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Exploring Nursing Education Stakeholders' Perceptions of Students with Disabilities Inclusion in Nursing Education Programs in the United Arab Emirates: Issues and Challenges

استكشاف آراء الجهات المعنية بالتعليم التمريضي تجاه دمج طلاب التمريض ذوي
الإعاقة في برامج تعليم التمريض في دولة الإمارات العربية المتحدة: القضايا
والتحديات.

By

AMANI ABDUL RAZZAK DARWISH

**A thesis submitted in partial fulfilment
of the requirements for the degree of
DOCTOR OF PHILOSOPHY IN EDUCATION**

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ABSTRACT

The purpose of the study was to explore nursing education stakeholders' perceptions about inclusion of students with disabilities in nursing education programs in the UAE and the barriers and facilitators to their inclusion. A sequential exploratory mixed-methods design was used to conduct this study. Data was collected using unstructured interviews, -semi-structured interviews, and questionnaires. Thematic analysis of the interviews with 7 nursing education stakeholders revealed the following barriers to the inclusion of nursing students with disabilities: 1) Nature of Disability 2) Knowledge of Nursing Faculty 3) Attitudes 4) Communication 5) Resources 6) Nursing Program Requirements 7) Admission and Support Policies 8) Disability Outreach Activities. Semi-structured interviews with 14 nursing education stakeholders showed eight themes related to the facilitators of the inclusion of nursing students with disabilities in nursing education programs: 1) Disability Laws and Policies 2) Disability Awareness 3) Establish Early Detection of Cases 4) Education and Training Programs 5) Creative Access 6) Attitudes 7) Communication to Meet Needs 8) Collaboration with Potential Employers. 284 nursing education students and 29 nursing education faculty members from health science academic institutions in Abu Dhabi, Ajman, Al-Ain, and Al Dhafra in the UAE completed the questionnaires. The descriptive and inferential statistical analysis of the responses of nursing education faculty members and nursing education students was performed using SPSS software. The findings showed that the educators and students had concerns regarding inclusion of students with disabilities. However, implementing facilitators and overcoming barriers can enhance the accessibility of nursing students with disabilities to nursing education programs. The findings also showed significant differences in nursing students' and faculty's perceptions toward inclusion concerning their interactions with students with disabilities and having

completed a course about individuals with disabilities. This research fills a knowledge gap related to disability inclusivity in nursing education in the UAE. Understanding the perceptions of nursing education stakeholders towards the inclusion of students with disabilities in nursing education may help in reducing negative attitudes and discriminatory practices and may assist in improving the general understanding of how to increase the participation of students with disabilities in nursing education and the access to care for underrepresented groups. Moreover, the findings of the will support nursing educators in meeting the needs of students with disabilities from legal, ethical and individualistic perspectives. Furthermore, findings will aid nursing education faculty members, nursing education administrators, disability services, and clinical practice partners to determine and provide reasonable accommodations that promote success of nursing students with disabilities in theory and clinical settings, Finally, findings will aid in the revision and subsequent development of policies and guidelines related to educating and supporting students with disabilities in nursing education programs in the UAE.

Keywords: *nursing education, inclusion, inclusive education, nursing education students with disabilities, nursing education stakeholder 's perceptions*

ملخص

يُمثل الغرض من هذه الدراسة في استقصاء آراء الجهات المعنية بتعليم التمريض تجاه دمج طلاب التمريض بمقاعد إلّا يؤذّنم في برامج تعليم التمريض في دولة الإمارات العربية المتحدة وتحديد العوامل المؤثرة على إدماجهم، وتتبع الدراسة التصميم التفسيري المتتابع (المنهج المختلط)، حيث جُمعت البيانات في المقام الأول بواسطة تحليل المقابلات غير المنظمة، والمقابلات شبه المنظمة، والاستبيانات، وقد كشف التحليل للمقابلات التي أُجريت مع 7 من الجهات المعنية بتعليم التمريض أنّه من المتصور أن العوامل التالية تؤثر على دمج طلاب التمريض بمقاعد إلّا يؤذّنم في برامج تعليم التمريض: (1) طبيعة الإعاقة، (2) معرفة أعضاء هيئة التمريض، (3) السلوكيات، (4) التواصل، (5) الموارد، (6) متطلبات برنامج التمريض، (7) سياسات القبول والدعم و(8) أنشطة التوعية كشفت أيضًا المقابلات شبه المنظمة مع 14 من الجهات المعنية بتعليم التمريض عن ثمانية موضوعات تتعلق بالمبادئ التوجيهية للدمج الفعال لطلاب التمريض بمقاعد إلّا يؤذّنم في برامج تعليم التمريض في دولة الإمارات العربية المتحدة، تأتي كما يلي: (1) قوانين وسياسات الإعاقة، (2) التوعية بالإعاقة، (3) تأسيس الكشف المبكر عن الحالات، (4) برامج التعليم والتدريب، (5) الوصول الإبداعي، (6) لسلوكيات، (7) التواصل لتلبية الاحتياجات، (8) التعاون مع أصحاب العمل المحتملين وأصحاب المصلحة. تم توجيه الاستبيانات إلى (284) طالبًا وطالبة من طلاب التمريض و(29) من أعضاء هيئة تدريس التمريض من المؤسسات الأكاديمية للعلوم الصحية في أبوظبي وعجمان والعين والظفرة في دولة الإمارات العربية المتحدة، وتم إجراء اختبارات التحليلات الإحصائية الوصفية والاستدلالية باستخدام برنامج الحزمة الإحصائية للعلوم الاجتماعية (SPSS) لاستجابات أعضاء هيئة تدريس التمريض وطلاب التمريض للمسح المستعرض، وأظهرت مِلَعَتَجَمَارِدِيَفَاقَاعِلَا يُوذَنَمَضِيرْمِتْلَا بَلَاطِجَمَد فَوَاخِم بَلَاطِلَاو نَبِلْعَمَلَا يْدَلْأُجِنَاتْنَا ضِيرْمِتْلَا مِلَعَتَجَمَارِدِيَفَاقَاعِلَا يُوذَنَمَضِيرْمِتْلَا بَلَاطِجَمَد فَوَاخِم بَلَاطِلَاو ذِفْنْتَلَا تَارْسِيم زَرَعَتْنَأُن كَمِيَكْلَذ عَمَوْضِيرْمِتْلَا كَمَا أَظْهَرَت النَّتَائِج وجود فروقات ذات دلالة إحصائية بين آراء طلاب التمريض وآراء أعضاء هيئة تدريس التمريض تجاه الدمج فيما يتعلق بتفاعلهم مع الطلاب بمقاعد إلّا يؤذّنم وتلقي دورة حول مقاعد إلّا يؤذّنم فهم تصورات أصحاب التعليم في التمريض تجاه إدماج الطلاب بمقاعد إلّا يؤذّنم في ضِيرْمِتْلَا مِلَعَتَجَمَارِدِيُمْكُن أَن يُسَاعِد فِي تَقْوِيل الاتجاهات السلبية والممارسات التمييزية، ويمكن أن يساعد في تحسين الفهم العام لكيفية زيادة مشاركة الطلاب ذوي الإعاقة في ضِيرْمِتْلَا مِلَعَتَجَمَارِدِي وَالوصول إلى الرعاية للفئات الأقل حظًا. علاوة على ذلك، ستساعد نتائج هذا البحث أعضاء هيئة التدريس في التمريض في تلبية احتياجات الطلاب ذوي الإعاقة من وجهات نظر قانونية وأخلاقية وفردية. وستساعد نتائج هذا البحث أعضاء هيئة التدريس في

التمريض وإداريي ضميرمتلا ميلعتجمارب وخدمات الإعاقة وشركاء الممارسة السريرية على تحديد وتوفير تسهيلات مناسبة تعزز نجاح الطلاب ذوي الإعاقة في الجوانب النظرية والعملية. وأخيرًا، ستساعد نتائج هذا البحث في مراجعة وتطوير السياسات والإرشادات المتعلقة بتعليم ودعم الطلاب ذوي الإعاقة ضميرمتلا ميلعتجمارب في الإمارات العربية المتحدة.

الكلمات المفتاحية: تعليم التمريض، الإدماج، التعليم الدامج، طلاب التمريض، لقاء إلابيوذ نم ، الجهات المعنية بتعليم

ضميرمتلا

DEDICATION

To my mother Hikmat and father Abdul Razzak who taught me that it is never too late to chase my passions.

To my son Ahmad and my daughter Naii who endured with love and patience my time away from them to complete this work.

To my brothers Dr. Tamim and Dr. Nadim for believing that I can do it.

Thank you. My love for you all can never be quantified.

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LIST OF ABBREVIATIONS

ANA	American Nurses Association
ANOVA	Analysis of Variance
DHA	Dubai Health Authority
KHDA	The Knowledge and Human Development Authority
MENA	Middle East and North Africa
MOE	Ministry of Education
MOHESR	Ministry of Education and Scientific Research
MOH	Ministry of Health
MOHAP	Ministry of Health and Prevention
MSA	Ministry of Social Affairs
NE	Nursing Education
NMC	Nursing and Midwifery Council
SPSS	Statistical Package for Social Sciences
UAE	United Arab Emirates
UDL	Universal Design of Learning
WHO	World Health Organization

Chapter 1 Introduction

1.1 Background to the Study

Globally, the number of students with disabilities in tertiary institutions has increased (Pacheco, Yoong, & Lips 2021). According to Erickson and von Schrader (2020), 19 % of university students have a disability. Although the number of nursing students with disabilities is indefinite; the number of students with disabilities admitted to nursing education programs and have completed these programs seems unusually small and disproportional compared to the number of students with disabilities graduating from other programs (Neal-Boylan & Miller 2020; Moodley & Mchunu 2022; Calloway & Copeland 2021; Metzger et al. 2020). While knowledge of the national and international laws and policies related to the rights of people with disabilities appears to be progressively growing, presumptions and misunderstandings regarding the abilities of nursing students with disabilities continue.

The American Nurses Association (ANA 2010) defines the term “nursing” as a health care profession that aims to protect, promote, and optimize the health and abilities of individuals, and alleviate their suffering through proper diagnosis and treatment. The ANA also refers to nursing as both an act of art and at the same time a science. According to Leininger (1999), there are philosophical and epistemological dogmas to nursing that are deeply ingrained in humanistic services to humankind. Leininger referred to nursing as a human field of study and practices and hence suggested identifying and studying the veiled and culturally based values and humanistic patterns of care.

While nursing is a profession committed to providing care to diverse patients (Metzger et al. 2020), nursing education refers to the formal learning and practicing in the science of

nursing in which students acquire knowledge and skills from experienced nurses or nursing educators on how to provide quality health care to patients (Olsson & Gullberg 1991; Paterson & Crawford 1994). Shalala et al. (2011) explained that the primary goals of nursing education are to develop nursing professions and to prepare nurses to provide secure and professional care to diverse patients.

Aaberg (2012) explained that various nursing organizations including the American Nurses Association, the American Association of Colleges of Nursing, and the National League for Nursing have stated their position against discrimination based on disability in nursing education or nursing practice and stipulated that the nursing community should strive to expand diversity to include people with different abilities who could also be successful nursing students, educators, and nurses. The Code of Ethics for Nurses (ANA 2001) offered a clear statement of support for inclusion of people with disabilities in nursing education programs. The first statement in the Code of Ethics indicates “the nurse, in all professional relationships, practices with compassion and respect for the inherent dignity, worth, and uniqueness of every individual, unrestricted by considerations of social or economic status, personal attributes, or the nature of health problem” (ANA 2001, p.7). This statement does not limit the scope of the professional caring relationship to nurse-patient relationships but indicates the importance of giving value to all humans. Obviously, this is a call to nurse educators to commit to inclusivity and to provide fair and equitable support to students with disabilities who want to enrol in nursing education programs.

It has been argued that students and healthcare workers with disabilities bring a unique perspective and set of talents with a fresh point of view to the nursing profession, involving it in driving change in healthcare (Ailey & Marks 2020; Neal-Boylan & Miller 2020). Supporting

students with disabilities has been well integrated under all the standards in the Standards Framework for Nursing and Midwifery Education (2018) issued by the Nursing and Midwifery Council in the UK which stipulated that the learning culture should be ethical, open, and honest, that respects the principles of equality and diversity. It also emphasized the importance of creating learning environments that optimize safety and quality, and that considers the diverse needs of students and the need to have an open, fair and transparent recruitment and selection process for students that address underrepresentation. The standards also highlighted how students should be empowered by providing them with the opportunity to learn and be assessed using different methods including technology-enhanced and simulation-based learning for effective and safe practice. Moreover, it requests educators to accommodate students according to their individual learning needs and to be protected them from any behavior that undermines their abilities or confidence. Recruiting skilled and qualified educators and assessors to provide the necessary support and the use of fair and reliable assessment to enable students to achieve up to their potential was also indicated.

Yet, several studies (Metzger et al. 2020; Gonzalez & Hsiao 2020; Neal-Boylan & Miller 2020; Neal-Boylan 2019; Calloway & Copeland 2021; Moriña & Orozco 2020; Langørgen & Magnus 2020) have identified the difficulties surrounding the admission and success of nursing students with disabilities in nursing schools despite the calls for increased inclusivity from major nursing organizations such as the adoption of discriminative admission criteria, faculty attitudes, the implications of their inclusion for clinical practice, an overestimation of the effect of disability on risking patient safety, and the impact of accommodation provisions on educational and clinical standards.

The United Arab Emirates (UAE), as a relatively young nation, has experienced rapid social changes that accompanied economic growth in the country (Bradshaw, Tennant, & Lydiatt 2004; Al-Abed & Hellyer 2001). Considering the rapid economic evolution, the government has created various approaches to improve the standards of living of its citizens (Hashem, Dawood, & Girgnov 2014). Significant attention was given to people with disabilities. The UAE's efforts to support and uphold the rights of people with disabilities are manifest in its policies, laws, and regulations as well as in its efforts to change how the UAE society views disability by redefining it as a social construct rather than a result of an individual's differences. The support for people with disabilities is not limited to the declaration of their rights to education and employment but also includes measures that prohibit discrimination towards people with disabilities. As a result, students with disabilities who want to enrol in nursing programs are protected by these laws and hence when students with disabilities are admitted into nursing programs, nurse educators need to provide proper support in theory and practice classes. Yet, in healthcare settings, nursing students are expected to provide competent nursing care to patients as achieving competence in clinical nursing practice has been a focus of nursing education for years with the aim to prepare nursing graduates to provide safe and competent nursing care (Symes 2014).

Different studies reported that there is a global demand for nurses in the workforce and that the need is magnified in the UAE and other gulf countries (Maymoun & Sohail 2020; Saifan et al. 2021) and therefore entail a large nursing taskforce and nursing graduates who are ready to practice after graduation. El Hachi (2019) mentioned that one of the strategic goals of the UAE Nursing and Midwifery Council is to increase the students' numbers graduating from the nursing education programs and to cater to the learning needs of a diverse learner population in

the country. Saifan et al. (2021) explained that nursing education in the UAE faces challenges including the slow improvement in the undergraduate nursing programs in embracing the international developments in nursing and clinical education within these institutes.

1.2 Statement of the Problem

Despite the increase in the number of students enrolled in higher education, students with disabilities are underrepresented in nursing education. Although the contributions of people with disabilities to nursing practice have been realized but established prejudices in addition to continued concerns about patients' safety remain. In spite of the establishment of different international and national laws and policies to ensure the rights of people with disabilities in education, yet with limited evidence of increased access for disabled students to nurse education programs. Nurse educators are obliged to provide appropriate accommodations in theory classes and in clinical placements in order to help students with disabilities achieve competence in clinical nursing practice and to be able to provide safe and competent nursing care.

In the UAE, despite that the educational system has undergone reform, including an improvement in the quality of the special and inclusive education system, and despite the existence of policies and regulations that support the inclusion of students with disabilities, a gap still exists between policy and practice (Hemdan, Efstratopoulou, & Moustafa 2021; Elhoweris & Efthymiou 2020). This is because inclusion, as a concept, is understood differently by different people and the way it is understood and implemented also differs from one context to another. According to Elhoweris and Efthymiou (2020), the social conceptualization of inclusion has an impact on the formulation of the formal guidelines for providing inclusive education which influences practice. Some studies in the UAE indicated the presence of barriers

for students with disabilities including faculty members' negative attitudes in higher education which create major hindrance to the success of the inclusive education process (Alzyoudi, Opoku, & Moustafa 2021; Gaad 2019; Morgan 2021; Elhoweris, & Efthymiou 2020). Therefore, in consideration of these barriers, it is crucial to address the area that has remained unexplored which is a disability in nursing education in the UAE specifically considering heightened altruistic motives by higher education institutions in to provide an inclusive learning environment to people with disabilities.

