurately assess patients' individual health needs, and deliver systematic, high-quality care (Sihaloho, 2022). Researchers reviewing the literature on emotional intelligence and critical thinking have found that targeted interventions are essential for developing both skills (Briscoe & Grabowsky, 2022).

2.2. Theoretical framework

The theoretical foundation for this research is based on two key psychological theories. These theories provide the conceptual basis for understanding how emotional intelligence and critical thinking disposition interact in nursing education.

2.2.1 Salovey and Mayer's Emotional Intelligence Theory (1990)

2.2.2 Paul and Elder's Critical Thinking Theory (2001)

Emotional Intelligence Theory primarily stems from the work of psychologists Peter Salovey and John Mayer, who first coined the term "Emotional Intelligence" in 1990, defining it as the ability to perceive, understand, manage, and use emotions effectively to facilitate thought and problem-solving. Salovey and Mayer's Emotional Intelligence Theory (1990) provides a strong theoretical foundation for understanding how emotional intelligence contributes to effective thinking, problem-solving, and professional competence. This study will examine whether nursing students with higher EI also exhibit stronger critical thinking dispositions, ultimately enhancing their clinical decision-making and patient care outcomes. Their theory forms the foundation for many EI assessment tools, including the Emotional Intelligence Assessment Scale (EIAS) used in this study.

2.2.3 Key Components of EI According to Salovey and Mayer (1990)

1. **Perception of Emotions** –involves the ability to recognize and interpret emotions in oneself and others. Nursing students with a strong awareness of their emotions are more likely to regulate stress and avoid emotional bias in clinical decision-making, enhancing critical thinking disposition.

2. **Facilitation of Thinking Through Emotions** – Using emotions to guide reasoning and problem-solving. In critical situations, emotionally intelligent nurses use emotions constructively to assess situations, consider multiple perspectives, and apply creative solutions to patient care challenges.

3. **Understanding of Emotions** – Interpreting emotional expressions and their implications. Understanding patients' emotions helps in holistic assessment and decision-making, strengthening open-mindedness and truth-seeking, which are key elements of CTD.

4. **Regulation of Emotions** – Managing emotional responses in various situations for better decision-making. Nursing students with strong emotional regulation can remain logical and analytical under pressure, improving their ability to assess situations systematically.

2.2.4 Application of the theory

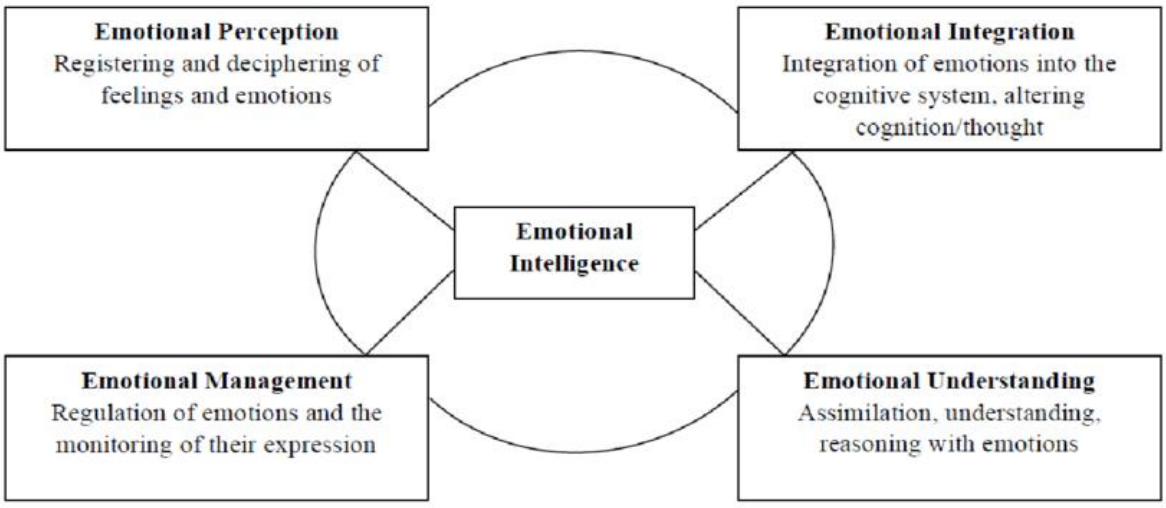

Fig1: Emotional Intelligence Mental Ability Model (Salovey and Mayer, 1990, 1996, 2008)

Critical Thinking Theory, this theory was postulated by Paul and Elder (2001), who defined critical thinking (CT) as the process of analyzing, assessing, and improving thought through disciplined reasoning. Their model highlights seven key elements that are essential for developing strong critical thinking skills. These elements enable individuals, particularly nursing

students, to analyze, evaluate, and improve their thought processes, leading to better decision-making in clinical and academic settings. Paul and Elder's (2001) framework for critical thinking provides a structured approach to analyzing, evaluating, and improving thought processes. By applying these seven elements, nursing students can enhance their critical thinking disposition (CTD), leading to better clinical decision-making, problem-solving, and patient care outcomes. This theory underpins the California Critical Thinking Disposition Inventory (CCTDI), which will be used to measure critical thinking disposition in this study.

2.2.5 Key Elements of Critical Thinking According to Paul and Elder (2001)

1. **Clarity** – which involves the ability to express ideas clearly. If a statement or reasoning is unclear, its accuracy and validity cannot be assessed properly. Critical thinkers must ensure their thoughts and communications are explicit, understandable, and free of ambiguity.

2. **Accuracy** – Ensuring thoughts are based on evidence. Accuracy means that information is true, correct, and free from errors. Critical thinkers must verify facts, cross-check sources, and avoid assumptions. Inaccurate reasoning can lead to misinterpretations, biases, and ineffective decision-making.

3. **Precision** – Providing detailed and specific reasoning. Critical thinkers should avoid vague statements and strive to be as specific as possible in their arguments and explanations.

4. **Relevance** – Relating ideas to the topic at hand. Relevance ensures that all information, arguments, and reasoning directly relate to the issue being analyzed. It prevents distractions or unnecessary details that do not contribute to solving the problem.

5. **Depth** – Involves considering complexities in thought. Depth refers to the ability to recognize and analyze the complexity of an issue rather than accepting superficial explanations. Complex problems require critical thinkers to explore multiple factors, underlying causes, and possible solutions to problems.

6. **Breadth** – Thinking from multiple perspectives. Breadth involves considering different viewpoints, alternative solutions, and multiple angles before forming a judgment. It prevents narrow-mindedness and biased thinking.

7. **Logic** – Ensuring thoughts are consistent and structured. Logical reasoning ensures that arguments, conclusions, and decisions follow a rational and coherent pattern. It eliminates contradictions, faulty assumptions, and emotional reasoning.

2.2.6 Application of Paul-Elder Critical Thinking Framework

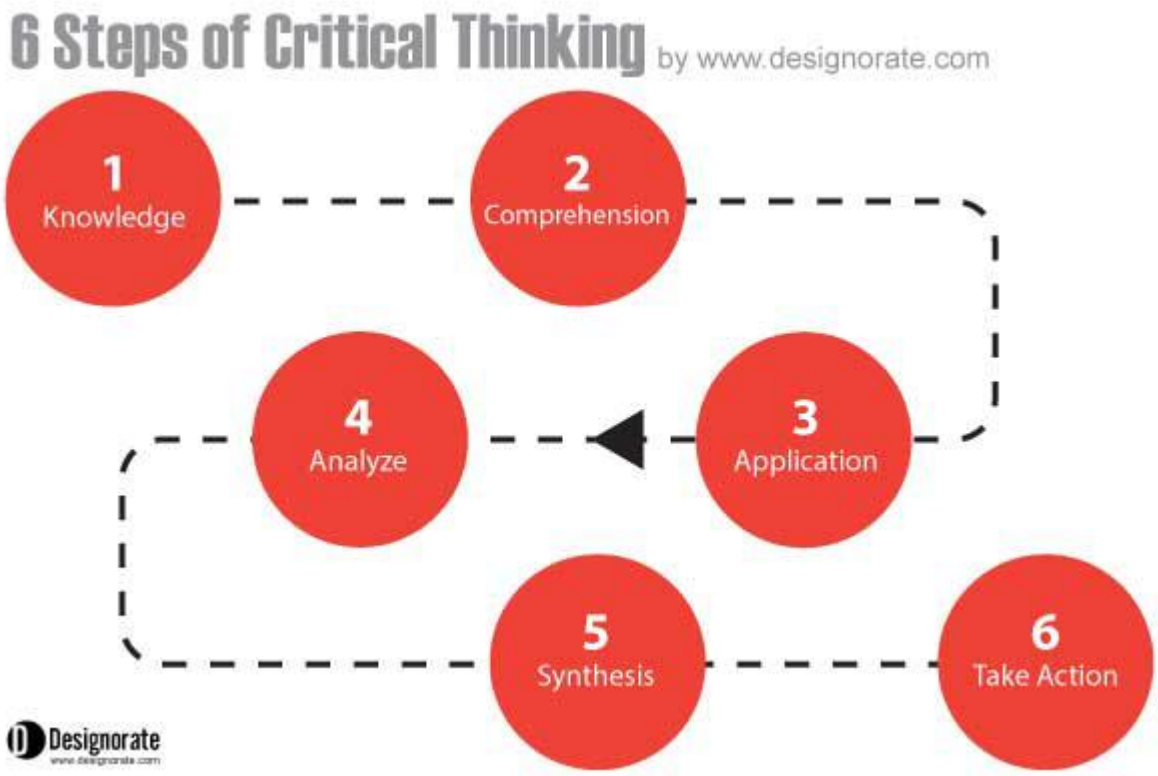

Fig2: Six steps of critical thinking (Rafiq, 2022)

The integration of Salovey and Mayer's Emotional Intelligence Theory with Paul and Elder's Critical Thinking Theory, in this study proposes that higher emotional intelligence fosters better critical thinking disposition in nursing students. EI helps students regulate stress and emotions, allowing them to think critically even in high-pressure clinical settings. Therefore, an emotionally intelligent individual can assess patients' emotional cues and respond with appropriate care decisions. Critical thinking disposition enables nursing students to evaluate emotional information objectively and make well-informed choices. Thus, nursing students with strong emotional intelligence are more likely to exhibit higher critical thinking dispositions, leading to improved clinical reasoning and decision-making.

2.3 Empirical review of related literature

2.3.1 Assessing Emotional Intelligence of Nursing Students

Varghese and Joseph (2024) conducted a study to assess the emotional intelligence (EI) levels among nursing students at Aswini College of Nursing, Thrissur, and to identify associations between EI and selected demographic variables. Using a purposive sampling technique, they selected 180 nursing students who met the study's inclusion and exclusion criteria. A standardized questionnaire was used for data collection, and the findings were analyzed using quantitative and inferential statistics. The results indicated that a significant portion of students had low EI, with 52 (28.88%) classified as having low EI and 41 (22.77%) as having very low EI. Conversely, 46 (25.55%) exhibited moderate EI, while only 22 (12.22%) and 19 (10.55%) demonstrated high and very high EI, respectively. The study further revealed a significant association between EI levels and demographic factors such as age and year of study, suggesting that these variables influence emotional intelligence development.

The findings underscore a concerning trend, as a majority of the nursing students demonstrated low levels of EI. This suggests that many future healthcare professionals may lack the emotional competencies necessary for effective patient interaction, stress management, and critical decision-making in clinical settings. Varghese and Joseph (2024) emphasize the importance of fostering emotional intelligence among nursing students, highlighting the need for educational interventions and structured training programs aimed at improving EI. Given that emotional intelligence plays a crucial role in effective communication, teamwork, and resilience in nursing, the authors advocate for the integration of EI-focused modules into the nursing curriculum. This, they argue, would help bridge the emotional intelligence gap observed in the study and equip nursing students with the necessary skills to manage the emotional demands of their profession.

Conversely, Meti (2022) conducted a cross-sectional study to assess emotional intelligence (EI) among nursing students in selected nursing colleges in Bagalkot. Using a convenient sampling method, data were collected from 160 nursing students, and EI levels were measured using the Schutte Self-Report Emotional Intelligence Test (SSEIT). The findings revealed that an overwhelming majority (96.25%) of the respondents exhibited high EI, while only 3.75% demonstrated an average level of EI. Notably, no student was classified as having poor EI. The total mean percentage score for EI was 77.81%, with a mean and standard deviation of 116.7 ± 8.37. Additionally, a chi-square test was conducted to determine the relationship between EI and selected socio-demographic factors, but no significant associations were found. This suggests that variables such as age, gender, and academic year did not significantly influence the emotional intelligence levels of nursing students.