1.3 Purpose and Questions

The purpose of this research is to explore nursing education stakeholders' perceptions about inclusion of students with disabilities in nursing education programs in the UAE and the barriers and facilitators to their inclusion. Consequently, the following objectives are identified:

- To identify the barriers to the inclusion of nursing students with disabilities in nursing education programs in the UAE as viewed by nursing education stakeholders.
- To determine the perceptions of nursing education faculty members and nursing education students regarding the inclusion of nursing education students with disabilities.
- To examine if there are demographic differences in the perceptions of nursing education faculty members and nursing education students regarding the inclusion of nursing education students with disabilities.
- To identify the facilitators to the inclusion of nursing students with disabilities.

The present study has designed a main research question:

What are the nursing education stakeholders' perceptions about the inclusion of students with disabilities in nursing education programs in the UAE and the barriers and facilitators to their inclusion?

The study poses the following four research sub-questions in order to achieve the research aim:

Sq.1. What are the nursing education stakeholders' views on the barriers to nursing students with disabilities' inclusion in nursing education programs in the UAE?

Sq. 2. What are the nursing education faculty members and nursing education students' perceptions of the inclusion of nursing education students with disabilities?

Sq. 3. Are there any demographic differences in the nursing education faculty members and nursing education students' perceptions of the inclusion of nursing education students with disabilities?

Sq. 4. What are the facilitators to the inclusion of nursing students with disabilities in nursing education in the UAE as viewed by nursing education stakeholders?

1.4 Rationale and Significance

Much of the research that has been conducted in the UAE is on teachers' perceptions of students with disabilities in general education. Few research studies focused on exploring the perceptions of educators of the inclusion of students with disabilities in higher education. The results showed the existence of barriers in the face of their inclusion. There is a scarcity in research that addresses the concept of disability within nursing education in the UAE. To date, the inclusion of students with disabilities in nursing education programs has rarely been

explored in the Middle East and North Africa Hence, it is crucial to complement the UAE studies with more studies related to the inclusion of nursing students with disabilities in order to know if the perceptions of the nursing academic community follow a similar pattern to that towards students with disabilities in any program. Equally important is to identify the barriers to the participation of students with disabilities in nursing education programs and to identify strategies to help them overcome these barriers. Phillion, St-Pierre, and Bourass (2021) pointed out the need to research to portrait the requirements and difficulties faced by nursing students with disabilities as well as the accommodations and supports available to help them overcome such difficulties. Moreover, Fontenot and McMurray (2020) recommended having continued exploration of structural factors that affect the disability diversity in nursing education institutions. Therefore, it is important to gain an understanding of nursing education stakeholders' perceptions of the inclusion of nursing students with disabilities in nursing education programs in the UAE and the barriers and facilitators to their inclusion which have a great influence on their education and employment opportunities through law adherence, policymaking, admission criteria setting, and support provision using a sound research approach. Nursing education stakeholders are crucial to the experience and success of nursing students with disabilities who graduate and become nurses as they have an important role in revisiting and reviewing of admission and curricular policies resulting in appropriate and equitable policies that are inclusive for all students including those with disabilities. This group of students may have a unique perspective towards health and wellbeing since they often pay attention to the needs of the people whom they are caring for and more understanding to their limitations can bring more compassion to the profession (Neal-Boylan & Smith 2016; Neal-Boylan 2012). Consequently, knowledge gained from this study will help in improving our

understanding of how to increase the participation of nursing students with disabilities in nursing education programs.

The UAE have employed laws and regulations to protect the rights of individuals with disabilities and promote their inclusion in various domains, including education. Therefore, it is important to explore the perceptions of nursing education stakeholders so insights can be generated to inform policy development related to inclusive education within nursing programs and institutions. These policies can outline guidelines, procedures, and support mechanisms to ensure the successful inclusion of students with disabilities and the compliance with disability rights legislation.

In general, the study will advance the body of knowledge in the area of special and inclusive education and advance knowledge on how to create a more inclusive learning environment in higher education. Specifically, the study will help in developing new knowledge regarding inclusive education in nursing education programs in the UAE by exploring different ways to increase the participation of students with special needs and disabilities and by identifying reasonable accommodations and support measures in theory classes and clinical sites that can also be used in nursing workplace to make it more inclusive to employees with disabilities or those who become disabled at work leading to an increase in the employment and retention of nurses that may contribute to solving the global nurse shortage problem and help in promoting disability diversity in the nursing profession in the UAE.

Further to that, the study has the potential to improve nursing education by enhancing the knowledge, skills, and attitudes required to prepare globally competitive nurses by recruiting and graduating nursing students with disabilities who bring a dual perspective on health care services as recipients and as providers of care who may be able to deliver compassionate,

patient-centered care to culturally diverse patients resulting in increasing the diversity of nursing student populations and creating a richer and more diverse nursing profession to meet the social mandate of nursing and to better reflect the population.

Additionally, research on stakeholder perceptions can help identify any gaps or discrepancies between existing legal frameworks and the actual practices within nursing education. This information can inform policy revisions or the development of specific regulations that align with legal requirements, ensuring compliance with disability rights legislation. can inform policies that address the provision of reasonable accommodations, specialized support, and assistive technologies to enhance the educational experience and success of these students and can guide the development of policies focused on faculty development and training programs.

Moreover, this study may add a new dimension to educating students with special needs and disabilities. Many graduates face challenges in transitioning to the workplace. This work may help students with disabilities to have a better comprehension of the differences in expectations between the place of work and educational programs which may assist them in making informed decision regarding their career choices as the absence of proper assessment may lead to unfavourable results (Alborno & Gaad 2012; Camulli & Xie 2019).

Finally, this academic work may have a substantial contribution to the medical assistive technology industry through creating innovative inclusive dimensions in healthcare by developing systems related to the delivery of assistive products and services that can benefit both staff and patients with different health conditions leading to improved individual's functioning and independence, thereby promoting their well-being. Finally, the findings of this

study can be the basis for further studies in the field of disability inclusion in health care education.

1.5 Overview of the Study Design and Methods

This study used a three-part sequential exploratory mixed-methods design. In the first part, data was collected using unstructured interviews with a group of nursing education stakeholders to access their views regarding the barriers to the inclusion of nursing students with disabilities. In the second part, a questionnaire was designed and used to investigate the perceptions of a large number of nursing education faculty and nursing education students regarding the inclusion of nursing students with disabilities in nursing education programs. The last part employed semi-structured interviews with another group of nursing education stakeholders with the purpose to explain the questionnaire results in relation to how the suggested accommodations and inclusive practices can facilitate the inclusion of nursing students with disabilities. The participants in the qualitative study were recruited through purposeful and convenience methods while in the quantitative study, the participants were recruited through convenience sampling by sending an emailed letter of invitation for participation in the study. All participants were provided contact information for the researcher, a consent form, and explanation of how the study will be conducted. The researcher then scheduled with consenting participants to record interviews via ZOOM. Qualitative data was analyzed using thematic analysis. The descriptive and inferential statistical analysis of the responses to the questionnaire was performed using SPSS software.

1.6 Thesis Structure

This thesis aims to explore nursing education stakeholders' perceptions about the inclusion of students with disabilities in nursing education programs and to identify the barriers and facilitators to their inclusion. The work is presented over seven chapters.

Chapter One provides a general background of the inclusion of nursing students with disabilities and the issues related to their inclusion. It also presents a brief description of trends involving disabilities and inclusive education perspectives in nursing education in the UAE and the UK. The chapter includes the problem statement, research purpose and questions, study rationale and significance, an overview of the study design and methods and concludes with an overview of how the thesis is structured.

Chapter Two details the literature review of the main theoretical underpinnings, the main concepts in the study, and the analytical synthesis of international and local related research in the field. Due to the complexity of the concept under study and the breadth of the scope examined, a conceptual framework is also proposed to guide the review and work through the whole research. Studies on the conceptualization of "disability", students with disability in higher education and issues related to the inclusion of nursing students with disability in nursing education are critically reviewed. Moreover, the chapter reviews traditional and recent innovative programs that are currently used to improve diversity and increase access for students with disabilities to nursing education. In addition, general policies on disability as well as specific institutional policies related to disability inclusion in nursing education in the UAE are analysed and evaluated.

Chapter Three details the mixed methods approach as the selected approach for the study. Specifically, the rationale and elements of a three parts exploratory sequential mixed methods design are emphasized as an appropriate fit to collect data and answer the research questions. Further to the research approach and methods, the chapter describes the site, population and sample, data collection instruments and tools, analysis methods and ethical considerations.

Chapter Four provides the main themes and subthemes that have been extracted from the qualitative data tools: open-ended unstructured and semi structured interviews with two groups of nursing education stakeholders.

Chapter Five presents quantitative results from both descriptive and inferential analysis of the questionnaires for the nursing education faculty members and nursing education students. Results of the conducted factor analysis on disability inclusion in nursing education is also explained. The last section of this chapter integrates and triangulates findings from all parts of the study.

Chapter Six is dedicated to discussing the findings from the different parts of the study. Research questions are answered in detail and in light of the theoretical foundation and consulted literature.

Chapter Seven summarizes the research and key findings. In addition, it concludes the thesis with recommendations on the level of disability policy and inclusive practices in nursing education. Implications of the study, the study contributions, suggestions for further research in the same topic, and the study limitations are also highlighted.

Chapter 2 Literature Review

2.1 Introduction

This chapter is divided into five main sections. The first section introduces the chapter. The second section is devoted to discussing the theoretical framework which is divided into five subsections: The Social Constructivism Theory, the Medical Model of Disability, the Human Variation Model of Disability, the Cross Model of Cultural Competence, and Jean Watson's Theory of Human Caring. The third section discusses the Bio Ecological Model of Human Development which serves as the conceptual framework for the study that is explained through diagrammatic and narrative explanation. The fourth section reviews literature related to disability in higher education and nursing education as well as issues related to disability inclusion in nursing education and the strategies to improve diversity and increase accessibility in nursing education. Finally, the fourth section examines general and specific institutional policies related to students with disabilities in nursing education in the UAE health sciences academic institutions. The last section includes a summary of the chapter.

2.2 Theoretical Framework

The perceptions of nursing education stakeholders towards the inclusion of students with disabilities in nursing education programs in UAE will be explored in light of models and theories related to sociology, education, and nursing that are considered to be the most salient to this study: The Social Constructivism Theory, the Medical Model of Disability, the Human Variation Model of Disability, Cross Model of Cultural Competence, and Jean Watson's Theory

of Human Caring (Figure 1). Relationships between the selected models and the inclusion of nursing students with disabilities are explored in the following paragraphs.

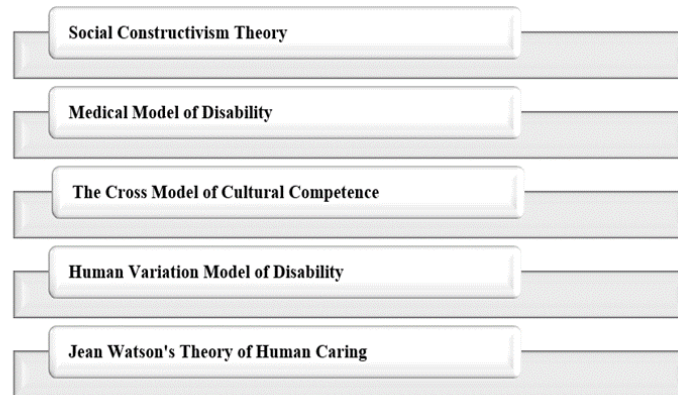


Figure 1: Theoretical Framework

(Source: Author's Own)

2.2.1 Social Constructivism Theory

Social constructivism focuses on how people cognitively participate in constructing knowledge through social interactions (Vygotsky & Cole 1978). According to social constructivism, social forces affect the development of scientific knowledge, which is analyzed by our belief system. Thus, reality is constructed by people over periods of time (Jones 1996). Anastasiou and Kauffman (2017) explained that concepts are ideas created by society that are often in direct connection to realities.

Asch and Fine (1988) argued that disability is a socially constructed concept that arises from a paradigm of notions that propose that society's beliefs about a specific community, group or population are grounded in the power structures intrinsic to a society at any given time. According to Asch and Fine (1988), behaviours and the structure of the environment of people with no disability contribute more to the handicap of the individual with disability than the

biological aspects. Such a perspective considers the biological aspect of disability as well as the ecosystem that shapes how disability is understood. Therefore, it is important to understand that our beliefs regarding disability stem from the meanings generated by people who are not disabled that have led to marginalization and underrepresentation of people with disabilities and have created handicaps out of their characteristics (Scheer 1994).

Rocco and Delgado (2011) explained that disability is not a simple concept, and its meaning is impacted by historical, social, legislative and philosophical influences. Therefore, exploring the perceptions of nursing education stakeholders regarding the inclusion of nursing students with disabilities in nursing education programs requires considering how the stakeholders conceptualize “Disability” and necessitates comprehending the underlying societal norms that shape their conduct, which may have an impact on how policies and revision are made, and on accommodation provision and training programs. Hence, the Social Constructivism Theory can inform the development of a knowledgeable and well-informed society through raising awareness and improving the general understanding about the abilities of nursing students with disabilities and the unique contributions they can provide to the nursing profession. Additionally, understanding disability from a social constructivist standpoint will help in adopting an inclusive mind in nursing education by acknowledging the impact of disability definitions that are environmental, structural, and cultural, thus help in removing barriers and aid in bringing more inclusive services in which the voice and opinions of students with disabilities are heard and respected (Jones 1996).

2.2.2 Medical Model of Disability

The beliefs that underpin the medical model bring on understandings that the problem is within the individual with disability him/herself which is the main reason for the individual's limitations to participate fully in society and that improving his/her function can be treated by rehabilitation and medications (Oliver 2013). Jackson (2018) explained that the medical model of disability is founded on categorizing levels of deviation from normative state. The differences in humans are seen as anomalies and the focus is placed on what the person cannot do rather than what he/she can (Raman & Levi 2002). According to Brisenden (1986), the medical profession views medical treatments as the only solution to disability and they ignore different life aspects of the person with a disability. The participation of the medical profession in constructing the definition of disability has led to partial and narrow definitions, which portrayed disability as a medical problem. This model has led to the transfer of these limited parameters to individuals with disabilities themselves which played a role in suppressing them by maintaining the dominance of the "sick role" concept over the concept of empowerment (Foucault 1965; Mishler 1984) which resulted in having low expectations of themselves and of their abilities which prevented them from applying to jobs that need more "able bodied" individuals.

Espousing the understanding that medication is needed to treat impairment for the benefit of the society and being endangered by the low public profile of people with disabilities, the conformity towards societal attitudes, weak reinforcements of legislations and poor understanding of the characteristics of people with disabilities have contributed to the domination of the medical model of disability and have impacted the existing physical built environment and have influenced educational and employment policies (Jackson 2018).

Considering the emphasis on physical abilities in the creation of the nursing programs technical standards, which are the physical requirements necessary to qualify students to become nurses (Sowers & Smith 2004), the Medical Model of Disability will improve the general understanding on how nursing students with disabilities are admitted and retained in nursing education programs. Therefore, adopting the medical model of disability in this study will help in understanding the attitudes and unquestioned norms of nursing education stakeholders towards the inclusion of nursing students with disabilities that may have contributed to their exclusion and marginalization and will enable us to have more knowledge about the assumptions related to their limitations and in capabilities that are embedded in various cultural, organizational, and physical manifestations and will assist in having a better understanding on how to provide medical care, treatments, and interventions for individuals with disabilities.

2.2.3 The Cross Model of Cultural Competence

The Cross Model of Cultural Competence proposed by Cross (1989) suggests a framework for individuals and organizations to support diversity. It designates cultural competency as movement along a continuum away from attitudes and policies that are destructive to a cultural group to advanced cultural competence where people not only accept and accommodate those from different cultures but also move towards raising awareness towards respecting cultural differences and acquiring the needed knowledge and skills to interact with individuals from diverse cultures (Figure 2). According to Cross (1989), cultural competency is not an outcome but a process that seeks out to constantly improve services and create a nondiscriminatory and inclusive environment.

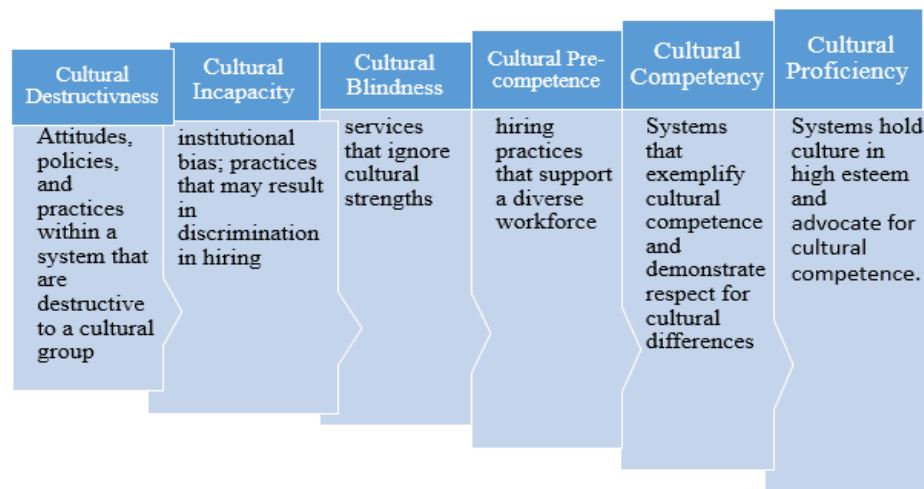


Figure 2: Cross Model of Cultural Competence

(Source: Cross 1989)

The Cross Model is made up of six phases. The first phase is referred to as “Cultural Destructiveness” in which people view culture as problematic and believe that if certain cultures or populations are destroyed people will live a prosperous life. The second phase is the “Cultural Incapacity” phase where the lack of cultural awareness and the belief that one culture is superior to others create authoritarian posture toward others. At the institutional level, this perspective can lead to having lower expectations for certain groups of people and may promote segregation and grouping people of different cultures in special institutions. The third phase is the “Cultural Blindness” phase. Individuals in this stage see others through the lens of their own culture and beliefs. They believe that all people are all the same and that everyone should be treated equally regardless of his/her race, ethnicity, religion, orientation or needs. At the organizational level, services are only beneficial for the dominant population. The fourth phase is the “Cultural Pre-Competence” phase. People in this phase acknowledge cultural differences and try their best to get the needed education and training in order to interact with people from diverse cultures. At the institutional level, there may be attempts to hire people from different cultures and create

policies to promote cultural diversity. The fifth phase is the “Basic Cultural Competence”. At this phase, people appreciate and accommodate differences in cultures. At the institutional level, provision to support cultural differences is given a lot of focus and attention. The last phase is the “Advanced Cultural Competence: People at this stage not only accept and accommodate people from different cultures but also move towards raising awareness towards respecting cultural differences and try to acquire the needed knowledge and skills to interact with individuals from diverse cultures. At the institutional level, this is interpreted as employing experts in cultural competence practices to advocate for multiculturalism and to identify barriers that prevent people of diverse culture from accessing institutional resources.

Adopting the Cross Model of Cultural Competence in this study will help in improving the general understanding of how cultural competence is practiced in nursing education programs and how, at the institutional level, multiculturalism is reflected in the institutional policies and professional development initiatives in the higher education in the UAE and in their pedagogical approaches across all learning opportunities.

Cultural competence connotes the aim of healthcare professionals in providing care to culturally diverse patients to enhance patients' quality of care and to create support services to respond to their needs (Shpigelman, Zlotnick, & Brand 2016). This study also looks at Cross Model of Cultural Competence to understand how respecting diversity and social inclusion promotion are echoed in the healthcare practices. Hence, the model helps in having a better knowledge of how cultural competence is implemented not only within the contexts of patients but also within the context of nursing students with disabilities in order to eliminate disparities in nursing education and nursing profession in the UAE. While the Cross model of cultural competence has been widely used in cultural competence training, it has limitations that should

be considered. Cultural competence is a complex and evolving process that requires an understanding of the unique cultural contexts, power dynamics, and systemic factors that influence interactions. Complementing the Cross model with other theoretical frameworks and adopting a more holistic and context-specific approach can enhance cultural competence initiatives and lead to more effective and inclusive practices.

2.2.4 Human Variation Model of Disability

Under the tenet of the Human Variation Model of Disability, disability is defined as an incongruity of people's qualities and the potentials of the society to accommodate those qualities (Scotch & Shriner 1997). Hence, disability represents a wide range of conditions, each condition is unique that may necessitate modifying the support provided over the course of education or employment of people with disabilities. Based on this model, the erroneous ability-disability dichotomy can be overcome by adopting a universal approach to disability that accept differences and increases the range of what is considered "normal" along the ability-disability spectrum that applies to all humanity (Bickenbach et al. 1999). Scotch and Shriner (1997) explained that many accommodations must be tailored to meet the needs of individuals that may require an ongoing readiness to modify these accommodations, restructure tasks, and have on going and open communication between individuals with disabilities and the people who are responsible for their environment like employers.

Exploring the perceptions of nursing education stakeholders regarding the inclusion of nursing students with disabilities requires an understanding of the underlying influences on the attitudes of nursing education stakeholders towards disability diversity in nursing education. Therefore, the Human Variation Model of Disability is important for this study because it will

help in understanding how the nursing community in the UAE respond to the individual variation among nursing students and nurses with disabilities and to what extent do healthcare academic institutions and organizations policies in the UAE respect and accommodate human variation represented by people with disabilities.

2.2.5 Jean Watson's Theory of Human Caring

The human caring theory proposed by Jean Watson (1988) is focused on the significance of human caring and on its healing power for both the caregiver and care recipient. The theory puts emphasis on humanistic facets of nursing and finds caring as central to nursing practice. Thus, the theory proposes a direction shift toward a new consciousness of human caring as a hopeful model for the prospect of health care that reverses the traditional medical treatment model. Therefore, in light of the human caring theory, nurses should always maintain emotional sensitivity and caring attitudes in a challenging work environment. According to Watson (1988), a caring environment accepts an individual as he or she is and looks to what he or she may become. Watson (1988) argues that humans cannot be treated as objects. She explains that caring affirms people's humanity and makes relationships more authentic. Watson (1996) explained that caring enhances people's abilities, promotes self-actualization and is helpful to patients, nurses and to all team members. Watson (1988) believed that it is a moral obligation of a nurse to provide non-judgmental and non-biased culturally competent care and to be sensitive to the needs of others.

Wei et al. (2019) conducted a study on different intervention studies based on Watson's Human Caring Theory. The findings of the study showed that caring interventions had the potential to improve the confidence of nursing students in clinical performance and their

mindfulness regarding caring behaviours. The human caring theory was criticized for its impracticality and clinical irrelevance. However, according to Rafael (2000), there is a wide gap between the process of nurse caring and the reality of clinical demand. Institutional policies and practices as well as different sets of values and beliefs of the health system, in addition to time constraints would limit the implementation of this theory.

Exploring the inclusion of nursing students with disabilities in the nursing education programs requires considering how the concept of human caring is understood and applied by the nursing education stakeholders when dealing with people with disabilities including patients with disabilities as well as colleagues with disabilities. Therefore, the concept of human caring as proposed by Jean Watson will help the researcher in understanding how nursing professionals extend care beyond patients to embrace colleagues and peers with disabilities. Application of this theory in nursing education will help in creating a supportive and caring environment which is sensitive to learners' diverse and dynamic needs.

In summary, and after presenting the main theories and models that are related to how the inclusion of nursing students with disabilities is perceived, it is important to show how these theories and models are used to underpin this research work together to form the theoretical and conceptual frameworks.

The social Constructivism Theory, the Medical Model of Disability, the Human Variation Model of Disability, Cross Model of Cultural Competence and Jean Watson Caring Theory have been used in this study to understand disability inclusion in nursing education as it relates to understanding how disability as a concept is conceptualized upon which policy and practices rest and how the variation among nursing students with disabilities is respected, responded to and accommodated within a caring and welcoming environment. My work draws

on this, as I believe that the way the concept of disability is defined and conceptualized impacts inclusive practices towards people with disabilities. The synthesis of these theories and models may help in improving our understanding of how to challenge discrimination, how to uphold the right of nursing students with disabilities in education as well as how to make nursing part of disability inclusion promotion at both patient and societal levels.

The social constructivist perspective towards disability depends upon an understanding that much of what is believed about disability results from meanings constructed by people who are not disabled. Hence, using the social constructivism theory lens to understand disability in nursing education helps us to analyze the social structures that may have impacted the admission of students into nursing schools. The social constructivism theory has valuable implications for practice as it gives importance to designing programs and services to support students with special needs in nursing programs. Moreover, to understand disability as socially constructed is to acknowledge the uniqueness of individual difference and to distinguish between the biological aspect of disability and the handicapping social environment.

Nursing is a profession that embraces the need to avoid discrimination and to promote disability equality in relation to the provision of healthcare; yet nursing is implicated largely by association with medicine and “disability” is predominantly seen as medicalized concept. Therefore, the Medical Models of Disability and Human Variation Model of Disability have great utility value in understanding how professionals in the medical and healthcare fields perceive differences brought about by disability and may be instrumental in understanding the reasons behind the underrepresentation of nursing students with disabilities in nursing programs.

Defining disability and constructing its meaning from a medical model perspective contributes to the marginalization and discrimination against nursing students with disabilities

and participates in having a narrow conceptualization of disability in people with disabilities are being defined by their impairments. Although the medical model represents power in technology and in the healthcare industry and remains necessary to understand the root cause of impairments by its efficiency in addressing afflictions of the body that can help in providing proper medical intervention and treatment to limit the impact of the impairments of an individual on his/her daily life activities; yet, it is limited in identifying environmental factors that can exacerbate the condition of disability it perceives human differences as anomalies that need to be treated rather than human variations that need to be respected and accommodated.

Since the concept of disability represents a wide and diverse variety of conditions, each with its own individuality that may require unique accommodations. To be effective, accommodations may even need to differ for different individuals with similar impairments. Since impairments are rarely constant over time, individuals may require varying accommodations over the course of their employment. Hence, I believe that the human variation model of disability will help in looking at differences brought by disability as a human variation and may help us to identify further strategies for achieving the goal of inclusion by creating more responsive institutions, not just on behalf of people with disabilities, but on behalf of everyone. Furthermore, looking at disability through the lens of human variation model may help in eliminating discrimination against people with disabilities that may not be eliminated by a policy strategy that focuses on anti-discrimination activities that do not fall under legal definitions of discrimination.

When addressing the challenges and the facilitators to inclusion of nursing students with disabilities in nursing education, this position would require the creation of an academic community that is caring, accepting, empowering and accessible to all which should be

responsive to the cultural background of all learners. Hence, Cross Model of Cultural Competence and Jean Watson Caring Theory are valuable in understanding and responding to these challenges.

Cultural competence in nursing care is essential for providing quality care for patients from different cultural backgrounds (Leininger 1999). It is a specific concept that is used extensively in nursing literature and is related to transcultural nursing and contains a wealth of skills and knowledge regarding cultural values, health beliefs, religion, and human philosophy. Hence, in order to create a culture of care, careful attention must be paid to the needs of minority groups within the context of their culture. Brown (2003) described disability as a culture in which people within this share life experiences about disability. As a result, the system must plan, design, and implement policies and services that are appropriate, accessible and delivered in a culturally competent manner. Hence, Cross Model of Cultural Competence provides a philosophical framework and offers some practical ideas for improving the system of care delivered to individuals from diverse cultural backgrounds to become more culturally competent that challenge marginalization and promote equity.

According to Jean Watson's Theory of Caring, caring is the essence of nursing, and a caring environment accepts a person as he or she is. Moreover, caring is also central to inclusive education. Therefore, inclusive education in nursing programs that is based on Watson's human care theory can improve caring behaviors of nursing education educators, students and clinical educators not only towards patients but also towards colleagues and peers with disability.

2.3 Conceptual Framework

While these models and theories have different concepts and focuses, there is an overarching theme or idea that can bridge them. All of them acknowledge the significance of contextual factors in shaping individuals' experiences, development, and perceptions. They emphasize that understanding and considering the context in which individuals with disabilities exist is essential for providing appropriate support, care, and inclusion. Consequently, this study identified some key concepts related to disability inclusion in nursing education: Perceptions of stakeholders, Disability Inclusion in nursing education, and Barriers and Facilitators to inclusion.

The study identified key nursing education stakeholders such as faculty members, students, administrators, and clinical instructors and will explore the interactions and relationships among these stakeholders in the context of disability inclusion as well as their attitudes and perceptions towards disability inclusion in nursing education.

Perceptions will be examined through the use of questionnaires designed to assess stakeholders' perceptions of inclusion and to capture their attitudes, beliefs, and opinions related to the inclusion of nursing students with disabilities. Also, individual in-depth interviews will be conducted with stakeholders to explore their perceptions.

Disability inclusion in nursing education will be studied through exploring the availability of reasonable accommodations, accessibility of learning materials and resources, inclusive teaching strategies, and the overall support provided to promote equal opportunities for success as well as through understanding the design and content of the nursing curriculum, the teaching methodologies, clinical placement settings, disability-related knowledge, faculty

qualifications and expertise, and the availability of resources, support for nursing students with disabilities and overall learning environment.

An important key concept is factors affecting including barriers and facilitators to inclusion, such as attitudes and beliefs of faculty and peers towards disability, availability of disability support services, policies and regulations related to disability inclusion, physical accessibility of learning environments, educational resources and technology, cultural competence of faculty, and awareness and understanding of disability-related issues.

Therefore, in order to explore perceptions of nursing stakeholders towards the inclusion of nursing students with disabilities and to the barriers and facilitators to their inclusion in nursing education programs we need to understand how these elements, which are part of multiple systems, interact and affect the inclusion of a nursing student with disability directly or indirectly.

Consequently, it is essential to understand the basis of the bioecological theory of development. By integrating the concepts of disability inclusion, nursing education, stakeholders and barriers and facilitators within the bioecological model, researchers and practitioners can consider the complex interactions between individuals with disabilities, their educational environments, and the broader social systems. This holistic approach supports the development of inclusive practices, policies, and interventions that promote the full participation and success of nursing students with disabilities.

2.3.1 Bio ecological Model of Human Development

The conceptualization of Bronfenbrenner of the “ecology of human development” offers a valuable conceptual framework for conducting this study that seeks to explore the perceptions

of nursing education stakeholders towards the inclusion of nursing students with disabilities and to examine the barriers and facilitators of their inclusion. Hence, it is important to recognize the elements in their ecosystem, how they dynamically interact with the various systems around them, and how these systems impact the inclusion process. As disability is seen as an ecologically constructed phenomenon (Olivier-Pijpers, Cramm, & Nieboer 2019), adopting the Bio Ecological Model of Human Development proposed by Bronfenbrenner and Ceci (1994) as a conceptual framework can help in examining the proximal and distal factors that can impact the inclusion of nursing students with disability in nursing education programs. Bronfenbrenner and Morris (2006) explained that the function and development of humans are affected by the multifaceted reciprocal interactions between an individual and his bio-psychological makeup (the onto-system) and the environment, which is perceived as four embedded layers: Microsystem, Mesosystem, Exosystem, Macrosystem, and Chronosystem. These systems are dynamic and interrelated as shown in Figure 3.

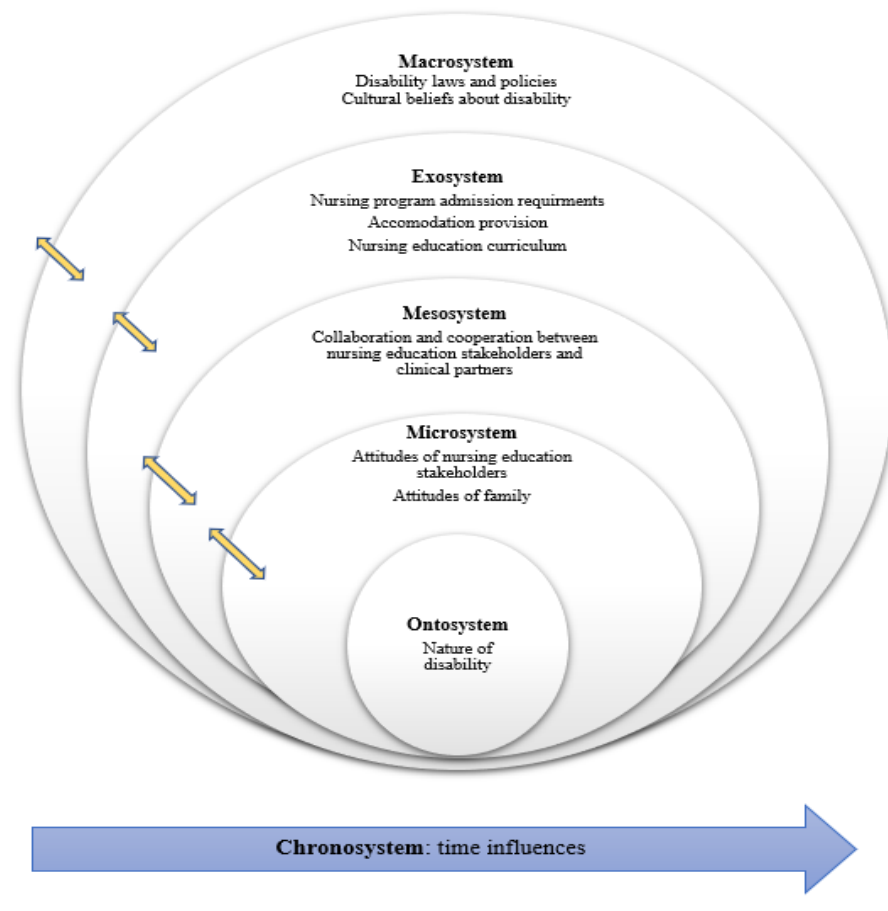


Figure 3: Bioecological Model of Human Development
(Source: Bronfenbrenner and Ceci 1994)

The “ontosystem” comprises the intrapersonal factors that include personal biological disposition and psychological characteristics. Each child has distinctive characteristics and needs that must be analyzed when exploring their participation in any educational program.