The study highlights that most nursing students possess high EI, which is an encouraging finding given the critical role of emotional intelligence in clinical practice. Emotional intelligence equips nurses with the ability to manage stress, communicate effectively, and make sound clinical decisions under pressure. The study underscores the importance of identifying and fostering EI in nursing students to ensure that they are well-prepared for emotionally demanding situations in healthcare settings. The high EI scores reported in the study may be attributed to the nursing curriculum, personal experiences, or cultural factors that emphasize emotional resilience and interpersonal skills. However, the absence of any students with low EI raises questions about potential biases in sample selection or assessment tools. The findings suggest that nursing education programs in Bagalkot may already be effective in nurturing emotional intelligence, but further research is needed to explore how EI evolves throughout a nurse's career.

Batran (2024) conducted a cross-sectional study to assess emotional intelligence (EI) among nursing students and examine its relationship with demographic factors. The study involved 381 nursing students, utilizing the Schutte Self-Report Emotional Intelligence Test for data collection. Statistical analysis, including independent t-tests, ANOVA, Pearson correlation, and multiple linear regression, was performed using SPSS. The findings indicated a high mean EI score of 143.1 ± 21.6, with 91.3% of participants demonstrating high EI levels. The results further revealed that EI increased with academic progression, with fourth-year students displaying the highest EI levels. Additionally, a significant positive correlation was observed between students' age and EI, suggesting that as students advance through their nursing education, their ability to recognize, manage, and regulate emotions improves. These findings emphasize the essential role of EI in nursing education, highlighting its influence on students' ability to navigate interpersonal relationships, patient care, and teamwork effectively.

The study underscores the significance of EI in nursing practice, as it is crucial for both technical and relational aspects of patient care. The findings suggest that nursing curricula should integrate strategies to enhance EI development, ensuring that students acquire the emotional regulation skills necessary for professional success. The positive correlation between EI, academic year, and age indicates that nursing education contributes to strengthening emotional intelligence over time. This aligns with the notion that clinical exposure, increased responsibilities, and diverse patient interactions help refine students' emotional competencies. Given the critical role of EI in fostering effective communication and patient-centred care, nursing educators should emphasize emotional intelligence training within academic programs. Further research exploring the long-term impact of EI on clinical decision-making and patient outcomes would provide deeper insights into its role in professional nursing practice. Contrarily, Thundiparampil and J. (2023)

conducted a study on emotional and spiritual intelligence, as well as coping abilities among nursing students in selected settings in Kerala. Among the 120 participants, a significant portion of both groups exhibited low levels of emotional intelligence. Specifically, 56.66% of students in the first group and 48.33% in the second group demonstrated lower emotional intelligence levels.

Monish et al. (2023) aimed to evaluate the emotional intelligence (EI) levels among Bachelor of Science in Nursing (BSc) students at Aragonda Apollo College of Nursing, Andhra Pradesh. A descriptive research design was utilized with a quantitative approach, selecting 82 nursing students through a non-probability convenient sampling method. The researchers employed a structured questionnaire using the EI scale to assess the students' emotional intelligence levels. Data analysis included statistical techniques such as mean, standard deviation, and Chi-square tests. Ethical considerations were upheld with institutional and participant approval. The study had no reported conflicts of interest, ensuring unbiased data interpretation.

The results indicated that a majority (52%) of nursing students had high levels of emotional intelligence, while 31% demonstrated medium EI. Additionally, 10% of the students exhibited extremely high EI, whereas 7% had low EI. The findings further highlighted a significant relationship between EI levels and specific demographic factors, including gender, schooling background, academic year, place of residence, parents' educational background, and family income ($p = 0.05$). These results suggest that both environmental and educational factors influence students' emotional intelligence. The study underscores the importance of fostering emotional intelligence in nursing students, as it plays a crucial role in their academic success, professional growth, and patient care abilities. The findings further emphasize the necessity of incorporating emotional intelligence training into nursing education to enhance students' emotional regulation and interpersonal skills.

Similarly, a study conducted by Almansour (2023) aimed to assess the level of emotional intelligence (EI) among nursing students in Saudi Arabia and examine its variation based on socio-demographic characteristics. A cross-sectional design was utilized, involving 322 nursing students from Majmaah University. The data collection was conducted between May and June 2023 using the Schutte Self-Report Emotional Intelligence Test (SSEIT). Various statistical methods, including descriptive statistics, independent t-tests, and one-way ANOVA, were employed for data analysis. The findings revealed that the vast majority (96.6%) of the students exhibited moderate to high levels of EI. This suggests that nursing students in Saudi Arabia generally possess a well-developed ability to understand, regulate, and manage their emotions, which is essential for professional nursing practice and patient care.

Additionally, the study identified significant variations in EI levels based on several socio-demographic factors. Specifically, factors such as age, gender, year of study, marital status, mother's education level, physical and psychological health, and grade point average (GPA) were found to influence EI scores ($p < 0.05$). Older students, those in advanced years of study, and students with higher GPAs exhibited higher EI levels. These findings underscore the impact of academic and personal experiences on emotional development. Furthermore, the study highlights the role of physical and mental well-being in shaping students' EI, suggesting that institutions should focus on holistic educational strategies that incorporate mental health support and emotional intelligence training. Based on these insights, the study recommends integrating structured EI programs into nursing curricula, including training workshops tailored to different demographic groups, to enhance students' emotional competencies.

Shrestha and Mandal (2021) conducted a cross-sectional analytical study to assess emotional intelligence (EI) levels among nursing students at Biratnagar Nursing Campus, Nepal. The study

involved 132 nursing students, with data collected using a self-administered structured questionnaire from May 13 to May 27, 2018. The Schutte Self-Report Emotional Intelligence Test (SSEIT) was utilized to measure EI, while descriptive and inferential statistics, including the Chi-square test, were applied to determine associations between EI and demographic factors. The results revealed that the majority of participants (72.7%) belonged to the 15 to 18-year age group, and 78.8% had chosen nursing education of their own volition. A significant portion of students (81.8%) exhibited high levels of EI, while 18.2% had a moderate level. However, the study found no statistically significant relationship between EI levels and demographic characteristics such as age, gender, or academic year.

The findings underscore the importance of EI in nursing education, particularly given the increasingly complex healthcare environment and heightened patient expectations. Shrestha and Mandal (2021) emphasized that nursing students with high EI are better equipped to handle stress, interact effectively with patients, and contribute positively to healthcare settings. Despite the high EI levels reported among participants, the researchers advocated for incorporating structured EI training into the nursing curriculum to further enhance students' emotional competencies. They also suggested that future studies explore this topic on a larger scale and include comparative analyses between different nursing programs, such as Proficiency Certificate Nursing (PCN) and Bachelor of Nursing Science (BNS) students. This recommendation stems from the recognition that developing emotional intelligence is crucial for fostering effective communication, empathy, and decision-making skills among nursing professionals.

2.3.2Assessing Critical Thinking Disposition of Nursing Students

Boso and Gross (2021) conducted a quantitative descriptive cross-sectional study to assess the critical thinking (CT) disposition of undergraduate nursing students using the California Critical Thinking Disposition Inventory (CCTDI). The study involved 112 valid participants, with most students (73%) demonstrating a generally positive inclination toward CT. The highest mean score among the CCTDI subscales was found in confidence in reasoning (48.9), closely followed by inquisitiveness (48.7), while the lowest was in truth-seeking (31.8), indicating a reluctance to actively seek out accurate information. Other subscales such as maturity of judgment (38.4) and open-mindedness (39.3) also showed relatively low mean scores, suggesting an ambivalent inclination toward CT in these areas. Statistical analyses, including independent t-tests and one-way ANOVA, revealed no significant gender-based differences in overall CCTDI scores or subscale scores. However, a significant difference was found in the inquisitiveness subscale based on students' academic year, with second-year students scoring higher (50.4) than third-year (48.1) and fourth-year students (47.4) ($p = 0.03$).

These findings highlight both strengths and areas for improvement in nursing students' CT dispositions. While students displayed strong confidence in reasoning, analyticity, and inquisitiveness, their lower scores in truth-seeking, open-mindedness, and maturity of judgment suggest a need for targeted educational interventions. The authors emphasize the importance of fostering a more balanced CT mindset by encouraging truth-seeking behaviour and open-mindedness. Given the significant role of CT in clinical decision-making, nursing educators should implement strategies to enhance students' ability to critically assess and seek accurate information. The study suggests that nursing programs should reinforce CT across all academic levels and incorporate instructional methods that actively promote a culture of inquiry, open-

mindedness, and sound judgment. Expanding research on CT disposition in diverse nursing education settings could further contribute to understanding how different factors influence students' critical thinking development. Contrary to these findings, Morisset, 2021; Sterner et al., (2021) stated that most newly graduated nurses often have a limited critical thinking (CT) disposition, which leads to inaccurate clinical decision-making and difficulty in identifying the underlying causes of problems.

Rubab et al. (2021) conducted an analytical cross-sectional study to evaluate the critical thinking disposition (CTD) levels among first-semester Bachelor of Science in Nursing (BSN) students at a private nursing college in Islamabad. A total of 98 students participated, with the majority (68.4%) being female and aged between 15–20 years. The Critical Thinking Dispositions Scale (CTDS), consisting of 54 items under seven constructs—contextual perspective, perseverance, reflection, intellectual integrity/truth-seeking, creativity, open-mindedness, and inquisitiveness—was used for assessment. The study found that overall CTD levels among students were at a progressive level (75%), with contextual perspective and inquisitiveness scoring the highest. However, lower scores were observed in reflection and open-mindedness. While demographic variables did not show statistically significant associations with CTD constructs ($p > 0.05$), students' FSc (Faculty of Science) marks were significantly associated with overall CTD scores, intellectual integrity, and inquisitiveness. Additionally, entry test scores were significantly linked to the intellectual integrity construct. The data revealed that most students had completed matriculation in public schools (56.1%) and FSc in private institutions (58.2%), while their mothers were predominantly housewives (74.5%) and fathers were employed in private organizations (32.7%).

The study underscores the need for targeted educational interventions to enhance critical thinking dispositions, particularly in areas where students demonstrated weaker tendencies, such as reflection, intellectual integrity, creativity, and open-mindedness. The findings suggest that improving one CTD construct could create a ripple effect, positively influencing other critical thinking components. Given that prior educational performance correlated significantly with CTD, educators should consider incorporating diverse teaching and learning strategies to enhance students' cognitive skills. Moreover, the study emphasizes the importance of future research, including interventional studies, to assess the effectiveness of various instructional approaches in fostering critical thinking dispositions among nursing students. The results can serve as a foundational guide for policymakers and educators in nursing education to design curricula that strengthen critical thinking skills, ultimately contributing to better decision-making and problem-solving abilities in clinical practice. Contrary to Rubab et al. (2021), Boso and Gross (2021) found that 73% of nursing students had a positive critical thinking disposition, with the highest scores in confidence and reasoning, and the lowest in truth-seeking. A significant difference ($p = 0.03$) was noted in inquisitiveness across study years.

Dur and Erkin (2023) conducted a quasi-experimental study using a one-group pre-test post-test design to assess the impact of a critical thinking course on nursing students' critical thinking disposition. The study included 58 nursing students enrolled in an elective "Critical Thinking in Nursing" course at a university during the 2020-2021 academic year. Data collection involved a student information form and the California Critical Thinking Disposition Inventory (CCTDI). The analysis, conducted using SPSS 25.0, included independent and dependent t-tests to compare pre- and post-course scores. Results indicated a significant increase in students' critical thinking disposition, with mean pre-course CCTDI scores at 220.36 ± 24.72 (categorized as low)

and post-course scores rising to 311.74 ± 32.06 (categorized as high), demonstrating the course's effectiveness ($p < .001$). The study also examined students' socio-demographic characteristics, noting that 75.9% were female, 63.8% willingly chose the nursing profession, and 70.7% did not participate in social activities. Despite variations in academic achievement and parental education levels, the intervention positively influenced students' ability to think critically.

The findings highlight the critical role of structured educational interventions in enhancing critical thinking skills among nursing students. The authors emphasize the necessity of integrating critical thinking-based learning across the nursing curriculum rather than confining it to a single elective course. Expanding courses like "Critical Thinking in Nursing" at a national level could help students develop essential skills in questioning, analysis, and problem-solving, which are crucial for effective nursing practice. The study underscores the importance of fostering a culture of critical thinking within nursing education, advocating for practical applications in various courses and clinical training. Additionally, the authors recommend conducting qualitative research to explore barriers preventing students from acquiring and utilizing critical thinking skills, ensuring that nursing programs implement effective strategies to strengthen these competencies. Recent studies in Turkey on nursing students' critical thinking dispositions have largely been descriptive and cross-sectional, consistently reporting moderate to low scores (Ciftci et al., 2021; Sözen & Karabulut, 2021).

Sultana and Gul (2021) conducted a study aimed at assessing the critical thinking dispositions (CTDs) of Bachelor of Science in Nursing (BScN) students and their educators in Rawalpindi and Islamabad, Pakistan, and to identify the factors influencing these dispositions. Utilizing a cross-sectional analytical design, researchers collected data from 215 BScN students and 63 educators through the Pakistan-Critical Thinking Dispositions Scale (P-CTDS), which consists

of 54 items across seven constructs measured on a five-point Likert scale. Analysis using SPSS 22 revealed that 52% of educators exhibited a developed level of CTDs, while 48% remained at the developing stage. In contrast, 76% of students showed an inclination toward CTDs, but only 23% had reached a developed level. Both groups demonstrated the highest scores in inquisitiveness and contextual perspective, while open-mindedness was their weakest construct. The difference in overall CTD scores and six of the seven constructs between students and educators was statistically significant, highlighting a disparity in critical thinking maturity.

Despite educators exhibiting stronger CTDs than students, the findings suggest significant room for improvement, particularly in open-mindedness. The study underscores that if educators actively challenge their assumptions and model strong critical thinking skills, students will be more likely to emulate these behaviours. Encouragingly, only one student scored at an underdeveloped level, suggesting that with targeted efforts from nursing colleges and faculty, student CTDs can be enhanced from developing to fully developed levels. The study highlights the importance of fostering key dispositions, contextual perspective, perseverance, reflection, intellectual integrity, creativity, open-mindedness, and inquisitiveness among nursing students to strengthen their professional decision-making skills. Additionally, the research emphasizes the need for dynamic educators who can serve as role models in promoting critical thinking. Nursing institutions should invest in infrastructure, curriculum integration, and educational innovations to create an environment conducive to the application and development of critical thinking skills, ensuring better preparedness for clinical practice. Contrary to this finding, a study by Raymond and Profetto-McGrath (2021) reported that nursing students demonstrated strong critical thinking dispositions, particularly in open-mindedness and truth-seeking. This suggests that, in certain

contexts, nursing students may exhibit well-developed critical thinking skills, challenging the notion that educators consistently outperform students in this area.

Mousazadeh et al. (2021) conducted a cross-sectional study in a nursing school in northern Iran to examine the factors influencing critical thinking disposition among nursing students. The study included students from the second to eighth semester, using a census sampling method to ensure broad participation. Data collection involved demographic details such as age, gender, marital status, semester, GPA, and interest in the nursing major, alongside the Ricketts' Critical Thinking Disposition Questionnaire. Statistical analysis was performed using SPSS 26, applying descriptive and analytical methods. The findings revealed a significant positive correlation between critical thinking disposition and variables such as age ($r = 0.150$, $p = 0.04$, $d = 0.30$), academic semester ($p = 0.001$, $d = 0.25$), and interest in the nursing field ($p = 0.003$, $d = 0.38$). Additionally, the innovation and maturity dimensions of critical thinking were significantly associated with academic progression and students' level of interest in the major. Married students exhibited higher critical thinking scores than single students, though the difference was not statistically significant. Furthermore, an analysis of variance indicated a significant relationship between students' critical thinking disposition and their academic progression.

The study emphasizes the crucial role of critical thinking in nursing education, as it directly impacts clinical decision-making in complex and emergency scenarios. The researchers suggest that nursing faculty and administrators consider various influencing factors such as educational environment, teaching methodologies, and cultural context when designing curricula to foster critical thinking skills. Given the importance of training competent nurses, nursing schools should integrate strategies that enhance students' critical thinking disposition. The study also acknowledges limitations, including its relatively small sample size, the use of a census method,

and a cross-sectional design rather than a longitudinal approach. The authors recommend further research in diverse academic settings to explore additional determinants of critical thinking disposition, particularly considering the influence of evolving educational environments, technological advancements in teaching, and social structures within nursing education. In contrast, a more recent study by Wu and Pei-Kwei, (2023) examined critical thinking disposition and its influencing factors among new graduate nurses (NGNs). This study found that NGNs generally exhibited weak critical thinking dispositions, particularly in areas like systematicity, truth-seeking, and self-confidence.

Younis and Batool (2024) conducted a qualitative exploratory study to examine critical thinking dispositions (CTD) among final-year Bachelor of Science in Nursing (BSc) students enrolled in military colleges across Pakistan. Using a descriptive approach, the study collected data through in-depth semi-structured interviews with twelve nursing students from six different institutions. The findings were categorized into two broad themes: perceptions of critical thinking (CT) and experiences of CT dispositions. Under these themes, key categories emerged, including truth-seeking, open-mindedness, inquisitiveness, and self-organization. The research revealed that students demonstrated strong dispositions towards truth-seeking, open-mindedness, and self-organization, while inquisitiveness was notably weak. Additionally, self-confidence and maturity were identified as positive traits that contributed to their critical thinking abilities.

The study underscored the importance of fostering inquisitiveness and curiosity among nursing students. The authors recommended that faculty members and nursing educators should revise their instructional methods to promote a culture of inquiry and encourage students to engage in critical questioning. They emphasized the need to enhance faculty knowledge about CTD and refine teaching strategies to cultivate attributes such as analyticity, systematic thinking, and self-

confidence. This could be achieved through targeted faculty development programs that focus on strengthening these dispositions within the academic environment. Furthermore, the study suggested that integrating CT into everyday learning practices could significantly improve nursing students' ability to analyze complex clinical situations and make well-informed decisions. Conversely, Wu and Pei-Kwei, (2023) found out that among the different aspects of critical thinking, students scored the highest in inquisitiveness (curiosity and willingness to learn) and the lowest in systematic thinking, truth-seeking (openness to finding the truth), and self-confidence in their reasoning. The results also showed that critical thinking skills were strongly linked to the teaching methods used during education, particularly problem-based learning and the amount of time spent using this approach.

2.3.3 Assessing Emotional Intelligence and Critical Thinking Disposition Among Nursing Students

Hasan and Noor (2024) conducted a descriptive correlational study to examine the relationship between emotional intelligence (EI) and critical thinking disposition (CTD) among undergraduate nursing students in Saudi Arabia. Using a convenience sample of 300 students from King Khaled University, the researchers assessed EI through the Schutte Self-Report Emotional Intelligence Test (SSEIT) and CTD through the Critical Thinking Disposition Scale (CTDS). The study found a significant positive correlation between EI and CTD ($r = .60$, $p < .001$), indicating that students with higher EI also demonstrated stronger critical thinking dispositions. Additionally, the results revealed that these variables varied across different academic years, with a statistically significant difference ($F = 52.000$, $p < .001$), suggesting that academic progression influences the development of both EI and CTD.

The study underscores the critical role of EI in enhancing nursing students' ability to think critically, solve problems, and make sound clinical judgments. Given the observed correlation, the authors advocate for the integration of EI and CTD into nursing curricula to better prepare students for professional challenges. By employing instructional strategies such as self-directed learning and problem-based teaching methods, educators can strengthen these essential skills, ultimately contributing to the development of competent and emotionally intelligent nursing professionals. These findings highlight the need for nursing education programs to adopt a holistic approach that nurtures both cognitive and emotional competencies, ensuring that future nurses are equipped with the necessary skills to navigate complex clinical environments effectively. However, a recent study by Christodoulakis and Tsiligianni (2024). found that the shift to online learning during the COVID-19 pandemic hindered nursing students' development of critical thinking and emotional intelligence. It emphasized the need for educators to implement strategies that enhance students' ability to seek accurate information and strengthen their critical thinking skills.

Christodoulakis and Tsiligianni (2023) conducted a descriptive cross-sectional study to explore the relationships among critical thinking disposition, emotional intelligence (EI), and the learning environment in health sciences students. The study involved 208 first-year students from nursing and medical departments across three Greek universities. To assess critical thinking, the educational environment, and EI, the researchers utilized the Critical Thinking Disposition Scale, Dundee Ready Education Environment Measure, and Trait Emotional Intelligence-Short Form questionnaires, respectively. The findings revealed a significant positive correlation between critical thinking disposition and EI ($\beta = 0.82$, $p < 0.001$), while no direct association was found between critical thinking and the learning environment ($\beta = 1.06$, $p = 0.30$). However,

structural equation modelling indicated an indirect relationship, suggesting that the learning environment influences critical thinking disposition through its impact on EI ($M = 1.10$, CI = 0.13–2.17, $p < 0.05$). These results imply that enhancing EI within educational settings may be a pivotal strategy for fostering critical thinking skills among healthcare students.

Contrary to these findings, a recent study by Younis et al. (2024) reported no significant correlation between EI and critical thinking skills among nursing students. The researchers suggested that factors such as cultural differences, variations in educational curricula, or differing assessment tools might account for this discrepancy. This divergence underscores the complexity of the relationship between EI and critical thinking, highlighting the need for further research to understand the contextual factors influencing these essential competencies in healthcare education.

Elnouby et al. (2024) conducted a descriptive correlational study to assess the relationship between emotional intelligence (EI), critical thinking skills, and self-esteem among nursing students at the Abbassia Institute of Nursing for Girls. The study encompassed all third-year nursing students, totalling sixty participants. Data collection instruments included an emotional intelligence questionnaire, a critical thinking questionnaire, and a self-esteem scale. The findings revealed that a majority of the nursing students exhibited low levels of emotional intelligence, with over one-quarter (26.7%) demonstrating moderate critical thinking skills. Additionally, a significant majority (95%) of the students were found to have low self-esteem levels. The study further identified a highly statistically significant correlation between the nursing students' emotional intelligence, critical thinking skills, and self-esteem. This suggests that students with higher emotional intelligence are more likely to possess enhanced critical thinking abilities and greater self-esteem. Based on these findings, the authors recommended integrating emotional

intelligence courses into the nursing curriculum to facilitate student development. They also advocated for the enhancement of education through approaches that promote critical thinking.

In contrast, a study by Hasan and Noor (2024) examined the correlation between emotional intelligence and critical thinking disposition skills among undergraduate Saudi nursing students. The findings indicated that 55% of the students had high levels of emotional intelligence, while 45% had moderate levels. This study concluded that higher levels of emotional intelligence and critical thinking skills are associated with improved problem-solving abilities and better judgment, contributing to the development of competent nursing professionals. These contrasting findings highlight the variability in emotional intelligence and critical thinking skills among nursing students across different cultural and educational contexts. While the study by Elnouby Ali Ahmed et al. (2024) identified low levels of emotional intelligence and self-esteem among Egyptian nursing students, the study by Alharbi et al. (2024) found higher levels of these attributes among Saudi nursing students. This underscores the importance of tailoring educational interventions to the specific needs of nursing students in diverse settings to enhance their emotional intelligence, critical thinking skills, and self-esteem.

In a 2023 quantitative study, Knaack investigated whether emotional intelligence (EI) could predict critical thinking (CT) abilities among practical nursing students. The research involved 56 participants enrolled in a practical nursing program, utilizing the Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF) and the California Critical Thinking Disposition Inventory (CCTDI) to assess EI and CT, respectively. Findings revealed that the average EI score was 5, with subscale averages of 5.6 for well-being, 4.7 for self-control, 5.2 for emotionality, and 6 for sociability. The overall CT score averaged 286.3. However, simple linear regression analyses indicated that neither the combined EI dimensions nor individual EI

components significantly predicted CT levels in these students. These findings suggest that, within this cohort, EI may not serve as a reliable predictor of CT abilities.

This contrasts with other studies that have identified a positive correlation between EI and CT in nursing students. For instance, a study assessing the correlation between EI and critical thinking disposition skills in undergraduate Saudi nursing students found that higher levels of EI were associated with improved problem-solving skills and better judgment, contributing to the development of critical thinking in nursing professionals. The discrepancy between Knaack's findings and those of other studies highlights the complexity of the relationship between EI and CT. Factors such as sample size, educational context, cultural differences, and assessment tools may influence these outcomes. Further research with larger, more diverse samples and varied methodologies is recommended to clarify the nature of the relationship between emotional intelligence and critical thinking in nursing education.