The “microsystem” is the system level that describes the factors within an individual’s immediate environment. It comprises interpersonal processes between an individual and his immediate surroundings such as his home and learning settings. Any contact between the individual at the center and any one other individual is a microsystem activity (Bronfenbrenner 1979). The value of the individual's activities, responses, and interactions with other individuals

in the microsystem would be determined by others' views and practices; this is valuable in understanding the development of a student with a disability. Consequently, interactions in an inclusive microsystem are the provision of welcoming and conducive learning environments for all (Opertti & Bradey 2011). In this study, some important elements that comprise the microsystem are attitudes of educators, clinical educators, students, and family members towards the inclusion of nursing students with disabilities.

The “mesosystem” involves relations between two or more settings in which the developing individual actively takes part including the relations between home, school, and peers (Bronfenbrenner 1979, p. 25). It includes the interactions between the different elements within the student’s microsystem that can affect his/her development. For instance, the relationship of family members with academic personnel affects the inclusion of their child with disability. Regarding this study, the mesosystem connotes the activities that take place to facilitate the inclusion of nursing students with disabilities in nursing education programs. These comprise the coordination and collaboration between nursing education faculty members, nursing education faculty members and accessibility professionals, and the coordination between nursing education educators and clinical partners and potential employers.

The “exosystem” embraces major systems that an individual does not directly engage in; yet have an impact on his/her development. In relation to this study, this can be the institutional disability legislation and policies, nursing curriculum standards, and admission criteria to nursing education programs as well as the inclusive practices of a given institution/organization.

The “macrosystem” encompasses the overarching system of laws that inform the actions of societies, the belief systems or ideologies, the characteristics of the culture, and the structure of the society.

The “chronosystem” consists of all of the physiological and psychological changes in an individual such as maturation and adaptation as well as environmental changes that occur over the lifetime which influence development, including major life transitions, and historical events, and technological advancement.

Through the bio-ecological conceptual lens, the study will explore the interrelatedness between the inclusion of nursing students with disabilities and the other system levels within which they engage and/or are directly or indirectly impacted. Disability is commonly accepted as an ecological construct rather than an internal deficit of the individual (Olivier-Pijpers et al. 2018) and hence should be understood as stemming from the interaction between individuals and their environment. This model has significance for nursing educators, policy makers, and researchers as it offers a useful conceptual reference point for exploring the multi-layered influences on inclusive education in nursing schools in higher education in the UAE.

Thus, this conceptual framework guides the research process, data collection, analysis, and interpretation, leading to a deeper understanding of the factors affecting disability inclusion and the potential strategies for improving inclusive practices in nursing education.

2.4 Related Literature

2.4.1 Disability

People with disabilities have historically been socially excluded due to social prejudices of people towards them (Pillay 2010; Waddington 1996; Dovidio, Pagotto, & Hebl 2011; Itasari 2020). The focus of societies on the ‘wrongness’ of the individual and their intolerance towards personal differences has been more challenging to deal with than the disability itself (Pillay 2010). Hunt and Hunt (2000) explained that the general beliefs regarding people with disabilities are related to being haunted by spirits or punished for committing sins which have created a social stigma within the society that led families to hide any member with a disability from society leading to the social isolation of the whole family (Richardson & Fulton 2010; McGrother et al. 2002; Gaad 2011) which according to Crabtree (2007) can be ameliorated by the influences of social development.

A disability is a state of being in which a person is regarded to be impaired in relation to the apparent usual standard of an individual or a group (Disability World 2016). Disability can include a long-term medical condition, learning difficulty, behavioral difficulties and psychological problems (Veitch, Strehlow, & Boyd 2018). The definition of disability has metamorphosed with the emergence of new disability legislations, which have influenced the labor force and higher education. The defining features of disability are generally divided into three core classifications including personal qualities, social qualities, and a combination of both.

The medical model of disability focuses on the individual qualities to define disability. According to Goering (2015), disability is usually viewed as a problem that exists in the body

of the individual which limits daily life activities and reduces interaction with the surrounding environment. Based on the medical model of disability, a person with a disability is viewed as having a pathologic condition that necessitates medical treatment (Oliver 2013). As a model or paradigm, the medical model includes the idea of medicalization; this is comprised of medical professional dominance in the lives of people with disabilities, low priority provided to them by societies that give priority to acute medical practice and undervalue people with chronic conditions, define them by their impairments, and focus on seeking causes and solutions to the problems of disability (Shakespeare 2006). Hence, if considering only the medical model of disability, it is difficult to think of someone who has a disability to be employed and to be able to contribute to society. Scullion (2010) argued that the medical profession tends to be one of the most powerful barriers to the inclusion of people with disabilities and is responsible for a large portion of discriminatory practices due to the reliance on the medical model. Yet, the value of the medical model in diagnosis and treatment of individual impairments as well as its contributions to advancements in medical knowledge, interventions, and improving the health and well-being of many individuals with disabilities cannot be ignored.

On the other hand, social aspects emphasize how contextual factors such as culture and the physical surrounding, contribute to a disability (Jones 1996). The social approach to disability suggests that individuals with disabilities do not need treatment but a more just and inclusive society in which they can have equitable chances at education and employment; hence, by changing how the society is structured and by changing the beliefs and behaviors, most obstacles for individuals with disabilities will disappear (Young 2011). Although the social model of disability has been in use for more than 30 years, Oliver (2015) argued that it has hardly made an improvement in equality for people with disabilities. Scullion (2010) explained

that the social model of disability has its limitations as it might oversimplify the reality of disability and that sometimes disability does carry with it a measure of physical or psychological suffering and a sense of negativity which makes the social model have a narrow conceptualization of disability. According to Scullion (2010), there are concerns about the validity of the social model with regards to people with intellectual impairments as the theoretical acceptance without any impact on practice produces a policy practice gap. Many definitions of disability currently combine individual and social attributes. The most popular of these is the definition of the World Health Organization (2016). It defines disability as a multidimensional phenomenon that involves both an individual and the way society influences life experiences of individuals (Leal, Eusebio, & Rosa 2020). According to WHO, disability and functionality are affected by the interaction between the health condition of individuals and the various factors in the environment of the individual (WHO 2016).

In summary, conceptualizing disability is challenging, and several theories and models can inform the discussion of disability. One meaning of disability has been described as restricted activity while other definitions describe disability as socially constructed. Anastasiou and Kauffman (2012) mentioned that medical professionals are trapped in their social roles as experts and that at the same time oppressors of people who have disabilities. Hence, it is important to understand how nursing education stakeholders conceptualize and define disability because this will help them create an inclusive and accessible learning environment for nursing students with disabilities. The definition of disability can have a significant impact on the way in which nursing programs approach the provision of accommodations, support, and resources for students with disabilities. Moreover, by defining disability, nursing education stakeholders can clarify who is considered a person with a disability and the types of disabilities that are

covered under disability legislation. This definition can then be used to guide the development of policies, practices, and procedures that ensure that students with disabilities are provided with equal opportunities to participate in all aspects of the nursing education program. Additionally, understanding the definition of disability can help nursing education stakeholders recognize and address the stigma and stereotypes that may be associated with disabilities. This can promote a more inclusive and welcoming environment which in turn can improve their academic and professional outcomes.

2.4.1.1 Students with Disabilities in Higher Education

Students with disabilities are enrolling in higher education at a higher rate than before (Kraus 2023). Research shows that 96% of higher education academic institutions classrooms have students with disabilities (Los Santos et al. 2019). According to Levey (2014), the increase in the admission of students with disabilities is attributed to the presence of legislation to eliminate discrimination and improve access to higher education. Goodall et al. (2022) noted that in 2022, 184 countries have endorsed the United Nations Convention on the Rights of Persons with Disabilities, which promotes the rights of people with disabilities to enjoy different life aspects and to have equal and equitable chances in education and employment, to be provided with reasonable accommodation, and to be protected from discrimination on the basis of their disability.

In the past, the inclusion of students with disabilities has been perceived as the job of disability professionals. This approach is rooted within the medical model as the student is expected to assimilate into the course structure. Hence students with disabilities are requested to adjust to the existing systems with no obligation on educators to adjust the course structure

(Heelan, Halligan, & Quirk 2015). However, this model does not have the capacity to deal with the ever-increasing number of students with disabilities who are moving to higher education. Ainscow (2020) explained that inclusive education is seen as the principle of supporting diversity among all learners that aim to reject social marginalization.

Higher education academic institutions are crucial to improving the quality people's life as they help in increasing job opportunities, and they contribute to social inclusion; yet, in the case of people with disabilities and despite of the efforts of universities and colleges to create policies to ensure the rights of students with disabilities to equitable education, the dropout rate among this group of students is still high (Veitch, Strehlow, & Boyd 2018; Moriña, Sandoval, & Carnerero 2020).

Literature showed that academic staff struggle to meet the diverse needs of culturally diverse learners and that there are barriers in the face of students with disabilities (Gaad & Almotairi 2013; Goodall et al. 2022; Sánchez-Díaz, & Morgado 2022; Alzyoudi, Opoku, & Moustafa 2021; Benkohila, Elhoweris, & Efthymiou 2020).

Sánchez-Díaz and Morgado (2022) conducted a study to analyze the factors identified by inclusive faculty members that impedes or facilitate the inclusion of students with disabilities and their recommendations for academic institutions in higher education to achieve full inclusion. Forty-four inclusive faculty members participated. The results showed the existence of different barriers that include physical barriers, inaccessible study programs, negative attitudes, and deficiency in educational policies. Facilitating elements were also identified to include positive attitude of the faculty and conducting training courses on disability. The participants recommended the hiring of more technical staff, the creation of support groups in

all faculties, more training and information on disability for the entire university community, and the implementation of university policies about inclusion.

In the UAE, some research explored the attitudes of the academic community towards the inclusion of students with disabilities in higher education. The results were contradictory. The findings of a study conducted by Gaad and Almotairi (2013), which looked at faculty attitudes toward students with disabilities in higher education in the UAE, showed that instructors had unfavorable attitudes toward including this group of students in regular classes and that the general focus was more on their disabilities and not on their abilities. The study showed that it was important to provide educational services for students with disabilities in higher education and provide professional development on disability related issues. The study also suggested that it was important to receive training on how to use smart boards, communicate with the disability center in order to receive the needed resources, and develop clear policies on accommodation provision.

On the other side, a study undertaken by Benkohila, Elhoweris, and Efthymiou (2020), which examined the attitudes and the readiness of one hundred twenty-five faculty members teaching at a local university in Abu Dhabi to provide support to students with disabilities, showed that the study participants had positive attitudes towards the inclusion of university students with disabilities, yet they showed concerns regarding modifying the curriculum and they doubted their knowledge related teaching strategies to support this group of students.

Negative attitudes towards the inclusion of students with disabilities in higher education were identified by a recent study conducted by Alzyoudi, Opoku, and Moustafa (2021) who examined the perceptions of college students towards their colleagues with disabilities. The findings of the study showed that the student participants had negative attitudes towards their

colleagues with disabilities which affect their interaction and engagement with them. According to Alzyoudi, Opoku, and Moustafa (2021), negative attitudes toward students with disabilities could affect the success of inclusive education implementation for all students as they students with disabilities may feel unaccepted and marginalized by their peers with no disabilities. It was also showed that participants whose friends were with a disability had more positive attitudes towards them as knowing someone with disability sought to enhance our knowledge of their needs, abilities, and strengths which is reported to help in building good relationships with them. The study concluded that university students should attend training programs to be oriented on how to welcome and accept students with disabilities.

In summary, in reviewing the articles focused on students with disabilities in higher education, despite the increase in the number of students enrolling in higher education, and in spite of the efforts of academic institutions in higher education to ensure the rights of students with disabilities to equitable education, the dropout rate among this group of students is still high. There exist challenges in the face of inclusion of students with disabilities that include negative attitudes of the academic community. The literature indicated the importance of improving the knowledge and awareness of educators and students regarding how to welcome, educate and accommodate students with disabilities.

2.4.1.2 Nursing Students with Disabilities

Considering the increase in the number of students with disabilities entering higher education, it is not surprising that among these students are students with disabilities who want to enroll in nursing education. However, despite the progress that has been made to include students with disabilities in higher education, research studies showed that students with

disabilities are underrepresented in nursing education (Moodley & Mchunu 2022; Calloway & Copeland 2021; Metzger et al. 2020; Neal-Boylan & Miller 2020). Gonzalez and Hsiao (2020) argued that although some federal government's request facilities to recruit a certain number of people with disabilities which leads to an increased demand for education health care providers with disabilities, yet the number of nursing students with disabilities has remained the same.

Ailey and Marks (2020) mentioned that the Institute of Medicine has requested increasing the diversity of the nursing labour force in order to support the needs of a culturally diverse patient population. Moreover, nursing education leaders have requested nursing schools to work towards inclusivity excellence (AACN 2017; NLN 2016) by retaining diverse faculty, staff, and students. Similarly, the American Association of Colleges of Nursing (AACN 2017) delineated the need to enhance diversity in nursing through different sectors including nursing education faculty and nursing practitioners. Specifically, the AACN (2017) stated that:

“When diversity is integrated within inclusive educational environments with equitable systems in place, assumptions are challenged, perspectives are broadened, and socialization across a variety of groups occurs, resulting in intellectual and cognitive benefits for all learners.”

It was believed that nurses with disabilities bring an exceptional outlook and a series of skills to the clinical setting that can help in improving the quality of culturally competent care as well as enrich diversity in the profession (Calloway & Copeland 2021; Ailey & Marks 2020). Florence Nightingale, regarded as the founder of contemporary nursing, suffered from a disability and made substantial contributions to her nursing profession. Marks and Ailey (2014) argued that a nurse with a lost arm is the best to teach patients with similar conditions how to look after themselves. Likewise, students with disabilities have a unique set of knowledge, skills, and aptitudes that are likely to improve nursing care with their distinctive understanding

of disability issues as they are usually more understanding of the limitations of the people they are helping (Neal-Boylan 2012; Gonzalez & Hsiao 2020).

Including students with disabilities in nursing education was regarded as an opportunity for the development of educators and students and for the enhancement of the quality of care provided to patients. Moriña and Orozco (2020) used a qualitative study to explore (2020) the experiences of 19 Spanish nursing faculty members in teaching nursing students with disabilities and how to facilitate their retention and success in nursing education programs. The results indicated that the majority of participants had positive experiences, yet few participants reported some negative experiences. Regarding pleasant experiences, various faculty members viewed impairment as one characteristic of a person with a disability and that their interaction with students with disabilities had helped in realizing that they are like any other student in the class and had helped them in designing an inclusive syllabus to support all students with disabilities despite disability disclosure. Regarding their negative experiences, it was mentioned that some participants lacked the needed knowledge to deal with and support students with disabilities in the class. Moriña and Orozco (2020) recommended that faculty members should always be ready with different strategies and plans to accommodate the educational needs of all students. It was also pointed out that although academic support exists, it is also important to provide personal and social support as a prerequisite for effective teaching. Furthermore, the direct communication between students with disabilities and support services as well as the ongoing close monitoring of them is sought to be useful in order for faculty members to do the needed adjustments.

Students are important stakeholders who have a significant effect on the classroom climate and have a chief role in supporting students with disabilities (Degtjarjova, Lapina, &

Freidenfelds 2018). Shpigelman, Zlotnick, and Brand (2016) investigated the attitudes of 270 Israeli nursing students toward their peers with impairments, the authors performed a quantitative survey. The findings demonstrated that nursing students' attitudes about their disabled colleagues were often unfavorable, and these negative attitudes were linked to attitudes toward individuals with disabilities more generally. The results also corroborated the notion that healthcare workers have prejudicial attitudes toward those with disabilities, believing that they cannot train to be nurses. The authors concluded that nursing students should be aware of prejudice towards their peers with disabilities and should grasp the need for cultural competency and awareness concerning both patients and peers. Positive attitudes from peers were a source of support for students with disabilities despite the widespread reports of negative views. Students who do not have disabilities can help their peers who do, according to Goodall et al. (2022). It was also hoped that developing connections and social networks with other students would help students with disabilities to succeed in higher education.

As a result, these studies demonstrate variance in the perceptions among educators and students in the higher education towards the inclusion of students with disabilities; hence, it is crucial to complement these studies with more work on nursing education stakeholders' perceptions towards the inclusion of nursing students with disabilities in order to know if the perceptions towards disability inclusion in nursing education programs in the UAE follow similar pattern.

2.4.2 Barriers to Disability Inclusion in Nursing Education

Although the literature showed the value and uniqueness that nursing students with disabilities can add to nursing education and nursing profession, students with disabilities face

barriers to have equitable chances to become nurses and dropout earlier than those with no disabilities (Metzger et al. 2020; Gonzalez & Hsiao 2020; Neal-Boylan & Miller 2020). Different studies have focused on exploring the challenges facing the inclusion of nursing students with disabilities in nursing education programs. The findings showed various barriers to inclusion including disability disclosure, educators' knowledge and attitudes, admission requirements, lack of clear policies, and lack of communication and collaboration among stakeholders.