In a 2022 systematic literature review, Sihaloho examined the relationship between emotional intelligence (EI) and critical thinking (CT) among nursing students. The review encompassed five studies, selected from an initial pool of 336 articles sourced from electronic databases such as ScienceDirect, PubMed, BMC Nursing, and ProQuest, published between 2012 and 2023. The total sample size across these studies was 958 nursing students, ranging from new entrants to those pursuing Bachelor's, Master's, and PhD levels. The majority of participants were female, with ages spanning from 17 to 50 years.

The findings from this review indicate a significant positive correlation between EI and CT in nursing students. Students exhibiting higher levels of EI tended to demonstrate stronger CT skills, which are essential for effective decision-making in clinical practice. The review also highlighted that both EI and CT can be enhanced through active, student-centred learning

methods. However, one of the five studies He reviewed reported no significant relationship between EI and CT, suggesting that variations in research methods, sample characteristics, and assessment tools could influence outcomes. These insights underscore the importance of integrating EI and CT development into nursing education curricula. By fostering these competencies, nursing programs can better prepare students for the complexities of clinical practice, ultimately leading to improved patient care and professional success. The review also recommends further research, particularly within the Indonesian context, to explore EI and CT across various levels of nursing education, given the limited studies available in this region. Contrary to these findings, a recent study by Knaack (2023) investigated whether EI could predict CT abilities among practical nursing students and found no significant predictive relationship between the two variables. This discrepancy highlights the need for further research to understand the factors influencing the relationship between EI and CT in nursing education.

2.3.4 Knowledge Gaps Based On Available Evidence

Despite the extensive research on emotional intelligence (EI) among nursing students, several knowledge gaps remain. Firstly, there is inconsistency in findings regarding the overall level of EI among nursing students across different studies. While Batran (2024) and Meti (2022) reported high EI levels among nursing students, Varghese and Joseph (2024) and Thundiparampil and J. (2023) found a significant proportion of students with low EI. These discrepancies may be attributed to differences in sampling methods, cultural influences, and assessment tools used across studies. This variation highlights the need for standardized tools and methodologies to accurately assess EI and provide more generalizable conclusions. Additionally, the impact of cultural and institutional differences on EI development has not been

explored in depth, leaving a gap in understanding how external factors contribute to students' emotional intelligence.

Another significant knowledge gap is the lack of longitudinal studies examining how EI evolves as students progress through their nursing education and transition into professional practice. Most studies, such as those conducted by Batran (2024) and Almansour (2023), identified a positive correlation between EI and academic year, indicating that senior students tend to exhibit higher EI. However, these cross-sectional studies do not provide insights into whether this increase in EI is sustained post-graduation or how it translates into clinical practice. There is a need for follow-up research that tracks nursing students from their initial training through their early years in the workforce to determine the long-term impact of nursing education on EI development.

Furthermore, while several studies, including those by Almansour (2023) and Monish et al. (2023), have examined the relationship between EI and demographic factors, the findings are inconsistent. Some studies found significant associations between EI and variables such as age, academic year, and gender, whereas others, like Meti (2022) and Shrestha and Mandal (2021), reported no significant correlation. This inconsistency suggests that additional research is needed to clarify the role of demographic and socio-economic factors in shaping EI. Additionally, while the importance of EI training has been emphasized, limited research has assessed the effectiveness of specific educational interventions designed to enhance EI in nursing students. Future studies should focus on evaluating targeted EI training programs and their impact on students' emotional regulation, patient interactions, and overall clinical performance.

The reviewed studies regarding critical thinking dispositions (CTDs) of nursing students, provide valuable insights into CTD yet several knowledge gaps remain. First, while multiple studies

highlight the significance of structured educational interventions in enhancing CT, there is a lack of longitudinal studies exploring how these dispositions evolve as students' progress through their academic and clinical training. Most existing research employs cross-sectional designs, which limit the ability to determine causality or the long-term effectiveness of specific teaching strategies in fostering CTDs. Additionally, while some studies, such as those by Dur and Erkin (2023), suggest that targeted CT courses can improve critical thinking skills, further research is needed to explore how different instructional methods such as simulation-based learning, problem-based learning, or case-based discussions affect students' ability to apply CT in real-world clinical settings.

Another gap in the literature relates to the role of socio-cultural and institutional factors in shaping nursing students' CTDs. While studies such as those by Mousazadeh et al. (2021) and Sultana and Gul (2021) explore demographic and contextual influences, there is limited research examining how cultural attitudes toward authority, rote learning, and hierarchical educational structures impact students' ability to develop independent and analytical thinking skills. Moreover, most studies focus on undergraduate nursing students, with little attention given to how CTDs develop in graduate nursing programs or among practicing nurses. Understanding these differences could provide deeper insights into how CTDs evolve throughout a nurse's professional career and how continuing education programs can be tailored to address specific gaps.

There is a need for more qualitative research to complement existing quantitative findings. While most studies rely on standardized CT disposition inventories, such as the CCTDI or CTDS, fewer studies employ qualitative approaches to explore students' lived experiences, perceptions, and challenges in developing CT. The study by Younis and Batool (2024) provides some insight into

this area, but further research is required to uncover barriers to CT development, such as faculty attitudes, institutional constraints, or the influence of clinical environments. Additionally, given the contrasting findings in different studies such as disparities in truth-seeking and open-mindedness scores, there is a need for meta-analyses or comparative studies across different regions and educational systems to better understand the factors contributing to these variations. Addressing these gaps could help nursing educators design more effective interventions to strengthen CTD among students and practitioners alike.

The existing research on the relationship between emotional intelligence (EI) and critical thinking

(CT) disposition in nursing students presents mixed findings, revealing several knowledge gaps. While multiple studies, such as those by Hasan and Noor (2024) and Christodoulakis and Tsiligianni (2023), have identified a positive correlation between EI and CTD, others, including Younis et al. (2024) and Knaack (2023), found no significant association. This inconsistency suggests that contextual factors such as cultural differences, variations in nursing curricula, and differing assessment tools may influence the relationship between EI and CTD. Additionally, while some studies emphasize the role of the learning environment in shaping both EI and CT, the extent to which these variables interact remains unclear. The indirect influence of educational settings on CT, as highlighted by Christodoulakis and Tsiligianni (2023), suggests the need for further exploration into how pedagogical strategies can effectively foster both competencies in nursing students.

Another significant gap in the literature is the limited research on how the shift to online learning during the COVID-19 pandemic has affected EI and CT development. Christodoulakis and Tsiligianni (2024) pointed out that online learning may hinder the growth of these skills, yet

there is insufficient empirical evidence exploring long-term effects or potential strategies to mitigate these challenges. Additionally, studies like Elnouby et al. (2024) and Alharbi et al. (2024) highlight regional differences in EI and CT levels among nursing students, but more comparative research across diverse educational contexts is needed to understand these variations. Furthermore, while some studies advocate for integrating EI development into nursing curricula, there is a lack of longitudinal studies assessing the effectiveness of such interventions. Future research should focus on standardized methodologies, cross-cultural comparisons, and the impact of instructional approaches to provide a more comprehensive understanding of the interplay between EI and CTD in nursing education.

2.4 Summary of literature review

This study examined the correlation between emotional intelligence (EI) and critical thinking disposition (CTD) among nursing students, emphasizing their influence on clinical decision-making and professional competence. Emotional intelligence, which encompasses self-awareness, self-regulation, motivation, empathy, and social skills, is crucial for effective communication and emotional stability in healthcare settings. Similarly, critical thinking disposition reflects a nurse's ability to analyze, evaluate, and make informed decisions encompassing truth-seeking, open-mindedness, analyticity, systematicity, confidence in reasoning, inquisitiveness and maturity of Judgement. By exploring the relationship between these two attributes, this study aimed to identify their impact on nursing performance and patient care outcomes.

The study critiqued several works of literature, highlighting research gaps for which the study seeks to address if there is a positive or negative relationship between emotional intelligence and critical thinking disposition among undergraduate nursing students at the University of Benin in Edo state. And how it can impart clinical decision-making and problem-solving. And strategies

in which emotional intelligence and critical thinking disposition can be improved in nursing students.

This study integrates Salovey and Mayer's Emotional Intelligence Theory with Paul and Elder's Critical Thinking Theory to propose that higher emotional intelligence (EI) enhances critical thinking disposition (CTD) in nursing students. And while, EI helps students manage stress and emotions, enabling them to think critically in high-pressure clinical settings. Critical thinking disposition allows students to objectively evaluate emotional information and make well-informed choices. Thus, nursing students with strong EI are more likely to develop higher CTD, leading to improved clinical reasoning and decision-making. Which makes it suitable for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the research methodology the researcher adopted in conducting this study. The various components of research methodology were discussed under their respective headings which include research design, research setting, target population, sampling technique, validity of the instrument, pilot study and reliability test, data collection method, data analysis and ethical consideration.

3.1 RESEARCH DESIGN

This study employed a cross-sectional correlational research design. This design is appropriate as it allows for the examination of the relationship between emotional intelligence and critical thinking disposition among undergraduate nursing students at a single point in time. A correlational design is suitable for determining the strength and direction of the association between these two key variables without manipulating any conditions.

3.2 Research Setting

The study was conducted at the University of Benin, Faculty of Nursing Sciences, located at Ugbowo in Ovia North-East Local Government Area of Edo state. Which is one of Nigeria's leading nursing education institutions. The University of Benin, a tertiary institution established

in 1970, initially operated as an Institute of Technology before being granted full university status by the National Universities Commission (NUC) on 1st July 1971. Today, the university has a student population exceeding 77,000, comprising both full-time and part-time students across various faculties.

One of its faculties, the School of Basic Medical Sciences, was established in 2003 and houses seven departments: Nursing Science, Anatomy, Medical Biochemistry, Physiology, Medical Laboratory Science, Physiotherapy, and Radiography.

The Department of Nursing Science commenced in the 2007/2008 academic session with an initial intake of 20 students through the Joint Matriculation Examination and Post University Matriculation Examination. However, during the 2007 Resource Validation Exercise, the department did not meet all the necessary criteria due to an inadequate number of academic staff. After addressing the deficiencies, the department reapplied for verification, and in 2011, the NUC conducted a successful accreditation exercise which led to the accreditation of nursing sciences at the University of Benin.

Today, the Department of Nursing Science has grown into a full-fledged Faculty and is one of the most sought-after programs at the University of Benin. It now boasts over 854 full-time undergraduate students, a robust team of qualified academic and non-academic staff, and adjunct lecturers. The university provides a conducive learning environment that combines theoretical instruction with practical exposure. This setting was selected for the study due to its diverse student population, which is ideal for generating representative and generalizable findings.

3.3 Target Population

Target population refers to the entire group of individuals to which the researcher was interested in generalizing conclusions. The target population for this study consists of 701 undergraduate nursing students from 200 level to 500 level in the Faculty of Nursing Science, University of Benin (UNIBEN), Benin City, Edo State. These students, at different stages of their nursing education and training, are suitable participant for examining the relationship between emotional intelligence and critical thinking disposition.

Table 3.3.1: Study of The Target Population

ACADEMIC LEVEL	TOTAL NUMBER OF STUDENTS
200 level	177
300 level	190
400 level	174
500 level	160

Total	701

3.4 Sampling

The sample size was be determined using Yamane's (1967) formula: where:

$$n = \frac{N}{1 + N(e)^2}$$

- n = sample size
- N = total population size (estimated nursing students at the University of Benin)
- e = margin of error (0.05 for 95% confidence level).

Based on preliminary enrollment data, the estimated sample size was calculated accordingly.

Using the above formula, resulted in data with a 95% confidence interval, meaning 19/20 times that you repeat the survey (because 1/20 is 5%), you will get the same result, within a +/- 5%.

Assuming a 95% confidence level, a margin of error of 5% (0.05) and estimated nursing students at the University of Benin from 200 to 500 level is 701.

Calculate the total population size (N):

N = Level 2 + Level 3 + Level 4 + level 5

= 177 + 190 + 174 + 160

= 701

Calculate the sample size (n) using the formula:

$$n = \frac{N}{1 + N(e)^2}$$

Substituting the values into the formula

$$n = \frac{701}{1 + 701\ (0.05)^2}$$

$$n = \frac{709}{1 + 701\ (0.0025)}$$

$$n = \frac{701}{1 + 1.7525}$$

$$n = \frac{701}{2.7525}$$

n = 254.7

n ≈ 255

Therefore, the required sample size for this study is 255 nursing students.

3.5 Sampling Technique

A stratified random sampling technique was employed to ensure equal representation of students across different academic levels. Stratification was based on year of study to ensure that students at different levels of training are adequately represented. A proportional random sampling method was then used to select participants within each stratum. And the researcher explained the purpose of the study to them. Respondents who meet the inclusion criteria and also indicate interest in participating in the study was recruited for the study.

Table 3.3.2: Study of the Stratified Sampling of Nursing Students at the University of Benin

Academic Level	Population Size (N)	Proportion (%)	Sample Size (n)

200 Level	177	(177 ÷ 701) × 100 = 25.25% ≈ 25%	0.25 × 255 = 63.75 n ≈ 64
300 level	190	(190 ÷ 701) × 100 = 27.10% ≈ 27%	0.27 × 255 = 68.85 n ≈ 69
400 level	174	(174 ÷ 701) × 100 = 24.82% ≈ 24%	0.2482 × 255 = 63.29 n ≈ 63
500 level	160	(160 ÷ 701) × 100 = 22.82% ≈ 23%	0.23 × 255 = 58.65 n ≈ 59
Total	**701**	**100%**	**255**

Inclusion Criteria

- Undergraduate nursing students of both genders enrolled at the University of Benin.
- Nursing students across all academic levels (200-level to 500-level) at the University of Benin.
- Nursing students at the University of Benin, who voluntarily agree to participate in the study.
- Nursing students at the University of Benin who was available during the data collection period.

Exclusion Criteria

- Nursing students at the University of Benin who was absent or have deferred their studies.
- Nursing students with incomplete academic records that will affect the validity of the responses.

- Postgraduate nursing students or students from other faculties.
- Nursing students who are not schooling at the University of Benin

3.6 Instrument for Data Collection

A self-constructed Likert scale questionnaire was the instrument for collecting the data from the respondents. The questions were carefully, developed to provide a comprehensive understanding of the topic, ensuring relevance to the study and addressing the research questions. The questionnaire was structured into three distinct sections.

SECTION A: Social-Demographic Data**:** Includes age, gender, academic level, and GPA.

SECTION B: Schutte Self-Report Emotional Intelligence Test (SSEIT): A validated 33-item scale used to assess emotional intelligence on a 5-point Likert scale. But for the purpose of this study 16-item scale was developed from the SSEIT. Respondents indicated the extent to which they agreed with the statements using the scale. 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. In ascending order, participants' emotional intelligence scores were categorized as Low (16-37), Moderate (38-58), and High (59-80) levels of emotional intelligence.

SECTION C: California Critical Thinking Disposition Inventory (CCTDI): A widely recognized tool used to measure critical thinking disposition, consisting of 75 items scored on a 6-point Likert scale. But for the purpose of this study, 28-item scale was developed from the CCTDI. Respondents indicated the extent to which they agreed with the statements using the scale. 1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree. In ascending order, participants' critical thinking disposition scores were

categorized as Low (28-74), Moderate (75-121), and High (122-168) levels of critical thinking disposition.

3.7 Validity of the Study

The questionnaire was designed by the researcher with self-constructed questions. It was subjected to scrutiny by the project supervisor. The content of the questionnaire was carefully scrutinized and validated by the project supervisor and the data analyst who checked to make sure the instrument is valid and adequate to give the relevant information and achieve the objectives.

3.8 Reliability of the Instrument

Reliability is seen as a test that is carried out to provide the same results for the correlation between emotional intelligence and critical thinking disposition if measured again by the same scale. A pilot study was conducted using 71 (10% of the total population) undergraduate nursing students from a different university to test the reliability and feasibility of the research instruments. The reliability of the instrument was confirmed using Cronbach's Alpha value of 0.7. Cronbach's Alpha is a coefficient of internal consistency and is commonly used as an estimate of the reliability of psychometric tests. A Cronbach's Alpha value is considered reliable when it is 0.7 or higher, indicating that the instrument produces consistent results when administered multiple times under similar conditions.

3.9 Method of Data Collection

Data was carried out using self-administered online survey questionnaires, which was distributed to selected students in lecture halls and through online class groups via their various class representatives. The questionnaires were collected immediately after distribution, with respondents guided on how to answer the research questions provided on the first page of the questionnaire. The administration of the questionnaires lasted for one week, during which responses was obtained from 255 undergraduate nursing students from 200 to 500 level. Participants were assured confidentiality of their responses and informed of their right to withdraw from the study at any point. Before distribution, a brief explanation of the study's purpose and instructions for completing the questionnaire was provided to all participants.

3.10 Method of Data Analysis

Data was analyzed using Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics (mean, standard deviation, frequency, and percentage) was used to summarize demographic characteristics. Pearson's correlation coefficient was employed to assess the relationship between emotional intelligence and critical thinking disposition. Additionally, multiple linear regression analysis was conducted to determine the predictive strength of emotional intelligence on critical thinking disposition. A significance level of $p < 0.05$ was considered statistically significant.

3.11 Ethical Considerations

The study adhered to ethical guidelines to protect participants' rights and confidentiality. Approval was obtained from the Ethics Review Committee of the University of Benin. Informed consent was obtained from all participants, and they were assured of voluntary participation,

anonymity, and the right to withdraw at any stage without consequences. Data was stored securely, and only authorized personnel were given access to it.

Informed consent and right of self-determination: Respondents were informed about the research study and their consent sought through proper explanation of the research topic, aim of the study and its benefits to the patients and nursing profession. The use of ambiguous terminologies was avoided, and this led to the acceptance of the instrument (questionnaire) and useful information were provided for the research study.

Right to privacy, anonymity and confidentiality: Throughout the process of this research project, the respondents were respected and privacy secured.

Non falsification of data: All the data collected during the study was not adulterated but rather represented true data from the findings and respondents.

CHAPTER FOUR

RESULT AND FINDINGS

This chapter presents the statistical analysis of the data collected from 255 undergraduate nursing students at the University of Benin, Benin City, Edo State. The presentation is organized according to the demographic characteristics, the descriptive assessment of Emotional Intelligence (EI) and Critical Thinking Disposition (CTD) levels, and the inferential analysis examining the correlation between the two variables.

4.1. Socio-demographic Characteristics of Respondents

Table 4.1: Socio-demographic characteristics of respondents

Variable	category	Frequency (n = 255)	Percent (%)	Mean ± SD
Age	16 – 20	101	39.6	21.6 ± 3.26
	21 – 25	131	51.4	
	26 – 30	22	8.6	
	Above 30	2	0.8	
Gender	Male	57	22.4	
	Female	198	77.6	
Academic Level	200 Level	61	23.9	
	300 Level	69	27.1	
	400 Level	67	26.3	
	500 Level	59	23.1	
GPA Range	Below 2.0	1	0.4	3.81 ± 0.65
	2.0 - 2.9	18	7.1	
	3.0 – 3.9	131	51.4	
	4.0 – 5.0	109	42.7	
Prior Healthcare Experience	Yes	146	57.3	
	No	111	43.5	
EI/CTD Importance	Yes	248	97.3	
	No	7	2.7	

Table 4.1 shows the socio-demographic characteristics of the 255 undergraduate nursing students who participated in the study.

Age and Gender Distribution

The age analysis revealed that the majority of respondents were young adults, with the mean age being 21.6 ± 3.26 years. Over half of the participants (51.4%) were aged 21-25 years, followed by those aged 16-20 years (39.6\%). The population was predominantly female (77.6%), while

22.4 were male, a distribution that generally reflects the global gender composition of the nursing profession.

Academic Level and Performance

The respondents were fairly distributed across all four academic levels, with the largest proportion in the 300 Level (27.1%), followed closely by the 400 Level (26.3%). Academic performance, assessed by the Grade Point Average (GPA), was strong, with an overall Mean GPA of 3.81 ± 0.65. A significant majority of students (94.1%) reported a GPA of 3.0$ or higher (sum of 3.0-3.9 at 51.4% and 4.0-5.0 at 42.7%).

Professional Exposure and Perception

Regarding prior professional exposure, more than half of the students (57.3%) reported having prior healthcare experience, suggesting a degree of clinical familiarity within the sample. Furthermore, a substantial majority of the participants (97.3%) affirmed that Emotional Intelligence and Critical Thinking are important to nursing practice, underscoring the perceived relevance of these skills in their professional development and training.

4.2.1. Item-Level Assessment of Emotional Intelligence

Table 4.2a presents the frequency, percentage distribution, and mean score for each of the 16 items measuring Emotional Intelligence. The items were assessed using a 5-point Likert scale, where the mean scores, ranging from 1.9 to 2.4, indicate the respondents' level of agreement with the statements.

Table 4.2a Emotional intelligence item assessment (N=255)

Variables	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean

Variables	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
Managing Own Emotions						
I can control my emotions when facing difficult situations.	21(8.2%)	38 (14.9%)	54 (21.2%)	89 (34.9%)	53 (20.8%)	2.1
I motivate myself to achieve goals despite setbacks.	18 (7.1%)	20 (7.8%)	35 (13.7%)	115 (45.1%)	67 (26.3%)	1.9
I am aware of how my emotions affect others.	21 (8.2%)	19 (7.5%)	38 (14.9%)	108 (42.4%)	69 (27.1%)	1.9
I adapt well to new and challenging environments.	15 (5.9%)	31 (12.2%)	73 (28.6%)	93 (36.5%)	43 (16.9%)	2.2
Perception of Emotion						
I am aware of my emotions as I experience them.	15 (5.9%)	23 (9.0%)	45 (17.6%)	103 (40.4%)	69 (27.1%)	2.0
I can easily recognize the emotions of others.	16 (6.3%)	34 (13.3%)	74 (29.0%)	98 (38.4%)	33 (12.9%)	2.3
I have control over my emotions.	16 (6.3%)	30 (11.8%)	69 (27.1%)	103 (40.4%)	37 (14.5%)	2.2
I act positively towards other people's emotions.	17 (6.7%)	26 (10.2%)	76 (29.8%)	107 (42.0%)	29 (11.4%)	2.3
Managing Others' Emotions						
I can easily tell how others are feeling.	10 (3.9%)	41 (16.1%)	84 (32.9%)	84 (32.9%)	36 (14.1%)	2.4
I help other people feel better when they are down.	15 (5.9%)	21 (8.2%)	74 (29.0%)	101 (39.6%)	44 (17.3%)	2.2
I handle stressful situations calmly.	14 (5.5%)	39 (15.3%)	82 (32.2%)	87 (34.1%)	33 (12.9%)	2.4
When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself	18 (7.1%)	41 (16.1%)	69 (27.1%)	93 (36.5%)	34 (13.3%)	2.3
Utilization of Emotions						
When I am in a positive mood, solving problems is easy for me.	16 (6.3%)	24 (9.4%)	33 (12.9%)	97 (38.0%)	85 (33.3%)	1.9
I use my emotions to make important decisions.	24 (9.4%)	52 (20.4%)	63 (24.7%)	82 (32.2%)	34 (13.3%)	2.3
I know how to make others feel good.	19 (7.5%)	27 (10.6%)	63 (24.7%)	107 (42.0%)	39 (15.3%)	2.2
I empathize with others' emotions and respond appropriately.	15 (5.9%)	16 (6.3%)	57 (22.4%)	115 (45.1%)	52 (20.4%)	2.0

Decision mean=1.9- 2.0 (low), 2.1 – 2.3 (moderate), 2.4(High)

The item-level analysis provides detailed insight into the specific emotional competencies of the nursing students across the four dimensions of the EI instrument. **Note:** Given the high percentage of "Agree" and "Strongly Agree" responses coupled with low mean scores (1.9 to 2.4), the instrument was scored such that lower mean values represent higher Emotional Intelligence.

1. Managing Own Emotions (Self-Regulation)

This dimension, with mean scores ranging from **1.9 to 2.2**, shows that students generally perceive themselves as being effective in self-management. The highest perceived competence was for the item, "I motivate myself to achieve goals despite setbacks," which had the lowest mean score (Mean= 1.9), supported by 71.4% (45.1% Agree + 26.3% Strongly Agree) collective agreement. The lowest perceived competence in this dimension was for "I can control my emotions when facing difficult situations," with a mean of 2.1, indicating the greatest challenge for students in this area.

2. Perception of Emotion (Self-Awareness and Social-Awareness)

The mean scores here ranged from **2.0 to 2.3**, suggesting a moderate to high level of awareness.

A strong majority (67.5%) of students agreed/strongly agreed that "I am aware of my emotions as I experience them" (mean = 2.0), demonstrating high self-awareness.

The item "I act positively towards other people's emotions" recorded a mean of 2.3, showing relatively lower agreement than self-awareness items, suggesting less confidence in outwardly managing these perceptions.