2.4.2.1 Disability Disclosure Dilemma

The need for disability disclosure, protecting students' privacy, and concerns about the willingness of students to disclose their disability coupled with fear of being stigmatized were reported by many studies as a barrier to the success of the inclusion of nursing students with disabilities as it can prevent people from getting the accommodations needed to perform their tasks safely and successfully (Sin & Fong 2007; Levey 2014).

Shpigelman et al. (2021) conducted a study to gain an understanding of the academic development of students with disabilities in higher education. The results showed that nursing students with disabilities face a dilemma of whether to disclose their disability and face ridicule and labeling or to benefit from disability services and accommodations. The study recommended that support services should be given to all irrespective of disability to prevent labeling. Similar concerns were raised by Luckowski (2016) and Morris and Turnbull (2006) who reported that nursing students with disabilities masked their disability as it might affect their future employment and they feared being discriminated against and treated differently. However, Goodall et al. (2022) argued that disability disclosure is especially important in

clinical professions. The study of Ashcroft and Lutfiyya (2013) and Calloway and Copeland (2021) which aimed to understand the viewpoints of nurses and nursing educators of nursing students with disabilities showed that it is frustrating not to be well informed about a disability and that it would be important that students disclose their disability to everyone whom they are working with so their needs can be met. There was a general belief among nursing educators that knowing about the students' disabilities would help them to comprehend students' behavior that might be mistaken for a lack of responsibility and would make educators more prepared to meet students' needs and hence concerns related to risking patients' safety would be reduced. Dupler et al. (2012) argued that students with disabilities have to disclose their disability upon admission if they desire to receive allowances and adjustments to enable them to study. It was suggested that students with disabilities can visit the academic institutions' websites to get the policies and procedures and the contact information for the disability services to request for accommodations. However, Calloway and Copeland (2021) argued that asking students with disabilities to disclose disability is inappropriate and illegal.

It was concluded that the decision to disclose a disability is a complex personal issue and that to respect students' right of not disclosing disability while encouraging them to disclose, centers should provide a warm and accepting environment in which the needed support is provided to any student with or without a disability. By providing services to all, students who get services due to their impairment will not be labelled 'disabled' by others.

2.4.2.2 Admission Requirements

All students applying to academic institutions have to satisfy admission requirements. Schools of healthcare including schools of nursing may have added admission requirements that

a student must meet. For students with disability, they will qualify for the program if they meet admission criteria along with the application of reasonable accommodations that do not need fundamental change of the curriculum (Levey 2014).

Literature showed that some nursing schools apply discriminatory practices against students and disabilities. It was argued that the inconsistent admission practices to nursing programs, the reliance on outdated technical standards, the subjective interpretations of these standards as well as the use of essential functions, which are related to work and not education are major barriers to the admission, retention, and matriculation of nursing students with disabilities (Marks & Ailey 2020; Marks & Ailey 2014; Betz, Smith, & Bui 2012; Matt, Maheady, & Fleming 2015; Gonzalez & Hsiao 2020). Ailey and Marks (2020) explained that “Technical Standards” are nonacademic standards that request students to show various physical and sensory abilities including lifting heavy objects, using a stethoscope to hear body sounds, measuring blood pressure, standing for a long time, working for long periods, putting on and removing gloves, and visually assess patients are prescriptive which are considered to be the main barriers to enrollment and engagement of nursing students with disabilities. Ailey and Marks (2020) argued that the technical standards for admission to medical schools were used also for nursing students’ education that should be created not to exclude a class of people from admission to nursing education programs by indicating how the task should be accomplished but it should take into account what is necessary to complete the program. Ailey and Marks (2020) reasoned that technical requirements must take into account what nursing is and the role of nursing in the future and that focusing on acquiring fundamental understanding; developing skills in communication; analysing data; and enhancing professional attitudes and actions makes it easier for students with disabilities to be admitted in nursing education programs as they focus

on "what" rather than the "how" and help in strengthening nursing practice by including workforce-required skills.

Ailey and Marks (2020) explained that essential functions are the selected skills and behaviours needed in a specific nursing job situation including physical abilities (lifting, twisting, squatting, pushing, pulling, etc.) that most nursing education programs are using to admit students to nursing education programs instead of using technical standards for education that should be related to academic attainment which if a student meet can qualify him/her to continue as a nursing student. Using the essential functions of nursing work instead of academic standards, are sought to be barriers to the admission and accommodations of students with special needs and disabilities (Ailey & Marks 2020; Gonzalez & Hsiao 2020). Moreover, it should not be confused with the basic duties of a specific nursing position and should relate to all students, be sensitive to new technologies, and respect critical reasoning and sound judgment. Carroll (2004) argued that technical skills are but one component of humanistic care and without a nursing knowledge base, technical procedures become techniques that can be conducted by anyone and may not reflect activities related to well-defined problems.

Gonzalez and Hsiao (2020) recommended the creation of new academic standards that should be done with the collaboration between the nursing school and disability professionals and to be focused on skills necessary to deliver safe nursing care. The American Nurses Association refers to nursing as both an act of art and at the same time a science. As a result of this dichotomous individuality, the nursing profession fosters trust, empathy, and compassion with the patients receiving care, which aids in achieving optimal health-related results (Trzeciak, Mazzairelli, & Booker 2019). According to Carroll (2004), competencies such as compassion, interpersonal understanding, persuasiveness, comforting and critical thinking are humanistic

criteria that are not technical in nature that should be used to evaluate prospective students. As a result, students with disabilities, in particular those with physical disabilities can surely deliver humanistic care to patients.

Other studies showed that certain nursing education programs have irregular entrance requirements for nursing students with disabilities. According to Marks and Ailey (2014) and Betz, Smith, and Bui (2012) that there is inconsistency and objectivity in the admission criteria to nursing education programs in many nursing schools and requesting medical/ health clearance was found to be a factor to affect the admission of students with disabilities. Betz, Smith, and Bui (2012) noted that different nursing education programs in California use standard program requirement criteria while others had no criteria to determine if students are eligible for admittance which was found to affect potential applicants to nursing education programs who have educational needs and disabilities.

2.4.2.3 Lack of Clear Policies

Higher education academic institutions' policies are crucial for including students with disabilities as they help in determining key actions and guide decision-makers on how to handle disability related issues as they arise. Yet, the dichotomy between regulatory requirements and disability legislation results in academic institutions struggling to create clear policies on how to support students with disabilities while maintaining the professional standards of the nursing profession (Griffiths et al. 2010).

Different studies showed the importance of having clear policies and procedures on how to include and support nursing students with disabilities. The experiences of nursing students with disabilities and teachers in nursing clinical assignments were examined by Epstein et al.

(2021). One of the issues that came up was how important it is to have rules and policies that are transparent and easy to obtain. It was suggested that having a support system and guidelines is essential before, during, and after the clinical experience. Similar findings emerged in the study conducted by Ashcroft and Lutfiyya (2013) who conducted a study to understand nursing educators' views of students with disabilities. The study found that students' opinions were impacted by the absence of rules about enrolling students with disabilities in nursing education programs. The study's participants stated a need for better policies that would aid them in evaluating and making decisions regarding students with various sorts of disabilities and in helping to provide adjustments in nursing clinical settings. The dearth of consistent guidelines was the main source of educators' frustration when working with students with disabilities as each educator was independently providing accommodations that were not often communicated to the next educator. As a result, different accommodations offered to one student varied across educators and courses. The study concluded that it is important to have clear policies on how to operationalize and monitor the provision of reasonable accommodations.

The lack of implementing policies was sought to be a barrier to the success of the inclusion of students with disabilities in nursing education programs. In Maheady's (1999) study, it was emphasized that nurse educators have the responsibility of upholding federal laws to ensure that students with disabilities have equal access to the nursing profession. It was also highlighted that it is important that nursing education programs develop enforceable guidelines for the admission and retention of students that should be used in their admission decisions and evaluations of students' performance.

2.4.2.4 Lack of Communication and Collaboration

The lack of communication and collaboration between key stakeholders was perceived to cause misunderstandings among nursing education faculty and clinical facilitators in placements on how to support nursing students with disabilities (Moodley & Mchunu 2022). In an early study conducted by Ashcroft and Lutfiyya's (2013), it was emphasized that the communication of nursing education faculty with disability services is important to facilitate the inclusion of nursing students with disabilities. It was sought that disability services often set the structure for how the accommodation will be provided. Disability counselors are seen as an essential link among students with disabilities, faculty, and administration as they can help in addressing discrimination issues, conduct psychoeducational assessments and provide accommodations, resources, and support to students and faculty members (Neal-Boylan & Smith 2016).

Other studies highlighted the influence of communicating directly with students to meet their needs. Moriña and Orozco (2020) showed that despite the help of the support offices in providing accommodations, students with disabilities were the ones who brought out the necessary modifications. Calloway and Copeland (2021) reported it is essential that nursing students with disabilities inform the nurse preceptors working with them about their needs and work together to determine the best way to accommodate them.

2.4.2.5 Educators' Attitudes and Knowledge

Bogart et al. (2019) argued that the most problematic barrier to social inequities such as disparities in the admission to higher education and degree completion for nursing students with disabilities is attitude, defined as evaluative decisions based on beliefs, feelings and behavioural

intentions. The negative attitude of people including educators, peers, family members and others, towards nursing students with disabilities was the most reported barrier (Moriña & Orozco 2020; Papadakaki et al. 2022). According to Papadakaki et al. (2022), there is a clear relationship between educators' attitudes and knowledge and prior training and experience in relation to people with disabilities. Nursing educators lack of knowledge on how to educate and support students with disabilities in addition to the lack of training provided to nursing educators and nursing students about disability inclusivity as well as the poor contact with students with disability affected their attitudes towards their inclusion (Dahl 2010; Leyser & Greenberger 2008; Ashcroft & Lutfiyaa 2013; O'Connor et al. 2019). It was found that educators who had more contact with people with disabilities were more ready to make instructional accommodations and testing accommodations as compared to the group with no/limited contact. Moreover, educators with more training about disability related issues were more inclined to provide instructional accommodations. Moreover, educators who adhere to the medical model of disability see disability as a deficiency and a medical condition and view nursing students with disabilities as patients in need of assistance, treatment, and rehabilitation which affect their admission and education decisions related to students with disabilities in nursing education programs. Conversely, educators who are in favour of the social model of disability, which emphasizes that disability is a social construct, are more likely to consider nursing students with disabilities as valuable contributors to the nursing profession (Neal-Boylan & Smith 2016). Calloway and Copeland (2021) argued that nursing educators are gatekeepers to the nursing profession and their attitudes towards disability should be in favour of a more inclusive social model as perpetuating of negative attitudes is unethical and reduces the potential of increasing diversity in the profession.

2.4.2.6 Issues Related to Clinical Placements

Different research studies have illuminated issues related to the inclusion of nursing students with disabilities in clinical placements pertaining to the safety of patients, the fitness of nursing students with disabilities to practice as well as concerns related to accommodation provisions in clinical placements (Gonzalez & Hsiao 2020; Neal- Boylan & Miller 2020; Calloway & Copeland 2020; Halligan & Howlin 2016; Phillion, St-Pierre, & Bourassa 2021).

2.4.2.7 Risk to Patients' Safety

Many of the concerns about safety center around the technical part of nursing (Carroll 2004). Literature mentioned that patient safety is number one priority in all clinical settings. Gonzalez and Hsiao (2020) explained that there are barriers in the face of people with disabilities to become nurses that include their abilities to perform job tasks, the likelihoods to jeopardize patient safety, and their abilities to contribute to the profession. Similar concerns were reported by Neal- Boylan and Miller (2020) who summarized the results of many studies related to inclusivity in nursing education and nursing profession. It was reported that there are misconceptions related to the abilities of nurses with disabilities to provide safe care to patients. According to Neal- Boylan and Miller (2020), nursing educators believe that nursing students with disabilities are unable to acquire the needed skills which create for them to graduate from nursing programs successfully.

Phillion, St-Pierre, and Bourassa (2021) reported that students who experience challenges in managing performance anxiety, those with Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder who experience significant difficulties in organizational skills, and students who suffer from a mental health disorder have needs that are difficult to manage by the

faculty. It was also noted that in the surgical and critical care setting, performance anxiety was generally incapacitating and students with disabilities, such as those with Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder, displayed a level of disorganization that could be severe enough to compromise their performance because they are more likely to arrive late to clinical units, have trouble establishing routines for their units, and struggle to meet work-related deadlines. Additionally, in relation to students with a mental health condition, participants had doubts about whether this group of students can attend clinical placements, the effect of medication on their alertness, and their ability to receive feedback related to their performance.

Moodley and Mchunu (2022) reported that students with mental disorders can be accommodated in academic learning settings like classrooms, but they raised concerns when students are in clinical settings as they might have psychotic episodes. There were concerns related to the abilities of students with social skills problems to communicate with patients and to be able to show empathetic towards them. The findings also show that students with disabilities like those with learning difficulties (Betz, Smith, & Bui 2012) and those missing fingers, eyesight, hearing, and mobility issues may participate in nursing education programs with the right assistance but students with complete blindness, with no limbs, or with bipolar psychological disorders (Ryan 2011) and students with motor impairments and neurological problems (Calloway & Copeland 2020) are not suitable for nurse training as they may not be able to transfer patients safely and may not be able to provide sound clinical judgment related to patients.

However, there is no evidence that nurses with disabilities present a unique set of risks to the public (Neal-Boylan & Miller 2020; Gonzalez & Hsiao 2020; Neal-Boylan & Smith

2016). It was reported that medical errors are mostly due to problems within systems or due to some conditions and hence, errors can be made by anyone regardless of the presence of a disability (Aaberg 2012; Betz, Smith, & Bui 2012). Using critical thinking ability and interpersonal communication skills to maintain patient safety is sought to be more valuable and less discriminative than completing hands-on tasks (Aaberg 2012).

Yet, other studies showed strengths in disabilities. Vincent (2020) reported that the cognitive attribute of students with autism is a strength as they were found to be dedicated to focus on details and to have a strong working memory that was considered valuable for their job success. Langørgen and Magnus (2020) explained that students with disabilities constitute a unique and valuable body of expertise, which was sought to be an asset. It was perceived that the knowledge that this group of students has related to the use of accommodations enabled them to be able to understand and meet the needs of individuals in similar situations and hence their opinions and advice on how to accommodate students with disabilities are of great value for all students. Carroll (2004) argued that nursing students with disabilities won't present any safety risks and will be able to satisfy clinical and professional requirements if reasonable adjustments are implemented, such as using specialized adaptive devices to mitigate the challenges they face. This will improve students' practices and increase their self-confidence.

It was argued not all nurses practice in hospital settings. Many nurses practice in the community and hence nursing students with disabilities can be placed in a variety of settings to meet clinical objectives. For example, a nurse who values interpersonal communication with patients can decide against working in an operating room. Therefore, nurses with disabilities may decide to work in a field that is less demanding in light of their impairments. They typically select fields that complement their capabilities and by excluding nursing students with

disabilities due to misconception, the nursing profession loses smart and compassionate people who may bring a unique perspective to the profession (Neal-Boylan & Miller 2020; Carroll 2004).

2.4.2.8 Fitness to Practice for Nursing Students with Disabilities

The Health and Care Professions Council in the United Kingdom defines fitness to practice in terms of whether the registrant, nurses and nursing students, have the skills, knowledge, character and health to perform their job in a safe and effective manner in agreement with the law which can be ensured through monitoring the practice and conduct of nurses and nursing students to ensure compliance with rules and regulations (Health and Care Professions Council 2012). Under the tenet of the American Disability Act (ADA) of 1990, an individual must be qualified to become a nurse. In other words, a person must be able to meet the requirements of the nursing program with the provision of the needed aids and support services and as a result an individual who poses a direct threat is not considered qualified (Carroll 2004). However, the ADA states that the determination of threat should not be founded on stereotypes of disability and hence it cannot be assumed that individuals with disability will risk the safety of patients.