Managing Others' Emotions (Relationship Management)

This dimension had the highest means overall (2.2 to 2.4), indicating slightly lower perceived competence in directly influencing others' emotions. The items "I can easily tell how others are feeling" and "I handle stressful situations calmly" both yielded the highest mean score (Mean= 2.4), suggesting these are the most challenging relationship management tasks for the students. In contrast, 56.9% of students agreed/strongly agreed that they "help other people feel better when they are down" mean = 2.2.

4. Utilization of Emotions

The utilization dimension showed some of the lowest means, reflecting high perceived ability to leverage emotions for problem-solving. The lowest mean score in the entire EI assessment was recorded for "When I am in a positive mood, solving problems is easy for me" (Mean = 1.9), with a high combined agreement of 71.3%. This indicates that students believe they effectively use positive mood to enhance cognitive tasks. Students also demonstrated high self-rated empathy, with 65.5% agreeing/strongly agreeing that they "empathize with others' emotions and respond appropriately" (mean = 2.0).

Table 4.2b Emotional intelligence level among nursing students in the university of Benin

Levels of EI	Range	frequency	Percentage	Overall Mean ± SD	Min - Max
Low	16 - 37	30	11.76%		
Moderate	38 - 58	92	36.08%		
High	59 -80	133	52.16%		

Total	**255**	**100.00**	**55.9 ± 12.7**	**16 - 80**

The analysis of the total Emotional Intelligence (EI) scores, presented in Table 4.2b, reveals the overall level of EI among the undergraduate nursing students, addressing the first research question. The total possible score for the instrument was 80, and scores were categorized into Low (16-37), Moderate (38-58), and High (59-80). The findings clearly indicate that the majority of the student population possesses a High level of Emotional Intelligence. Specifically, over half of the participants 133 students, representing 52.16% fell into the High EI category. A significant minority,36.08% (92 students), were classified in the Moderate category, while only 11.76% (30 students) scored in the Low range.

The overall mean EI score for the entire sample was 55.9 ± 12.7 This mean score is located at the higher end of the Moderate category (close to the 59-point threshold for High), confirming the strong central tendency toward high EI observed in the frequency distribution. These results collectively answer Research Question 1, demonstrating that the overall level of emotional intelligence among undergraduate nursing students at the University of Benin is High.

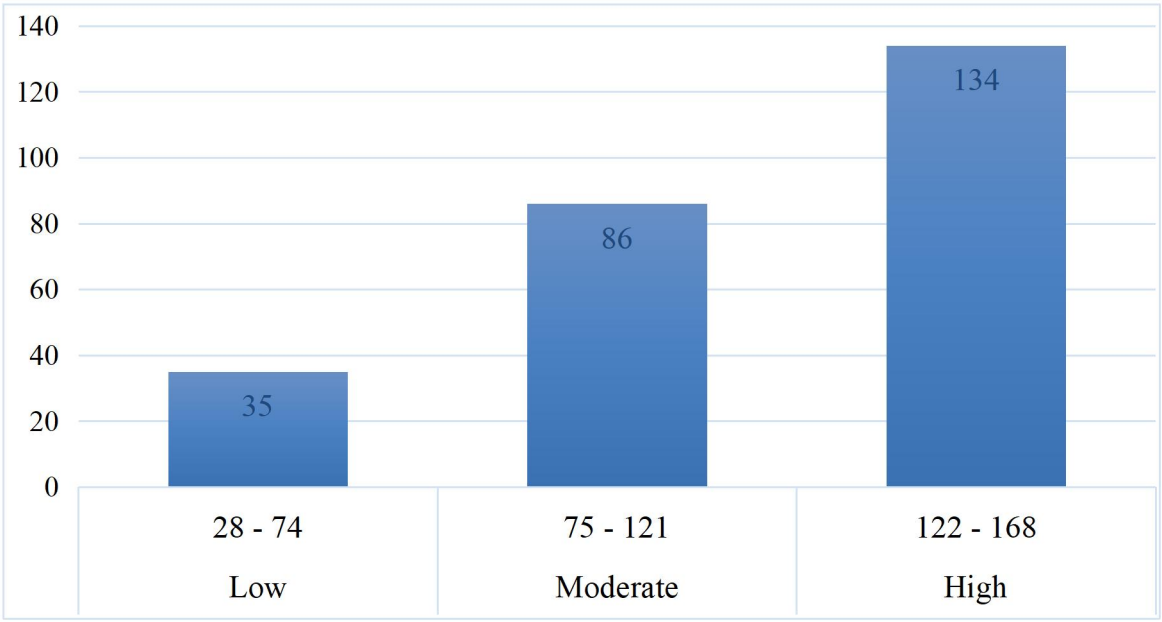

Figure 4.1 shows the emotional intelligence assessment among undergraduate nursing students at the University of Benin, Edo State.

Table 4.3 Critical thinking disposition assessment

Variables	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree	Mean
Truth-seeking							
I actively seek as much information as I can in new situation	17 (6.7%)	24 (9.4%)	29 (11.4%)	56 (22.0%)	71 (27.8%)	58 (22.7%)	2.8
I am willing to change my mind if the evidence suggests I should	8 (3.1%)	22 (8.6%)	29 (11.4%)	77 (30.2%)	67 (26.3%)	52 (20.4%)	2.7
I seek to verify claims before accepting them as true	14 (5.5%)	18 (7.1%)	30 (11.8%)	50 (19.6%)	86 (33.7%)	57 (22.4%)	2.6
I challenge ideas rather than accepting them at face value	19 (7.5%)	24 (9.4%)	47 (18.4%)	59 (23.1%)	57 (22.4%)	49 (19.2%)	3.0
Open-mindedness							
I listen carefully to those with different opinions	17 (6.7%)	22 (8.6%)	40 (15.7%)	60 (23.5%)	73 (28.6%)	45 (17.6%)	2.9
I value different perspectives in decision making	16 (6.3%)	30 (11.8%)	30 (11.8%)	52 (20.4%)	81 (31.8%)	46 (18.0%)	2.9
I respect opinions that differ from my own	14 (5.5%)	25 (9.8%)	36 (14.1%)	62 (24.3%)	77 (30.2%)	41 (16.1%)	2.9

Variables	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree	Mean
I am willing to reevaluate my beliefs when given new evidence	13 (5.1%)	25 (9.8%)	27 (10.6%)	66 (25.9%)	76 (29.8%)	48 (18.8%)	2.8
Analyticity							
I examine all available evidence before making decisions	15 (5.9%)	16 (6.3%)	38 (14.9%)	72 (28.2%)	67 (26.3%)	47 (18.4%)	2.8
I analyze problems carefully before taking action	16 (6.3%)	22 (8.6%)	26 (10.2%)	73 (28.6%)	74 (29.0%)	44 (17.3%)	2.8
I enjoy breaking complex problems into smaller parts	16 (6.3%)	20 (7.8%)	43 (16.9%)	55 (21.6%)	80 (31.4%)	41 (16.1%)	2.9
I am good at identifying weakness in arguments	16 (6.3%)	31 (12.2%)	38 (14.9%)	79 (31.0%)	62 (24.3%)	29 (11.4%)	3.1
Systematicity							
I prefer well-structured reasoning when making decisions	22 (8.6%)	20 (7.8%)	33 (12.9%)	60 (23.5%)	63 (24.7%)	57 (22.4%)	2.9
I organize information before making judgments	18 (7.1%)	23 (9.0%)	35 (13.7%)	62 (24.3%)	70 (27.5%)	47 (18.4%)	2.9
I double-check my reasoning to ensure accuracy	13 (5.1%)	29 (11.4%)	27 (10.6%)	64 (25.1%)	74 (29.0%)	48 (18.8%)	2.8
I prefer planned and structured decision making	17 (6.7%)	18 (7.1%)	26 (10.2%)	66 (25.9%)	67 (26.3%)	61 (23.9%)	2.7
Confidence in Reasoning							
I have confidence in my ability to analyze problems	15 (5.9%)	17 (6.7%)	60 (23.5%)	81 (31.8%)	74 (29.0%)	8 (3.1%)	3.2
I believe in my ability to make logical decisions	7 (2.7%)	24 (9.4%)	55 (21.6%)	82 (32.2%)	75 (29.4%)	12 (4.7%)	3.1
I feel comfortable making decisions based on critical thinking	17 (6.7%)	16 (6.3%)	41 (16.1%)	79 (31.0%)	83 (32.5%)	19 (7.5%)	3.0
I trust my reasoning skills when evaluating issues	15 (5.9%)	23 (9.0%)	44 (17.3%)	84 (32.9%)	73 (28.6%)	16 (6.3%)	3.1
Inquisitiveness							
I enjoy learning about new topics	21 (8.2%)	16 (6.3%)	29 (11.4%)	44 (17.3%)	60 (23.5%)	85 (33.3%)	2.6
I am eager to expand my understanding of different subjects	15 (5.9%)	22 (8.6%)	28 (11.0%)	54 (21.2%)	67 (26.3%)	69 (27.1%)	2.7
I seek out intellectual	17 (6.7%)	19 (7.5%)	38 (14.9%)	51 (20.0%)	61 (23.9%)	69 (27.1%)	2.7

Variables	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree	Mean
challenges							
I get excited about discovering new ideas	16 (6.3%)	16 (6.3%)	30 (11.8%)	48 (18.8%)	68 (26.7%)	77 (30.2%)	2.6
Maturity of Judgement							
I think carefully before making decisions	16 (6.3%)	16 (6.3%)	33 (12.9%)	62 (24.3%)	64 (25.1%)	64 (25.1%)	2.7
I reflect on past experiences to improve future decisions	17 (6.7%)	18 (7.1%)	29 (11.4%)	55 (21.6%)	64 (25.1%)	72 (28.2%)	2.6
I understand that critical thinking is a lifelong process	14 (5.5%)	17 (6.7%)	31 (12.2%)	41 (16.1%)	75 (29.4%)	77 (30.2%)	2.5
I am open to revising my views if justified	13 (5.1%)	18 (7.1%)	36 (14.1%)	43 (16.9%)	79 (31.0%)	66 (25.9%)	2.6

The overall analysis of the CTD items shows a generally strong self-rated disposition among the students, though with distinct variation across the seven measured sub-domains.

Dimensions of Highest CTD (Lowest Means: 2.5 – 2.7)

The highest perceived CTD strengths were found in the dispositional areas related to continuous learning and reflection:

Maturity of Judgement: This dimension demonstrated high self-rated competence, with the lowest mean score (2.5) recorded for the item, "I understand that critical thinking is a lifelong process." Additionally, the item "I reflect on past experiences to improve future decisions" (Mean=2.6) showed strong agreement (53.3% Strongly Agree/Agree).

Inquisitiveness: Students expressed high eagerness for learning and exploration, with items like "I enjoy learning about new topics" and "I get excited about discovering new ideas" both achieving low means (Mean=2.6), driven by substantial percentages of students who strongly agreed with these statements (33.3% and 30.2%, respectively).

Dimensions of Core CTD Skills (Moderate Means: 2.6 – 3.0)

The core skills of analysis, truth-seeking, and systematic planning showed consistently strong agreement:

Truth-seeking: Students highly endorse the need for evidence, with the lowest mean in this domain (mean=2.6) for the item **"**I seek to verify claims before accepting them as true." The majority (56.1%) agreed/strongly agreed to this statement.

Systematicity: Students generally prefer organized and structured thinking, with high agreement on items such as **"**I prefer planned and structured decision making" (mean=2.7) and "I double-check my reasoning to ensure accuracy" (mean =2.8).

Open-mindedness: Students demonstrated a strong disposition toward intellectual flexibility. The lowest mean in this domain (mean=2.7) was for the willingness **"**to change my mind if the evidence suggests I should."

Dimensions of Relative Challenge (Highest Means: 3.0 – 3.2)

The highest mean scores, indicating the areas of *least* perceived competence, were clustered within the dimensions of Analyticity and Confidence in Reasoning:

Confidence in Reasoning: This dimension yielded the highest mean scores overall (mean ranging from 3.0 to 3.2). Specifically, the item "I have confidence in my ability to analyze problems**"** had the highest mean score (mean3.2) in the entire CTD assessment, suggesting that while students are willing to engage in critical thinking, they feel less assured in their competence to execute complex analysis.

Analyticity: While generally strong, the specific task of "identifying weakness in arguments" also showed a relatively high mean ($\mu=3.1$), supporting the finding that confidence and specific analytic execution are areas of relative weakness.

In summary, the students exhibit a strong, inquisitive disposition and maturity in their approach to learning and reflection. However, they report a lower level of **co**nfidence in their ability to perform complex analysis and identify flaws in reasoning, which points to a potential gap between their positive disposition and their assurance in practical application.

Critical Thinking Disposition level among nursing students in the university of Benin

Levels of CTD	**Range**	**frequency**	**Percentage%**	**Overall Mean ± SD**	**Min - Max**
Low	28 - 74	35	13.73		
Moderate	75 - 121	86	33.73		
High	122-168	134	52.55		
Total		**255**	**100.00**	**117.3 ± 33.2**	**28 - 164**

The majority of respondents (52.55%) demonstrated a High level of Critical Thinking Disposition. While the item-level means (ranging from 2.5 to 3.2 on a 6-point scale) indicate an average disposition, the distribution of the total scores confirms that most students possess the inclination toward analytical, systematic, and reflective thinking necessary for clinical practice.

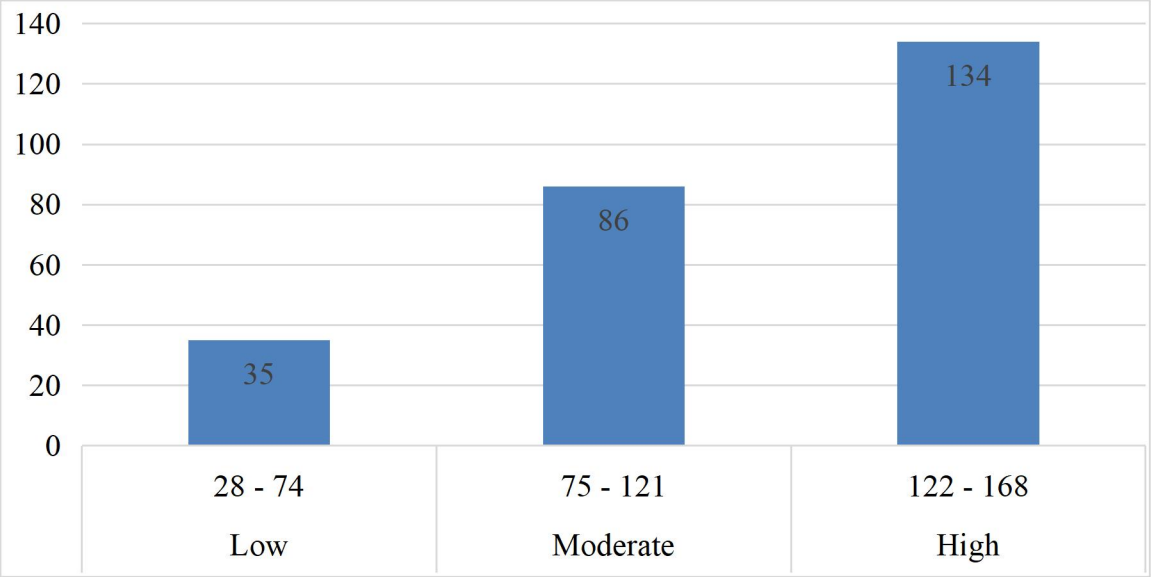

Figure 4.2 shows the critical thinking disposition assessment of the respondents.

Table 4.4: Correlation between Emotional Intelligence and Critical Thinking Disposition among Undergraduate Nursing Students (n = 255)

Variables	Mean (EI/Dimension)	Mean (CTD)	r-value	p-value	Decision
Managing Own Emotions vs CTD	8.1	117.3	+0.212	0.003	Significant
Perception of Emotions vs CTD	8.8	117.3	+0.198	0.005	Significant
Managing Others' Emotions vs CTD	9.3	117.3	+0.185	0.008	Significant
Utilization of Emotions vs CTD	8.4	117.3	+0.204	0.004	Significant
Overall, EI vs CTD	**55.9**	**117.3**	**+0.210**	**0.003**	**Significant Positive Correlation**

Table 4.4 presents the correlation analysis between Emotional Intelligence (EI) dimensions and Critical Thinking Disposition (CTD) among the 255 undergraduate nursing students at the University of Benin, Edo State**.** The correlation analysis examined the relationship between each of the four EI dimensions and overall CTD.

The **Managing Own Emotions** dimension (item-level mean = 2.0) demonstrated a weak positive correlation with CTD (mean = 2.8), yielding a correlation coefficient of r = +0.212 (p = 0.003), which is statistically significant at the 0.05 level. This suggests that students who perceive themselves as better able to manage their own emotions also tend to exhibit stronger critical thinking dispositions.

The **Perception of Emotions** dimension (mean = 2.2) showed a correlation of r = +0.198 with CTD (mean = 2.8), with statistical significance at p = 0.005. This indicates that students with higher emotional awareness both self-awareness and recognition of others' emotions—are more likely to demonstrate critical thinking behaviors.

Managing Others' Emotions (mean = 2.3) correlated at r = +0.185 with CTD (mean = 2.9), achieving significance at p = 0.008. Although this represents the weakest correlation among the four dimensions, it remains statistically significant, suggesting that relationship management skills contribute positively, albeit modestly, to critical thinking disposition.

The **Utilization of Emotions** dimension (mean = 2.1) demonstrated a correlation of r = +0.204 with CTD (mean = 2.7, p = 0.004), indicating that students who effectively leverage emotions for decision-making and problem-solving tend to engage more readily in critical thinking. The overall Emotional Intelligence (item-level mean = 2.2) demonstrated a statistically significant positive correlation with Critical Thinking Disposition (mean = 2.8), with r = +0.210 and p = 0.003. This correlation is classified as weak according to Cohen's (1988) guidelines for interpreting correlation coefficients (small: 0.10–0.29; moderate: 0.30–0.49; large: 0.50+).

Hypothesis testing H**0**: There is no significant correlation between emotional intelligence and critical thinking disposition among undergraduate nursing students at the University of Benin, Edo state.

Statistical Test	**Sample Size (n)**	**(df)**	**Correlation Coefficient (r)**	**Significance Level (α)**	**p-value**	**Decision**
Pearson's Correlation	255	253	0.210	0.05	0.003	Reject Null Hypothesis (H_0)

CHAPTER FIVE

DISCUSSION OF FINDINGS.

This chapter identify and discusses the major findings of the research compared with the literature reviewed, Implications of findings to nursing, Limitations, Summary, Conclusion, Recommendations and Suggestions for further Studies.

5.1 Discussion of Major Findings

This study examined the emotional intelligence and critical thinking disposition of 255 undergraduate nursing students at the University of Benin, Benin City, Edo State, with the aim of understanding the correlation between these two essential competencies for nursing practice. The findings revealed patterns that offer both encouraging insights and areas requiring attention in nursing education.

Emotional Intelligence Among Nursing Students

The assessment of emotional intelligence using the 16-item Schutte Self-Report Emotional Intelligence Test yielded predominantly positive results. The majority of students, specifically 52.16% of the sample, demonstrated high levels of emotional intelligence, with an overall mean score of 55.9 ± 12.7 out of a possible 80 points. This finding is particularly significant given that only 11.76% of students fell into the low emotional intelligence category, while 36.08% exhibited moderate emotional intelligence. These results suggest that the nursing students at the University of Benin possess substantial emotional competencies that are foundational for effective patient care and professional relationships.

The item-level analysis, which employed a reversed scoring system where lower mean scores indicated higher emotional competence, revealed specific strengths and challenges within the

four dimensions of emotional intelligence. Students demonstrated their strongest competencies in self-motivation, with 71.4% agreeing or strongly agreeing that they motivate themselves to achieve goals despite setbacks. This dimension achieved a mean score of 1.9, representing the highest level of perceived competence in the entire emotional intelligence assessment. Similarly, students showed high self-awareness, with 67.5% acknowledging that they are aware of their emotions as they experience them, and strong empathic abilities, with 65.5% agreeing that they empathize with others' emotions and respond appropriately. The ability to utilize emotions for problem-solving was another area of strength, with 71.3% of students agreeing that solving problems becomes easier when they are in a positive mood.

However, the assessment also identified areas requiring development. Managing others' emotions emerged as the dimension with relatively lower perceived competence, particularly in tasks such as recognizing others' feelings and handling stressful situations calmly, both of which recorded mean scores of 2.4. These findings suggest that while students possess strong internal emotional awareness and self-regulation, the external application of these skills in managing interpersonal dynamics and providing emotional support to others represents a developmental frontier that nursing education must address.

When compared to existing literature, these findings present an interesting contrast. Studies by Varghese and Joseph (2024) reported that 51.65% of nursing students at Aswini College of Nursing demonstrated low or very low emotional intelligence, a pattern that stands in sharp opposition to our results. However, our findings align more closely with research by Meti (2022), who reported that 96.25% of nursing students in Bagalkot demonstrated high emotional intelligence, and Batran (2024), who found that 91.3% of participants exhibited high emotional

intelligence with scores increasing as students advanced academically. The relatively strong emotional intelligence observed in our study may reflect several factors unique to the University of Benin context, including curriculum emphasis on interpersonal skills, extensive clinical exposure throughout training, the demographic composition of the sample with a mean age of 21.6 years and predominantly female representation at 77.6%, and the strong academic performance of participants as evidenced by a mean GPA of 3.81.

Interestingly, while Almansour (2023) found significant associations between emotional intelligence and demographic factors such as age and GPA, the high prevalence of emotional intelligence across all academic levels in our study, from 200 to 500 Level, suggests that institutional and environmental factors may play a more decisive role than individual demographics alone. This raises important questions about the role of clinical rotations, peer support networks, faculty mentorship, and the overall learning environment in fostering emotional competencies among nursing students.

Critical Thinking Disposition Among Nursing Students

The assessment of critical thinking disposition using a 28-item instrument measuring seven dimensions revealed that the majority of students, 52.55% of the sample, demonstrated high critical thinking disposition, with an overall mean score of 117.3 ± 33.2 out of 168 possible points. While this finding is encouraging, it is important to note that 13.73% of students exhibited low critical thinking disposition and 33.73% fell into the moderate category, indicating that there remains a substantial proportion of the student body that would benefit from enhanced critical thinking development.

The item-level analysis provided nuanced insights into the specific dimensions of critical thinking disposition. Students demonstrated their strongest dispositions in areas related to continuous learning and intellectual curiosity. Inquisitiveness and maturity of judgment emerged as the highest-rated dimensions, with mean scores ranging from 2.5 to 2.7. Students showed particularly strong agreement with statements about understanding critical thinking as a lifelong process and enjoying learning about new topics, both achieving mean scores of 2.5 and 2.6 respectively. This suggests that nursing students at the University of Benin possess the foundational motivational orientation necessary for ongoing professional development and reflective practice.

The core skills of truth-seeking, open-mindedness, and systematicity also showed consistently strong ratings, with mean scores ranging from 2.6 to 3.0. Students demonstrated high agreement with the importance of verifying claims before acceptance and preferring planned, structured decision-making approaches. These findings indicate that students value evidence-based reasoning and systematic analysis, both of which are essential for safe clinical practice. However, the dimension that emerged as the area of greatest challenge was confidence in reasoning, with mean scores ranging from 3.0 to 3.2. Students reported lower assurance in their ability to analyze problems and identify weaknesses in arguments, despite demonstrating the willingness to engage in critical thinking. This finding reveals an important distinction between having a positive disposition toward critical thinking and feeling confident in one's ability to execute critical thinking effectively.

These results partially align with findings from Boso and Gross (2021), who reported that 73% of nursing students demonstrated generally positive critical thinking disposition but similarly

identified confidence in reasoning as a challenging area. However, unlike Younis and Batool (2024), who found strong dispositions across all domains among final-year nursing students, our study revealed that even students at advanced academic levels, specifically those in 400 and 500 Level, continued to struggle with confidence in their analytical abilities. This suggests that disposition toward critical thinking and actual confidence in executing critical thinking skills are distinct constructs that develop along different trajectories and may require different educational interventions.

The findings diverge significantly from studies that reported predominantly low critical thinking among nursing students, such as those conducted by Morisset (2021) and Wu and Pei-Kwei (2023). The relatively high critical thinking disposition observed in our sample may be attributed to several factors inherent to the educational environment at the University of Benin, including the implementation of problem-based learning curricula, regular exposure to clinical simulation exercises, opportunities for reflective practice, and the strong overall academic performance of participants as evidenced by their mean GPA of 3.81.