Hargreaves et al. (2014) reasoned that the assessment of fitness to practice may lead to discrimination against students with disabilities and decisions related to fitness to practice may be impacted by the concerns related to the capabilities of nursing students with disabilities to provide safe patient care. Walker et al. (2013) argued that any notion of assessing fitness to practice includes assumptions of risk; yet it is important to differentiate between the perception of risk and the actual level of risk in relation to students with disabilities in healthcare. Walker

et al. (2013) citing Stone and Winter (1985) suggested there is no such thing as objective risk, unless it is quantifiable as in, for example, physical risk. It was argued that due to the dearth of research on the measurement of risk that students with disabilities in healthcare may pose, it can be assumed that the risk they pose on patient safety is a perceived risk. Walker et al. (2013) argued that risk is regarded as a complex interaction between many factors and support is a critical element of the educational experience and therefore proposed an educational approach to risk perception and management that challenges some of the assumptions made about the fitness to practice of students with disabilities in healthcare which recognizes disabling factors such as environment, policies, or procedures which is in line with the social model of disability as opposed to the existing model of risk management that is individualistic in nature with regard to disability as something that belong to students with disabilities and that they are the risk. Within the individualistic risk approach, there is no acknowledgement of disabling factors and hence adopts clearly the medical model in its standpoint. Consequently, a cultural shift toward inclusive participation can be achieved through focusing on societal structures so both the barriers to people with disabilities and the perception of risk should be reduced (Walker et al. 2013). Similar views were adopted by Halligan and Howlin (2016) who argued that the competence of students and their fitness to practice may change over time and may be impacted by different factors and therefore students with disabilities may not necessarily face issues related to their fitness to practice when compared to other students with no disability and when students feel that their fitness to practice is impaired they can negotiate the support provided to them to help in the delivery of patient care or limit the scope of practice to areas where they are assured that their practice completely meets the proficiency standards of the profession or stay away from practice until the issues are being solved.

Sin and Fong (2008) explained that fitness to practice assessments should focus on the core or essential skills needed by the student and the needed supportive devices and adjustments required to enable students with disabilities to be involved in safe and effective practice. According to Halligan and Howlin (2016), issues related to fitness to practice that may arise during the program should be resolved by students in collaboration with academic and clinical staff and should be guided by a clear policy that outlines the way and the people involved in making decisions when it is acceptable for a student to declare or not declare disability to placement staff (Hargreaves et al. 2014). Tee and Cowen (2012) explained that the balance between providing the right support for a student with disability while ensuring fitness to practice necessitates a close collaboration between higher education and practice mentors. Hence effective preparation of mentors is crucial to ensure that chances for students with disabilities to succeed are maximized.

2.4.2.9 Provision of Adjustments

Provision of adjustments to nursing students with disabilities was one of the most reported barriers to their inclusion in nursing education programs especially in clinical settings (Philion, St-Pierre, & Bourassa 2021; Halligan et al. 2019; Toutain 2019). The situation is complex when it comes to students with disabilities who have disclosed their disability as they must be proficient in conducting tasks but also has legal rights to receive accommodations that are fair, and which do not compromise on the technical standards of the course (Heelan, Halligan, & Quirke 2015). Additionally, the complex working setting, the feeling that supporting diverse learners is important as well as the worry about litigation if the needed accommodations were not provided, may oblige educator to manage this dilemma by either over adjusting by removing or reducing certain elements of practice that are essential to have full level of

competence or by under adjusting which may lead to discrimination against students with disabilities (Halligan et al. 2019).

Toutain (2019) reviewed literature related to barriers to the successful provision of accommodations that are encountered by students with disabilities in general. The review identified various barriers to accommodations including the lack of student knowledge or awareness of campus resources, the inability to provide appropriate documentation of a disability, negative reactions of peers and faculty members that students experienced upon their disclosure of a disability.

The literature also showed challenges related to the effort and time needed by educators to support students with disabilities in clinical settings. It was also reported that additional time and effort is needed for faculty to support and supervise students in clinical courses than other learners and that accommodating students with disabilities in clinical placements required a significant amount of teaching modifications that did not guarantee the success of students with disabilities (Sowers & Smith 2004; Neal-Boylan & Miller 2020). Moreover, there were concerns related to the impact of accommodation provision on the quality of clinical performance (Matt, Maheady, & Fleming 2015; Ashcroft & Lutfiyya 2013; Sowers & Smith 2004).

Inaccessible clinical areas such as the lack of escalators, the location of skills laboratories which made moving specialized equipment difficult, in addition to the lack of funds and resources, made accommodating students with disabilities in clinical placements challenging to educators and clinicians at the placement sites. (Mchunu & Moodley 2019). Furthermore, Neal-Boylan and Smith (2016) showed that most of the accommodations that were provided to students were theory class focused like giving extra examination time and that there was a lack of accommodations in clinical settings.

Another challenge related to accommodation provision to nursing students with disability is that accommodation differs according to the student's unique needs. These needs must be identified, evaluated, and accommodated individually. Gonzalez and Hsiao (2020) explained that the needs of persons with disabilities can vary from one another, regardless of having the same or a different disability which makes it challenging for educators to determine the right accommodation considering their workload and time constraints. Moreover, the variances in clinical sites and methods pose additional challenges to identify the right accommodation and, as a result, accommodation adjustments to meet students' needs and ongoing evaluation are always needed until the student and the educators are both satisfied with the outcome (Horkey 2019). Additionally, Neal-Boylan and Miller (2020) recommended that nursing students with disabilities should be provided with reasonable accommodations through proper official channels and through meaningful collaboration with disability services to avoid unintentional discrimination against students without disabilities.

Overall, exploring the barriers to inclusion for nursing students with disabilities is an important step in promoting equity, diversity, and social responsibility in nursing education. By addressing these barriers, nursing programs can create a more inclusive and accessible learning environment for all students. Different studies highlighted the need to explore the requirements and the challenges faced by nursing students with disabilities as well as the reasonable accommodations and support measures available to help them overcome any impediments (Philion, St-Pierre, and Bourass 2021; Fontenot & McMurray 2020). A significant point to consider in educating nursing students with disabilities is the perception of nursing education stakeholders of the barriers to the inclusion of nursing students with disabilities. Exploring the barriers to inclusion can help identify the challenges faced by this group of students and pave

the way for developing strategies to address these challenges. To date, no studies within the UAE have sought to understand the perceptions of nursing education stakeholders towards the challenges facing students with disabilities in nursing schools. Hence, exploring the barriers to the inclusion of nursing students with disabilities is crucial for creating a more equitable and inclusive nursing education system and workforce.

2.4.3 Strategies to Improve Diversity and Accessibility in Nursing Education

Nursing education is urged to change its paradigm to adopt effective teaching and learning strategies that respond to different learning needs (AACN 2013; NLN 2016). Yet, nurse educators face challenges in providing inclusive learning experiences for learners with diverse needs (Aaberg 2012; Levey 2014; Dupler et al. 2012). Levey (2018) explained that in order to respond to the calls for innovative and inclusive teaching practices in nursing education, it is important that nursing faculty shift from “Sage on the Stage” to “Guide on the Side” teaching strategies that are accessible to all learners. Clinical practice is a core component of nursing programs. Clinical hands-on experience on how to provide care to patients is a necessary requirement and clinical placement is integral to nursing education in which standards of competence must be demonstrated with no room for errors with regards to the safety of patients (Heelan, Halligan, & Quirke 2015; Halligan, Martyn, & Pace 2019). However, this requirement poses substantial challenges and concerns related to the ability of students with disabilities to meet the program requirements. Halligan, Martyn, and Pace (2019) explained that the equality legislation in Ireland and the UK prohibits healthcare institutions from discriminating against students with disabilities and that faculty should focus on responding to students’ requests for support. Different studies reported various strategies to support students with disabilities in nursing education programs.

2.4.3.1 Reasonable Accommodations in Clinical Settings

The American Psychological Association defines “Reasonable Accommodations” as the changes or adjustments to the activities, setting, or to the way things are usually conducted which provide opportunities for students with disabilities to have equal chances in education and employment by reducing disability-related barrier and by providing a level playing field and not an unfair advantage. These adjustments are assumed to help students with disabilities to perform the essential functions of the academic program and to have access to different aspects of it. According to the American Psychological Association, for accommodations to be “reasonable” they must not pose an undue hardship on the institution providing them. The determination of whether an accommodation presents an undue hardship should consider the nature and cost of the accommodation, the resources available to the school, and whether the accommodation would substantially alter an educational program or pose a safety risk (ADA1990). Therefore, accommodation provision should not compromise the essential elements of the curriculum; nor do they lower the academic standards or threaten the integrity of a course but should be able to meet the needs of learners. Ramluggun, Jackson, and Usher (2021) argued that although it is important to provide adjustments and accommodations to students with disabilities to enable them to meet the nursing program requirements, there should be a formal integration and collaboration between educators and student services on the appropriateness and reasonableness of these adjustments and that the parameters of the decision-making for reasonable adjustments need to be clear to avoid misinterpretations of these adjustments by educators that may lead to students dissatisfaction. Ramluggun, Jackson, and Usher (2021) explained that although accommodations are required to support the learning needs of students, the interests of all parties should be equally considered and there should be a

mutual agreement between academic and clinical settings on how to protect the rights of students with disabilities without compromising the integrity of the nursing programs. Students need to balance between their right to privacy and sharing the information related to reasonable adjustments with educators and clinical staff to support and facilitate their learning (Ramluggun, Jackson, & Usher 2021).

Halligan and Howlin (2016) developed a resource guide that outlines the reasonable accommodations that can be provided for different types of disabilities which can be used on clinical placement. The following Table 1 outlines the reasonable accommodations that can be provided to students with disability in nursing clinical placement as suggested by Halligan and Howlin (2016).

Table 1: Reasonable Accommodations for Different Disability Category
(Source: Halligan & Howlin 2016)

Disability Category	Type	Reasonable Accommodations
Specific Learning Difficulties: It refers to diverse neurological conditions that affect how information is learned and processed.	Dyslexia: A type of disability that affects how information is processed, stored and retrieved by an individual. It affects memory, speed of processing, perception of time, and organization skills.	Provide clear instructions and expectations Do students assessments in quiet room to minimize distractions Provide a glossary of essential terminology Highlight important tasks for patient care Explain the procedures simply with many repetition Use pastel colored background to minimize visual disturbance Reduce glare of white backgrounds

		Use prompt sheet to help in recalling
	Dyscalculia: A type of disability that affects number comprehension resulting in difficulties in computation, mental mathematics, sequencing and problems in reading and writing numbers.	Can use talking calculators, scientific calculators with large display, and mathematical formulas on the drug trolley Provide talking tapes to measure wounds Use talking scales to measure patients' weight
	Dysgraphia: A type of disability that results in the inability to write legibly with trouble organizing letters, numbers and words on a line as well as difficulty with structure and grammar.	Allow use of paper with guiding lines Provide extra time to do tasks Allow students to record handover using audiotape Sloping desk is recommended for students with poor muscle tone. Use voice recognition software to help in writing.
	Attention Deficit/ Hyperactivity/ Disorder: It is a condition that affects the impulsivity, attention and concentration of individuals leading to difficulties in time management and organization, problems with attention.	Conduct preclinical placement visit Receive assistance in prioritizing patients' care Use to do lists as helpful reminders Provide ongoing feedback to help in time management and punctuality
Serious Ongoing Illness: It refers to long term medical conditions.	Epilepsy	Advised to wear alert bracelet Avoid areas with bright light Avoid triggers for seizures

	Diabetes	Advised to wear alert bracelet Need regular meal breaks Need break to check blood glucose level Shorten night shifts
	Chronic fatigue syndrome	Decrease physical effort and stress Allow flexible work plan
Sensory Impairments: It refers to any condition that affects hearing, vision and speech.	Hearing Impairment: People who are deaf or hard of hearing.	Use vibrating alarms to signal cardiac arrest Students can sit in front rows Sit in a place to enable to see what is being said and done Provide information with verbal and paper/ electronic copies Provide phones on clinical placement that can be amplified Use voice to text phones Adapted stethoscope with visual display Use of clear masks for lip reading
	Speech Impairment: It refers to problems with articulation.	Provide patience to allow students to express themselves Speak slowly Provide frequent verbal clues and visual cues Use gestures to support understanding Use a word prediction software

	Visual Impairment: It refers to people with vision problems.	Use magnifying devices Use screen reading software Use talking blood glucose monitors scales, and thermometers Use talking blood pressure monitors. Document on audiotape or in electronic format or Braille Use verbal description of the route to and from the clinical site
Physical Conditions: It refers to all conditions that affect mobility.	Rheumatoid Arthritis, Multiple Sclerosis, and Back Conditions	Ensure accessible work site Assign light duties Flexible work schedule Provide arm support and stools Place equipment within easy reach range Provide motorized scooters Use team lifting approach Adjustable beds and examination tables Provide speech amplification and enhancement Allow extra time for task completion Implement ergonomic workstation
Mental Health Conditions: It refers to all mental health disorders.	Depression, Anxiety disorders, bipolar affective disorder, and schizophrenia	Offer opportunity to talk about personal fears Encourage using counselling services

		Allow quite areas for record writing Be sensitive to the student's needs Provide flexible scheduling
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Halligan and Howlin (2016) explained that the level of reasonable accommodations needed for students with disabilities varies and hence it is important to conduct a needs assessment to identify what type of accommodations are needed. Other studies suggested different methods to accommodate students in clinical placements.

Howlin et al. (2014) and Atkins et al. (2001) suggested different methods to accommodate students before, during, and after clinical placements.

- **Prior to Clinical Placement**

Nursing students with disabilities can be encouraged to disclose their needs as part of pre-clinical placements seminar where the skills and abilities required of nurses are delineated. Staff who are responsible to provide support can be introduced, their roles explained and the existing support to be described. Moreover, clinical preceptors should be selected based on their positive approaches towards students.

- **During Clinical Placements**

It was suggested that students who have completed a particular clinical placement can mentor students with disabilities going through a similar placement. Moreover, students can

have access to assistive devices and be granted additional time to accomplish some tasks as needed under the supervision of their clinical instructor.

- **Post Clinical Placements**

Students who fail their clinical placements may be asked to reflect on the challenges they faced and to actively work on remedying any practice gaps prior to repeating the same placement. They may be directed to nursing programs that do not include direct clinical care placements or may be referred to career counselling to explore different career pathways.

2.4.3.2 Tripartite Model to Support Students with Disabilities

Griffiths, Worth, Scullard, and Gilbert (2010) provided a framework (Figure 4) to support students with disabilities in clinical practice settings by creating a six – phase student-centric tripartite model that provides a supportive framework for students with disabilities in clinical practice.

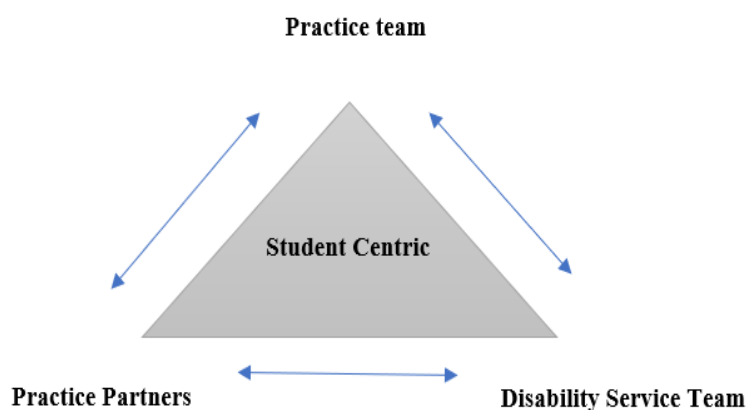


Figure 4: Tripartite Model
(Source: Griffiths et al. 2010)

The model depends on the teamwork between three vital groups: the Practice Team, Disability Service, and Student Placement Facilitator who should work in partnership with a wider range of people to collect relevant information including the student who is receiving the support to provide reasonable adjustments within the practice context. According to Griffiths et al. (2010), the aims of the model are to provide support to students with disabilities in clinical settings, develop a proactive working plan between academic institutions, practice partners and students, create a policy for clinical practice that includes the identification of suitable support for students with disabilities, and to establish a valid and reliable system to plan, implement and assess support measures.

Phase 1: Disability Disclosure. Students are encouraged to disclose their disability at any stage of their academic journey. All students should undertake a physical assessment to determine fitness of practice through task analysis for early identification of areas that needs reasonable accommodation in practice. After identifying the needs, at risk students are referred to health professionals and disability services for further assessment and guidance.

Phase 2: Creating a Support System. After needs assessment and identification, the collaboration between nursing education team, disability services and clinical partners to discuss reasonable adjustments in placement is needed. Suggested reasonable adjustments to support students to provide safe and effective practice may include:

- Additional skill training
- Peer support at clinical site
- Teamwork
- Providing assistive devices

- Providing counselling
- Providing frequent breaks

Phase 3: Mid -placement review. A revision of the effectiveness of the reasonable accommodations and determining alternative strategies.

Phase 4: Development of Detailed Plans. An analysis of the key points in the students ' journey to formulate detailed action plans that could be developed and used to different student situation that could help in judging the reasonable accommodations.

Phase 5: Placement Evaluation. The support framework is evaluated for attaining optimum support for students and to identify areas for improvement and adjustment.

Phase 6: Support Strategy Revision. This phase includes a revision of the support strategies by the team and student to make sure that its flexible enough to meet the changing needs of students during the program.

Griffiths et al. (2010) explained that in order to enable a student with a disability to achieve their full potential in clinical setting, a collaborate partnership is needed to construct, develop and evaluate support measures through reflexive discourse to make sure that the model is dynamic and responsible to the changing needs of students in practice settings. Griffiths et al. (2010) recommended that the adjustments should be tailored to the needs of student rather than adopting one size fits all approach or assume that all disabilities present in the same way. It was also recommended that students with disabilities should work positively alongside of educators and disability service staff to address their needs appropriately and that ongoing disability awareness and education is needed to bring about a positive change in the culture.