Correlation Between Emotional Intelligence and Critical Thinking Disposition

The primary objective of this study was to examine whether a significant correlation exists between emotional intelligence and critical thinking disposition among nursing students. The statistical analysis revealed a significant positive correlation between overall emotional intelligence and critical thinking disposition, with a Pearson correlation coefficient of $r = +0.210$ and a p-value of 0.003. This correlation, while statistically significant at the 0.05 level, is classified as weak according to Cohen's (1988) guidelines for interpreting correlation coefficients,

which categorize correlations between 0.10 and 0.29 as small, 0.30 to 0.49 as moderate, and 0.50 and above as large.

The analysis of individual emotional intelligence dimensions with critical thinking disposition revealed consistent patterns across all four domains. Managing own emotions demonstrated the strongest correlation with critical thinking disposition at $r = +0.212$ with $p = 0.003$, followed by utilization of emotions at $r = +0.204$ with $p = 0.004$, perception of emotions at $r = +0.198$ with $p = 0.005$, and managing others' emotions at $r = +0.185$ with $p = 0.008$. The consistency of these correlations across all emotional intelligence dimensions suggests that the relationship between emotional intelligence and critical thinking disposition is not confined to a single aspect of emotional competence but rather reflects a general pattern whereby students with higher emotional intelligence tend to exhibit stronger inclinations toward critical thinking.

The coefficient of determination, calculated as $r^2 = 0.044$, indicates that emotional intelligence explains approximately 4.4% of the variance in critical thinking disposition. While this proportion may appear modest, it is important to interpret this finding within the broader context of the multifaceted nature of critical thinking development. The weak positive correlation suggests that emotional intelligence and critical thinking disposition are related but largely independent constructs. Students with higher emotional intelligence, particularly in managing their own emotions, tend to exhibit stronger inclinations toward analytical, systematic, and reflective thinking. However, emotional intelligence alone is insufficient to ensure strong critical thinking disposition, as evidenced by the fact that 95.6% of the variance in critical thinking disposition is explained by factors other than emotional intelligence.

This finding has important theoretical and practical implications. It supports the expectation that emotionally intelligent individuals possess certain advantages for critical thinking, such as the ability to regulate emotions that might otherwise cloud judgment, maintain composure under pressure, and engage empathetically yet objectively with complex information. At the same time, it clarifies that critical thinking disposition also depends heavily on other factors, including cognitive ability, metacognitive awareness, domain-specific knowledge, educational training, clinical experience, and personality traits such as intellectual curiosity and tolerance for ambiguity. The relationship between emotional intelligence and critical thinking disposition thus appears to be one of facilitation rather than determination, where emotional competencies create favourable conditions for critical thinking but do not guarantee its development.

These findings align with existing theoretical frameworks that position emotional intelligence as a supportive but not sufficient condition for critical thinking. Emotionally intelligent individuals are better equipped to manage the affective challenges that arise during complex reasoning, such as anxiety when confronting uncertainty, frustration when encountering contradictory evidence, or defensiveness when one's assumptions are questioned. However, emotional regulation alone does not substitute for the cognitive skills, knowledge base, and deliberate practice necessary for effective critical thinking. This understanding reinforces the need for nursing education to address both emotional and cognitive competencies through integrated, complementary approaches rather than viewing them as interchangeable or assuming that development in one domain will automatically transfer to the other.

5.2 Implications of findings for Nursing

The findings of this study have several important implications for nursing education, clinical training, and professional development: Integration of Emotional Intelligence Training Since more than half of the respondents demonstrated a high level of emotional intelligence, nursing educators can build on this strength by incorporating EI-focused training into the curriculum. Improving EI cation, teamwork, and patient-centered care. Enhancement of Critical Thinking in Clinical Decision-Making The high level of critical thinking disposition observed suggests that nursing students possess foundational analytical and reflective skills necessary for clinical judgment. Strengthening these skills will improve clinical reasoning, prioritization, and problem-solving key competencies needed for safe nursing practice. The positive correlation between EI and critical thinking indicates that both abilities can complement each other in improving students' professional abilities. Nursing schools may consider designing interlinked EI–CTD modules to promote holistic development.

Students with higher EI and CTD are better positioned to manage stressful clinical situations, communicate effectively with patients and colleagues, and make informed decisions. This ultimately leads to enhanced patient safety and better clinical outcomes. Nurse educators should be equipped to model emotionally intelligent behavior and encourage critical thinking through teaching strategies such as simulation, case-based learning, reflective journaling, and mentorship.

5.3 Summary

This study examined the correlation between emotional intelligence and critical thinking disposition among 255 undergraduate nursing students at the University of Benin, Edo State. Key findings include: Most respondents were female and within the 21–25 age range. A majority

displayed high emotional intelligence, with an overall mean score of 55.9 ± 12.7. Critical thinking disposition levels were also high among the respondents, with a mean score of 117.3 ± 33.2.Pearson correlation analysis revealed a weak but statistically significant positive correlation between emotional intelligence and critical thinking disposition ($r = +0.210$, $p = 0.003$). All EI dimensions (managing own emotions, perception of emotions, managing others' emotions, and utilization of emotions) were positively associated with CTD. Overall, the findings suggest that nursing students at the University of Benin possess strong emotional and cognitive skills that support effective clinical performance.

5.4 Conclusion

The study concludes that undergraduate nursing students at the University of Benin demonstrate both high emotional intelligence and strong critical thinking disposition. Although the relationship between these two constructs is weak, it is statistically significant, indicating that higher emotional intelligence is associated with stronger critical thinking. These results highlight the importance of cultivating both cognitive and emotional competencies in nursing education, as they play vital roles in clinical decision-making, communication, and patient care. By integrating emotional intelligence development with critical thinking training, nursing programs can better prepare students to meet the increasing demands of modern healthcare settings.

5.5 Limitations of the Study

Despite the valuable insights provided by this study, several limitations should be acknowledged:

1. **Cross-sectional Design**: The study employed a cross-sectional design, capturing data at a single point in time. This limits the ability to infer causal relationships between emotional intelligence and critical thinking disposition among the nursing students.

2. **Self-reported Measures**: Data on emotional intelligence and critical thinking disposition were collected through self-administered questionnaires. This method is subject to biases such as social desirability bias, where participants may have provided responses, they believed were expected rather than their true feelings or behaviors.

5.6 Recommendations

Based on the study findings, the following recommendations are proposed:

1. **Incorporate EI and CTD Training into the Curriculum:**
   Nursing educators should integrate structured emotional intelligence and critical thinking development modules into coursework and clinical teaching.
2. **Use Active Learning Strategies:**
   Methods such as simulations, role-playing, reflective writing, problem-based learning, and case studies should be used to strengthen both EI and CTD.
3. **Promote Supportive Learning Environments:**
   Clinical instructors and mentors should model emotionally intelligent behaviors and encourage students to reflect on their clinical decision-making.
4. **Regular Assessment of EI and CTD:**
   Nursing programs should periodically evaluate students' emotional and cognitive competencies to guide instructional improvements.

5.7 Suggestions for Further Study

1. **Longitudinal Studies**: Future research should adopt longitudinal designs to track the development of emotional intelligence and critical thinking disposition among nursing students from admission to graduation.
2. **Comparative Studies Across Institutions**: Studies comparing nursing students from different universities and regions in Nigeria could provide broader insights into contextual factors influencing emotional intelligence and critical thinking.
3. **Interventional Studies**: Researchers should examine the impact of specific educational interventions, such as emotional intelligence training programs or critical thinking workshops, on nursing students' academic and clinical performance.
4. **Qualitative Research**: In-depth qualitative studies could explore personal experiences, perceptions, and challenges nursing students face in developing emotional intelligence and critical thinking skills.

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APPENDIX I

FACULTY OF NURSING SCIENCES

UNIVERSITY OF BENIN,

BENIN CITY, EDO STATE.

QUESTIONNAIRE ON THE CORRELATION BETWEEN EMOTIONAL INTELLIGENCE AND CRITICAL THINKING DISPOSITION AMONG UNDERGRADUATE NURSING STUDENTS OF THE UNIVERSITY OF BENIN

Dear Respondents,

I am a student at the aforementioned institution, conducting a research study titled: "Correlation Between Emotional Intelligence and Critical Thinking Disposition Among Nursing Students at the University of Benin." I kindly request your participation by providing your opinions where applicable. Please note that this study is solely for academic purposes, and all information provided will be handled with the utmost confidentiality. Your cooperation is highly appreciated. Thank you.

Instructions:

- This questionnaire is designed for research purposes only. Your responses will remain confidential and anonymous.

- Please read each question carefully and tick (✓) the appropriate response or fill in the required information where necessary.
- There are no right or wrong answers; answer honestly based on your personal experiences and perceptions.

SECTION A: SOCIO-DEMOGRAPHIC DATA

Age: 16 – 20 years ( ) 21 – 25 years ( ) 26 – 30 years ( ) Above 30 years ( )

Gender: Male ( ) Female ( )

Academic Level: 200 Level ( ) 300 Level ( ) 400 Level ( ) 500 Level ( )

GPA Range (Most Recent Academic Year): Below 2.0 ( ) 2.0 – 2.9 ( ) 3.0 – 3.9 ( ) 4.0 – 5.0 ( )

Do you have any prior healthcare experience? Yes ( ) No ( )

Have you received any formal training on Emotional Intelligence or Critical Thinking? Yes ( ) No ( )

Emotional intelligence and critical thinking are important. Yes ( ) No ( )

SECTION B: EMOTIONAL INTELLIGENCE ASSESSMENT

(Adapted from Schutte Self-Report Emotional Intelligence Test - SSEIT)

Instructions: Indicate the extent to which you agree with the following statements using the scale below:

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

S/N	Statement	SA	A	N	D	SD
	Perception of Emotion					
1	I am aware of my emotions as I experience them.					
2	I can easily recognize the emotions of others.					
3	I have control over my emotions					
4	I act positively towards other people's emotions					
	Managing owns Emotions					
5	I can control my emotions when facing difficult situations.					
6	I motivate myself to achieve goals despite setbacks.					
7	I am aware of how my emotions affect others					
8	I adapt well to new and challenging					

	environments.					
	Managing others Emotion					
9	I can easily tell how others are feeling					
10	I help other people feel better when they are down					
11	I handle stressful situations calmly.					
12	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself					
	Utilization of Emotions					
13	When I am in a positive mood, solving problems is easy for me					
14	I use my emotions to make important decisions					
15	I know how to make others feel good					
16	I empathize with others' emotions and respond appropriately.					

SECTION C: CRITICAL THINKING DISPOSITION ASSESSMENT

(Adapted from California Critical Thinking Disposition Inventory - CCTDI)

Instructions: Indicate the extent to which you agree with the following statements using the scale below:

1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Agree, 6 = Strongly Agree

S/N	Statement	SA	D	SD	SA	A	SA
	Truth-seeking						
17	I actively seek as much information as I can in a new situation						
18	I am willing to change my mind if the evidence suggests I should						
19	I seek to verify claims before accepting them as true						
20	I challenge ideas rather than accepting them at face value						
	Open-mindedness						
21	I listen carefully to those people who have different opinions from mine						
22	I value different perspectives in decision-making						
23	I respect opinions that differ from my own						
24	I am willing to reevaluate my beliefs when given new evidence						
	Analyticity						
25	I examine all available evidence before making decisions						
26	I analyze problems carefully before taking action						
27	I enjoy breaking complex problems into smaller parts						

28	I am good at identifying weaknesses in arguments						
	systematicity						
29	I prefer well-structured reasoning when making a decision						
30	I organize information before making judgments						
31	I double-check my reasoning to ensure accuracy						
32	I prefer planned and structured decision-making						
	Confidence in reasoning						
33	I have confidence in my ability to analyze problems						
34	I believe in my ability to make logical decisions						
35	I feel comfortable making decisions based on critical thinking						
36	I trust my reasoning skills when evaluating issues						
	Inquisitiveness						
37	I enjoy learning about new topics						
38	I am eager to expand my understanding of different subjects						
39	I seek out intellectual challenges						
40	I get excited about discovering new ideas						
	Maturity of Judgement						
41	I think carefully before making decisions						
42	I reflect on past experience to improve future decisions						
43	I understand that critical thinking is a lifelong process						
44	I am open to revising my views if justified						

Thank you for your participation!

Your responses are greatly appreciated and will contribute to the understanding of emotional intelligence and critical thinking disposition among nursing students.

APPENDIX II

RELIABILITY ANALYSIS RESULTS

Emotional Intelligence

Case Processing Summary

		N	%
Cases	Valid	255	100.0
	Excluded[a]	0	.0
	Total	255	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.88	0.88	16

Critical Thinking Disposition (CTD)

Case Processing Summary

		N	%
Cases	Valid	255	100.0
	Excluded[a]	0	.0
	Total	255	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.90	.0.90	28