2.4.3.3 Universal Design for Instruction in Nursing Education.

Considering that disability is impacted by the structure and design of the environment or the curriculum, it is imperative to recognize the need for creating a more inclusive learning environment in which students from diverse background are supported in a seamless way. Consequently, the curriculum should be designed in a way to take into account that learners learn in different ways and that learning outcomes can be met in many ways (Halligan, Martyn, & Pace 2019). Different studies suggested the use of Universal Design for Learning (UDL) as a framework to support nursing students with disabilities in theory and clinical settings (Mack, Stephens, & Epstein 2021; Levey 2018; Halligan, Martyn, & Pace 2019; Heelan, Halligan, & Quirke 2015).

Universal Design is a design philosophy that aims to create an accessible environment that can be used by all people despite of their age, size and ability (CAST 2011; Halligan & Howlin 2016; Heelan, Halligan, & Quirke 2015). It was developed by the Center of Applied Special Technology in the US (CAST) that aims to remove barriers to education for students. Universal Design for Learning is a set of principles for curriculum development that offers multiple means of representation, multiple means of action and expression and multiple means of engagement (CAST 2011). Universal Design for Learning provides a design for developing instructional goals, strategies, material and assessment that work for all learners, not a single one- size- fits all solution but flexible and proactive approaches that can be tailored to respond to individual needs. Hence, educators can introduce the principles of Universal Design for Learning into their teaching and demonstrations which can help in addressing the issues of resourcing by limiting the need for further accommodations. According to Halligan, Martyn, and Pace (2019), through the Universal Design for Learning lens, practitioners can be supported as the Nursing and Midwifery Council don't specify how clinical tasks should be conducted

rather, they provide the principal educational standards that need to be achieved. Heelan, Halligan, and Quirke (2015) and Mack, Stephens, and Epstein (2021) proposed how the principles of Universal Design for Learning can be extended to clinical placement by introducing more flexibility and variability of choices for how to achieve the performance standards as stipulated by the Nursing Board in the Code of Conduct and Ethics for nurses and midwives.

Principle 1: Equity. Clinical sites should ensure accessibility to all students. The tasks to be conducted by the student should be clearly identified and introduced on a pre- placement visit and should be broken down into a structured and logical format. The accommodations should be identified prior to the placement.

Principle 2: Flexibility. Students should be allowed to use different ways to carry out tasks in a safe manner and different modalities for engagement and comprehension should be provided. Learning outcomes can be categorized into mandatory skills and optional ones in a way to help students reach these outcomes. Adaptability should be provided to the user's pace. An example can be changing the night shift for a student with fatigue.

Principle 3: Simple and Intuitive. Instructions should be easy to understand, predictable and free from unnecessary complexity. Students should understand the practice competencies to be acquired on placement. An induction for the placement site should be organized prior to placement. Effective promoting and feedback can be provided during and after task completion.

Principle 4: Perceptible Information. Information should be communicated in a way to be clear and accessible to all students (e.g. Oral, written, electronic). Reference material should

be provided in digital format to facilitate independent learning. The use of assistive technology such as reading and writing software will enable students to access information in real time.

Principle 5: Tolerance of Error. Students should understand that doing things wrong is part of learning to get them right. They should be given constructive feedback on performance through their clinical placement and should be provided with the opportunity to practice in simulations to ensure adequate performance.

Principle 6: Low Physical Effort. Teaching should be designed to reduce unnecessary physical stress, unless physical effort is an essential aspect of the job. Task should be focus on what to do and not on how to do unless the how is a core skill.

Principle 7: Size and space for Approach and Use. Proper size and space should be provided for the method, reach, operation, and usage despite the size, posture and mobility of the user.

Principle 8: Community of Learners. The learning environment should encourage the interaction between learners, educators and clinical placement staff.

Principle 9: Instructional Climate. A welcoming environment should be created which promote diversity. Staff training and awareness on issues related to disability is essential to improve attitudes and self-confidence toward including and educating students with disabilities.

As a result, adopting a Universal Design for Learning framework provides a change of perspective from one which views the learner as a source of deficit who needs accommodations to one which entrenches flexibility in procedures and material which create supportive environments for all without compromising the academic standards of nursing programs (Edyburn 2005). According to Halligan, Martyn, and Pace (2019), it important not to ignore

issues through the fear of not doing it correctly, and neither is it acceptable to eliminate areas of clinical practice just because the student declared to the preceptors that the task is challenging to be conducted and hence an honest and open dialogue that focus the attention on the “middle ground” by avoiding under or over accommodating while sustaining an inclusive academic approach within clinic settings.

2.4.3.4 Framework to Promote Nursing Community Inclusivity.

As disability is part of the health continuum (WHO 2001), it is important that educational programs instill in nursing students the ability to appreciate and respect their culturally diverse peers which strengthen the cohesion of the nursing community. Zlotnick and Shpigelman (2018) provided a five-step conceptual framework, using an example of a nursing student with a disability, to promote community inclusivity among nursing students through establishing a health promotion course as a platform to focus on the connections between social wellbeing, health and inclusivity and community that is linked to caring, empathy and cultural competences as core values in nursing profession.

The first step of the framework is comprised of a lecture to teach nursing students about the basic concepts of health promotion. They are taught that health promotion aims to assist individuals to determine their health goals in terms of wellbeing and not merely absence of disease. Students are also educated about three major strategies to advocate, enable and mediate health promotion activities to enable them to encourage positive attitudes towards health, to promote equity in health and to create supportive environments to assist people in achieving their highest level of wellbeing as well as to realize how the interaction between the direct and indirect physical and social environments affect wellness.

The second step of the framework includes a discussion about the social environments and its impact on our communities. Students are encouraged to reflect on individuals who were excluded by others in the social environment and are stimulated to think of how stigma and bias are prevalent in society and how beliefs can motivate or impede nursing students with disabilities.

The third step of the framework includes providing a lecture introducing the precede-proceed model (PPM), a nine- stage ecological model that provides a plan for conducting a community assessment that includes collecting objective information such as demographic characteristics, funds and deficits as well subjective information related to political context, attitudes towards healthcare and life quality of a group of people. The model also includes an appropriate intervention and assessment of the outcomes.

The fourth step of the framework includes demonstrations, simulations and role-playing of being a person with a disability in an inaccessible environment which provides students with a better understanding of the difficulties encountered by people with disabilities. Such pedagogical techniques are considered to help students to practice in a safe environment before they become nurses.

The last step of the framework includes encouraging students to reflect on the process and the project design and execution. Students may realize that it takes time to modify attitudes and that using diverse interventions based on this model is necessary when one intervention fails to change attitudes. Zlotnick and Shpigelman (2018) concluded that the 5-step framework to promote inclusion in the community provides a method of integrating inclusivity within the nursing curriculum which does not only teach nursing students about health promotion but also

encourages them to connect between inclusivity, social environment and community membership.

Overall, there is a growing recognition of the importance of accommodating nursing students with disabilities in nursing education. Different studies have explored strategies to support students with disabilities in nursing education programs. There is a paucity of research to date on specific clinical accommodations and support strategies in clinical settings in the UAE. Issues related to the education of nursing students with disabilities and best practices for accommodations in clinical settings are complex. Hence, more research is needed to identify effective strategies for doing so.

2.4.4 Disability Legal Climate in the UAE

Since the establishment of the UAE in the 1970s, the government has recognized the significance of assisting people with disabilities to have equal rights as others in all aspects of life (Gaad 2019). As a result, the UAE established different laws and policies to defend their rights for equal and fair education and employment opportunities (Wiens, Karaki, & Mohebi 2022; Alzyoudi, Opoku, & Moustafa 2021).

Literature was reviewed to identify explicit general disability policies or frameworks, policies and framework related to educating students with disabilities as well as health sciences institutional policies related to admitting and supporting nursing students with disabilities. The list of these policies is not intended to be exhaustive but detailed enough to present a useful literature review of concrete policy examples related to educating students with disabilities in nursing schools in higher education in the UAE.

The UAE recognized the rights of people with disabilities in its Federal Law No 29 of 2006 regarding the Rights of People with Special Needs. Federal Law Number (29) by Ministry of Social Affairs (2006, p.5) states that “UAE guarantees for the person with special needs the equality with people without special needs and non-discrimination due to special needs in all the legislations”. This legislation strives to protect the rights of people with disabilities and to provide them with all services that are within their skills and capacities. For the UAE, special needs may not necessarily be a barrier to accessing their rights and services, particularly in the areas of welfare and social, economic, health, educational, professional, cultural, and promotional services. In addition to the foregoing, the UAE provides equality and non-discrimination to those with special needs.

Furthermore, the law stipulates the importance of providing them with their rights in different aspects of life taking into consideration the importance of applying the needed modification to the curricula to meet their academic needs such as using tactile writing system, sign language, and assistive technology to facilitate their learning process (Ministry of Social Affairs 2006). Moreover, the law requests the formation of a dedicated committee to regulate the education approaches, such as admission, the provision of the needed adaptations and accommodations, evaluation of the provision offered, as well as supporting academic institutions’ administration in including students with disabilities and in providing them with a favorable educational environment (Ministry of Social Affairs 2006). The law also guarantees the right of expression for people with disabilities by using Braille, Sign Language and other methods of communication, and their right in requesting, receiving, and transmitting the information equally with others and it stated by Ministry of Social Affairs (2006, p.7) that:

The State guarantees for the person with special needs equal chances in education in all the educational and pedagogical institutions, the vocational qualification, teaching of adults, the continuous teaching in the regular classes or in special classes; if necessary, with providing the curriculum in the language of sign or Braille and any other methods as necessary.

Additionally, based on the law, the right of people with disabilities to benefit from the health and rehabilitation services and the support services and their rights to work and occupy public positions are declared. Ministry of Social Affairs (2006, p.9) also states that:

The UAE national person with special needs enjoys the right to work and occupy the public positions, for which the special needs, in themselves, do not constitute an obstacle hindering from applying and being selected for jobs.

Additionally, discrimination is rejected and denied by the UAE, whereby, the UAE restricts any act of discrimination and promotes equality and non-discrimination within its Laws as stated by Ministry of Social Affairs (2006, p.3):

Any discrimination exclusion or restriction due to special needs which cause damaging or denying recognition of any rights prescribed under the legislations applicable in the state, enjoying them or practicing the same equally, is restricted.

However, Ministry of Social Affairs (2006, p.2) in the law defines disability as a failure in an individual's functions by stating that,

[e]very person suffering from a temporary/permanent, full /partial deficiency or infirmity in his physical, sensational, mental, communicational, educational or psychological faculties to an extent decreasing the possibility of satisfying his ordinary requirements in the conditions of people without special needs.

According to Pineda (2020), the Federal Law No. 29 does not describe disability as a shortcoming from the social or physical environment to reduce the limitations caused by the disability but as a failure in the functions of the individual. Pineda (2020) argued that the awareness towards disability in the UAE is mentioned in the context of health in which people with disabilities need rehabilitation to integrate into society reflecting how policies between 2006 and 2014 adopted the medical model of disability.

National Policy to Empower People of Determination: The National Policy to Empower People of Determination, which was issued in 2017 (p. 9), states that, “[e]mpowering people of determination and their families, through setting policies and innovating services that allow them to enjoy a high quality of life.” This implies that the policy is to empower people with disabilities by securing their right to a dignified life and by encouraging them and their families to actively engage in the community and fulfill their roles. Warner and Moonesar (2021) explained that the UAE National Policy for Empowering People of Determination is aimed to promote an inclusive society by referring to people with disabilities (PWDs) as “People of Determination” and by ensuring their right in health and rehabilitation; education; vocational rehabilitation and employment; outreach; social protection and family empowerment; and public life, culture, and sports reflecting how the UAE National Policy for Empowering People of Determination adopts the social model of disability that does not seek to fix people of determination to accommodate the society but seeks to change society in order to accommodate the need of people with disabilities (Camulli & Xie 2019).

In addition to the foregoing, the policy aims to provide people with disabilities with the needed support in education settings, improving the awareness of all community members on the importance of inclusion, and to prepare people with disabilities for the job market and providing them with suitable work possibilities for various types of disabilities and levels of severity.

Law No. (3) of 2022 Concerning the Rights of Persons with Disabilities in the Emirate of Dubai. The law aims to encourage the participation of people with disabilities into all areas of life and give them the right and opportunity to live independently on an equal footing

with others. Moreover, the law combats all forms of discrimination based on disability, including all acts of abuse, neglect, and exploitation. The law also aims to incorporate the rights and interests of people with disabilities in the government policies, strategies, legislation, plans, programs, and projects; and involve people with disabilities in the process of formulating government policies, plans, legislation, and programs; and in making the decisions relating to them or affecting their well-being.

The definition of disability established by Law No. (3) of 2022 (DLP 2022, p.2) reflects the critical role that several environmental elements such as physical, social, attitudinal, policy, and legal impediments play in disability and emphasizes the important role that environmental factors like physical, social, attitudinal, policy, and legal barriers play in disability, as stated below.

A person suffering from a permanent or temporary physical, sensory, mental, communicative, learning, or psychological deficiency or impairment which, as a result of interaction with other physical and behavioral barriers, may hinder his full and effective participation in the society on an equal footing with others.

Pineda (2020) stated that Law No. (3) of 2022 indicates how the emirate of Dubai shifts away from a limited medical perspective on disability and toward a new, broader, sociological perspective that emphasizes that disability results from obstacles erected by society. According to Pineda (2020), the emirate of Dubai in 2014 assumed a special leadership role in leading the Dubai Disability Strategy and provide an effective and operational framework for sustainable evolution and to promote a culture of inclusion.

The law describes the rights of people with disabilities in inclusive education at all stages, rights in rehabilitation and employment opportunities in all sectors, rights in healthcare and medical treatment services. The law also describes the rights of people with disabilities in

social services, accessibility to various places, services, and data, participation in sports activities and various recreational events. For this purpose, the concerned entities that are responsible to achieve these objectives are well listed and described. Moreover, under this law, people with disabilities are protected from any act of discrimination based on disability. People with disabilities are also issued special cards so they can be identified and assisted in availing of the services, facilities, and privileges to which they are entitled under this law.

2.4.4.1 Inclusive Education Legislations in the UAE

The UAE promotes and ensures the educational rights of people with disabilities. Hence, the country established different initiatives to ensure the rights of people with disabilities to education.

General Rules for the Provision of Special Education Programs and Services. The release of the General Rules for the Provision of Special Education Programs and Services in 2010 by MOE (2010, p.21) was the first initiative of the UAE and it stated that, “an important consideration in special education is to provide the student with disabilities an education in the least restrictive.” The law stressed on the rights of people with disabilities to appropriate education and to encourage and regulate inclusive services in public schools as stipulated by the Federal Law 29/2006. The guidebook included how the necessary accommodations and conducting appropriate adaptations to the curriculum and assessment system will be provided as well as how special education services will be offered to students with disabilities in the least restrictive circumstances in public and private schools.

The guidebook describes the disability types that make students eligible for special education programs and associated services including students with specific learning

disabilities, students with physical and health-related disability, students with visual impairment, students with hearing impairment, those with speech and language disorders as well as students with individuals with communication disorders, Autism Spectrum Disorder and emotional and behavioral disorders. Additionally, individuals with problems in intellectual functioning are grouped under the intellectual disability category in which individuals show a significant drop in their intellectual functioning that can be comorbid with difficulties in adaptive behavior.

Indication of how to support students whose abilities, talents, and potential for success are so great or advanced that special education is critical since such individuals may not fit adequately inside standard curriculums was also indicated in the document by MOE (2010, p.13) and it specifically stated that:

The proposed categories of special education described in these guidelines, no longer only apply to individuals with a disability. Categories of special education now include Gifted and Talented individuals whose abilities, talents and potential for accomplishments are so exceptional or advanced that special education and support services are needed for the student to meet educational objectives and goals in the general education classrooms.

2.4.4.2 Dubai Inclusive Education Policy Framework

A further step to promote the education of diverse learners in the UAE and as a continuous endeavor to spread the provision of inclusive education in the public educational system is the launching of the Dubai Inclusive Education Policy Framework (DIEP) by the Knowledge and Human Development Authority (KHDA) which was another attempt to provide a completely inclusive educational system for students with disabilities through the Emirate of Dubai (KHDA 2017). The goal of the DIEP is to improve education for all students while embracing the concepts of diversity and fairness. The Salamanca Statement and Framework for Action, the Federal Law No. 29 of (2006), and the Convention on the Rights of Persons with Disabilities (CRPD) all influenced the development of DIEP. This is clarified in the definition

that the goal of inclusive education is to ensure that all students have access to high-quality education by successfully addressing their different needs in a way that is flexible, welcoming, courteous, and encouraging (KHDA 2017). Likewise, the policy aims to enhance inclusive education for all students and to disseminate information on the practices and requirements needed to achieve this goal as indicated by KHDA (2017):

Every day, in every classroom, all students, including those identified as experiencing special educational needs and disabilities, will learn and achieve in a safe, supportive, engaging and appropriately challenging common learning environment. Within such a setting, their personal, social, emotional and academic needs are fully met.

Additionally, the framework by KHDA (2017) highlights Dubai's 10 inclusive education criteria, which are intended to improve and broaden the availability of high-quality inclusive education services in Dubai's schools and other learning environments, which are indicated as follows:

“The following standards provide clear guidance about the actions necessary to assure good governance and accountability to enhance and extend quality inclusive education services within schools and other education settings across Dubai:

- Identification and Early Intervention
- Admissions, Participation and Equity
- Leadership and Accountability
- Systems of Support for Inclusive Education
- Special Centres as a Resource for Inclusive Education

Technical, Vocational Education and Training (TVET) Higher Education and Post-School Employment as indicated in Dubai Inclusive Education Policy Framework (KHDA 2017).

2.4.4.3 Disability in Nursing Education

The UAE Nursing and Midwifery Council (UAE-NMC), a regulatory and organizational entity for nursing and midwifery, is responsible for organizing nursing and midwifery and developing their services. As a result, it has set education standards to be the building blocks for nursing and midwifery education programs. According to the Nursing and Midwifery Education Standards in the UAE (2013) document, the World Health Organizations standards framework (WHO 2009), was used as the foundation for Midwifery Education and was congruent with the nursing and midwifery UAE Scope of Practice for Registered Nurses and Midwives and Regulation (UAE NMC 2012). The standards indicate the needed objectives and characteristics for nursing students and the essential skills to graduate successfully from the nursing education program. Moreover, the standards identify the program's needs including structure, curriculum development, corporations, educational setting, qualifications of professors, support, admissions program, and student support.

In relation to people with disabilities in nursing education in the UAE, in general there is very limited data relating to the inclusion of students with disabilities in nursing programs. However, Standard One in of the UAE Nursing and Midwifery Education Standards (p. 12) mentioned that, “student support services are in place and meet the diverse needs of student body”, which indicated that diversity should be promoted among nursing students and that support services should be present based on students' diverse needs but without clearly indicating how to achieve this goal in theory and clinical settings.

Moreover, Standard Two describes program organization and stipulates the necessity of healthcare academic institutions to have an infrastructure that ensures students' safety and well-being of all students.

According to Al-Yateem et al. (2020) and Saifan et al. (2021), nursing education in the UAE is still progressing and responding to the educational needs of a diverse learner population to resemble the diversity in the nursing workforce in the UAE is a challenge and that the slow improvement in the undergraduate nursing programs and the slow embracing of the international developments in nursing and clinical education within these institutes are challenges in the way of nursing education development in the UAE.

Currently, there are five academic institutions in the UAE that offers Bachelor of Science (B.Sc.) degree in Nursing program. The policy documents related to four institutions each in four Emirates: Ajman, Ras Al Khaimah, Abu Dhabi, and Al Sharjah, reflected in one way or another their support to students with disabilities and how their work is in alignment with the UAE's national policy in including students with disabilities in higher education.

Reflection of the National Policy to Empower People of Determination. The UAE National Policy to Empower People of Determination is reflected within most of the health sciences academic institutions' policies. Each of these institutions reflected its alignment with the UAE's National Policy in their own way.

Some institutions explained it explicitly within their introductory statements as outlined below:

Education is an essential right for everybody, and His Highness has been heedful of the right to education of people with disabilities, and so, schools of the Emirate of Sharjah have been opened for pupils with mobility and visual impairments. (Health Sciences Academic Institution 3 - Al Shareqa- Disability Resource Center Directory Services for PWD. Webpage.)

However, other institutions reflected their support of inclusive education through mentioning equity as one of their core values and respecting diversity as the bases of

relationships between students and teachers, which is quoted in Health Sciences Academic Institution 4 (Ras Al Khaima) - Students Handbook (p. 8) as: “Core Values: 1) Collegiality 2) Equity.”

Some institutions opened a disability resource center to support students with disabilities, to guarantee their rights to proper education, and to help them in determining suitable jobs as well as to increase community awareness about people with disabilities and their important role within the community.

Accommodations for Students with Disabilities. Most of the health sciences academic institutions provide different accommodations for students with disabilities. Some of these accommodations are related to introducing physical accessibility alterations for their facilities to ensure safe and as much as possible autonomous accessibility. Other accommodations set more emphasis on accommodations related to educational programs and educational methods including students' performance evaluation and assessment as well as accommodations related to providing supporting services such as counseling and advising, and introducing some adjustments to the assessments as well:

Provide Accessible Facilities for Students:

- Ramps

- Wheelchairs

- Escalators

- Special parking arrangements. (Health Sciences Academic Institution2 (Ajman) - Students of Determination _ CoHME - _ UAE, Webpage.)

Deferred Assessment - Students may apply for deferred assessment if they were prevented from performing an assessment item, such as an examination, text, seminar presentation, or other assessment activity scheduled for a particular date. (Health Sciences Academic Institution 1 (Abu Dhabi) - Policy and Procedures, p.145.)

Equality and Equity in Nursing Education Institutions. There is inconsistency in the admission requirements and criteria among most of the health sciences institutions in the UAE.

No medical assessments were required by two institutions whereas, other two institutions required medical fitness as the main admission criteria. Moreover, some of the health sciences academic institutional documents lacked disability sensitivity in students' admission and retainment criteria. These documents focus on equality among all students rather than equity specifically in what relates to applicants' need to be fit to be admitted to the educational program; and the medical, physical, and mental fitness required to be part of the nursing program. For instance, Health Sciences Academic Institution 3 (Al Sharjah) - Admission for Undergraduate Admission Process (p. 1) mentioned that, "the applicant should be medically, physically and mentally fit to be admitted to the university in accordance with the desired major." However, Health Sciences Academic Institution 1 (Abu Dhabi) - Student Handbook (p. 8) outlined the below:

Medical Fitness: The college provides a well-rounded educational system where health activities play a major part. Should a student develop a medical condition that would prevent her from taking an active part in all learning activities, the Academic Committee may withdraw her from the program. This will be done in full consultation with the student's parent or guardian.

In summary, it is clear from the review of literature that the UAE has recently made considerable attempts to address disability concerns at the local and national levels. In fact, the UAE efforts to address disability issues is apparent at both national and local level. It is evident that the UAE supports people with disabilities and upholds their rights in education and in the workplace through its policies, laws and regulations, and frameworks for putting those policies into practice. Considering the different disability laws, all academic institutions are requested to provide reasonable and necessary modifications to prevent discrimination and ensure access and opportunities for students with disabilities. However, some health sciences academic institutions have conditional admission and retention of students if they were medically physically, or mentally not fit or if they have any medical condition that stops them from performing their

daily life activities. Moreover, there is a dearth of documents related to nursing education in the UAE, and very limited data was found relating to the inclusion of students with disabilities within nursing programs. Therefore, issues related to the admission and support policies of students with disabilities in nursing education programs require more investigation.

2.5 Chapter Summary

To sum up, the theoretical and conceptual framework considers essential dimensions of disability inclusion in nursing education. The framework's substantial dimensions include the perceptions of nursing stakeholders of disability inclusion in nursing education and the proximal and distal factors in the surrounding of nursing students with disabilities that may impede or facilitate their inclusion.

The literature showed how the UAE has demonstrated its future commitment to full inclusion of people with disabilities through creating a mechanism for enabling societal change by moving away from a deficit view of disability and examining the failure of the society to be inclusive and to respect and accommodate differences that necessitates the provision of support in different aspect of life and to protect them against discrimination. Additionally, different laws and policies in the UAE support the idea of inclusive education and ensure the right of people with disabilities to have equal educational opportunities at all stages in all public and private educational institutions. However, disability in the Nursing and Midwifery Education Standards is not clearly described. Although different health sciences academic institutions in the UAE provide support to students with disabilities in their own way yet there is inconsistency in the admission criteria to nursing programs among most of the health sciences academic institutions in the UAE. It appears that there is a focus on equality among all students rather than equity

specifically in what relates to applicants' need to be fit to be admitted to the educational program; and the medical, physical, and mental fitness required to be part of the nursing program.

Moreover, a review of literature showed that although nursing students with disabilities exhibit inner strengths and compassion which can increase rapport with patients, the literature showed that there are issues related to education of nursing students with disabilities and discussed different strategies and practices for accommodations in clinical settings. Yet, to identify the best practices for accommodations is complex and requires further investigation. The topic of the inclusion of nursing students with disabilities in nursing education programs has not been yet explored in the UAE and Middle East and North Africa region. To date, no studies within the UAE have sought to explore the perceptions of nursing education stakeholders towards the inclusion of nursing students with disabilities. Hence, it is important to understand these perceptions so the nursing student with a disability is provided the best chance for success. With the current incitement in nursing on cultural diversity, nursing can promote equality for people with disabilities (Scullion 2010). For individuals with disabilities to become nurses, they should graduate successfully from schools of nursing. To accomplish this, it is important to understand the culture of nursing education and the perceptions of nursing education stakeholders toward the inclusion of nursing students with disabilities which might be culturally impacted and could create barriers for nursing students with disabilities. Using a mixed methods design to explore this specific problem within the culture of nursing education would help to understand the issue and provide a guide for a social change within the nursing environment.

Chapter 3 Methodology

3.1 Introduction

The purpose of this research is to explore nursing education stakeholders' perceptions about inclusion of students with disabilities in nursing education programs in the UAE and the barriers and facilitators to their inclusion. The research intends to address the following research sub-questions:

Sq. 1 What are the nursing education stakeholders' views on the barriers to nursing students with disabilities' inclusion in nursing education programs in the UAE?

Sq. 2 What are the nursing education faculty members and nursing education students' perceptions of the inclusion of nursing education students with disabilities?

Sq. 3 Are there any demographic differences in the nursing education faculty members and nursing education students' perceptions of the inclusion of nursing education students with disabilities?

Sq. 4. What are the facilitators to the inclusion of nursing students with disabilities in nursing education in the UAE as viewed by nursing education stakeholders?

This chapter presents a description of the study approach and design including the philosophical paradigm, its rationale, site population, sampling, and samples, in addition to instrumentations, data analysis, and ethical considerations.

3.2 Research Approach and Design

It can be argued that the use of mixed-method approaches became popular among researchers in social science as it associates quantitative and qualitative research methods (Bergman 2008). According to Lodico, Spaulding, and Voegtle (2010), since educational research includes other various disciplines, it is suggested that researchers use multiple research approaches and theoretical constructs which could mean using a combination of qualitative and quantitative methods to help the researcher in collect meaningful data leading to more insights into the research problem (Teddle & Tashakkori 2009). Patton (1990) explained that it is important to focus attention on the research problem and then use pluralistic approaches to know more about it. According to Mertens and McLaughlin (1995), the variations in cultural and social contexts and the progress in diversity and inclusion influence the approaches used to explore the concept of disability in education.

In this study, a mixed-method research approach was followed to achieve the objective of this research study which is to explore nursing education stakeholders' perceptions towards the inclusion of nursing students with disabilities in nursing education programs in the UAE and to identify the barriers and facilitators of their inclusion. Both quantitative and qualitative methods of research were included in data collection in this study. Quantitative and qualitative approaches offer unique strengths that researchers can leverage based on their research objectives and the nature of the phenomena they are investigating. While the quantitative approach provides precise numerical data and allows for generalizations, the qualitative approach delves into the richness and context of human experiences. By combining these approaches in mixed-methods research, researchers can attain a more comprehensive and nuanced understanding of their research topics (Tashakkori & Teddle 2003). In fact, disability

is a socially constructed phenomenon that is understood differently by different people (Mertens & McLaughlin 1998). Therefore, adopting a mixed methods approach that combines qualitative and quantitative methods to study the phenomenon under exploration is essential.

The researcher based her choice of adopting mixed methods approach on Greene, Caracelli, and Graham (1989) reasoning which includes seeking triangulation, development, complementarity, and expansion in order to offset or counteract biases and strengthen the validity of inquiry results. The use of both qualitative interviews and a quantitative questionnaire to explore the perceptions of nursing stakeholders towards the inclusion of nursing students with disabilities in nursing education programs and the barriers and facilitators to their inclusion illustrated this triangulation intent which enabled the researcher to compare the views of the stakeholders from each method to obtain valid and more reliable results by neutralizing inherent method bias as well as the biases of the inquirer.

Another reason for adopting a mixed method work is the development of data. According to Madey (1982), development seeks to utilize the findings from one method to help develop or inform the other method to increase the validity of constructs and inquiry results by exploiting inherent method strengths. In this study, the researcher adopted mixed methods approach with a development intent through using the results of the qualitative data in the unstructured interviews to help in developing the quantitative data collection tool (questionnaire).

By using various techniques for various inquiry components, expansion aims to broaden the inquiry's breadth and range (Madey 1982). Regarding this work, the researcher was able to examine nursing education stakeholders' perceptions towards the inclusion of nursing students with disabilities using in-depth qualitative participant information, which was used to build upon

quantitative findings, by employing mixed methods research with expansion purpose. Quantitative methods were used to survey the perceptions of nursing education faculty members and nursing education students towards the inclusion of nursing students with disabilities and to identify demographic differences in their perceptions whereas qualitative measures were used to elaborate on the quantitative findings to produce a more comprehensive evaluation of the one hand and to resuscitate insufficient quantitative controls or statistical power through discussing, from nursing stakeholders' perspectives, different strategies to facilitate the inclusion of nursing students with disabilities in the nursing education programs in the UAE.

Complementarity includes using qualitative and quantitative methods to enhance, clarify and elaborate on the results from one method with the results from the other method (Rossman & Wilson 1985). In this study, the complementarity intent was illustrated by the use of semi structured interviews to elaborate on the results from the questionnaire and to clarify trends in data.

3.3 Research Paradigm

Each research method has different assumptions and views linked to the paradigm that guided how the researcher explored the concept of inclusion in nursing education depending on how they viewed the nature of social reality and how this reality was constructed (Creswell 1994).

The term paradigm was introduced by Thomas Kuhn in 1970 to refer to the philosophical assumptions and shared generalizations, beliefs, and values of a community regarding the researcher's worldview and the nature of reality and knowledge (Patton 2002; Creswell & Clark 2011). According to Mackenzie and Knipe (2006), the term paradigm in educational research is

used to describe a researcher's 'worldview' which is the perspective, thinking, school of thought, or set of shared beliefs that impact how the research data is interpreted and is the conceptual lens through which the researcher examines the methodological aspects of their research work to decide on the research methods that will be utilized and on the way the data will be analyzed. Candy (1989) proposed many paradigms that he grouped into three main classifications, namely Positivism, Interpretivism/ constructivism, and Critical paradigms. The fourth classification, known as the Pragmatic paradigm, was proposed by Teddlie and Tashakkori (2003) and derives features from these three. Each paradigm is rooted in specific assumptions that produce different ways of theory building.

The Positivist paradigm is grounded in what is recognized in research approaches as the scientific method of investigation and assumes that experimentation, observation, and reason based on experience should be the heart for understanding human behavior, and hence, the only valid means of extending knowledge and human understanding. As researchers realized that these features cannot be fully applied in settings where humans are involved and that the social and natural worlds cannot be studied in the same way, a derivative of the positivism paradigm, known as the Post positivist paradigm, was proposed (Guba 1990).

A post-positivist paradigm is a traditional form of postulation necessary for researchers adopting quantitative methods (Creswell 2014). Post-positivists try to investigate the causative relation between variables, yet they believe that knowledge is hypothetical and absolute truth can never be found when dealing with humans (Creswell 2012). Post-positivists reject the idea that a researcher can be an independent observer of the social world and argues that the identity of researchers and their experience impact their observations and influence their interpretations (Clark 1998); however, they pursue objective answers by recognizing subjective biases and

consider such biases when developing theories and knowledge. As a result, the researcher must stay impartial and unbiased to avoid any intrusion or bias which can be obtained by following specific procedures accurately (Mertens 1998).

Interpretivism believes that reality is socially constructed (Guba & Lincoln 1994). They differentiate between the social and natural sciences aiming to comprehend the meaning of diverse social phenomena. They also give importance to the subjective experience of people aiming to objectively interpret subjective experiences through using proper empirical methodologies. Accordingly, the purpose of the interpretive research is to comprehend how people in society validate their subjective realities and provide meaning to them and to show how these meanings and views affect people's behaviors.

Constructivism, also known as social constructivism (Creswell 2014), has a sociological origin and is prevalent and widespread in qualitative research as it endeavors to define the nature of reality (Phillips & Burbules 2000). Social constructivists hold that humans have a wide range of subjective experiences that affect how they see the world. Crotty (1998) asserts that people often build their knowledge and comprehension of the situation they are in when they interact with the world and the culture. Reality may therefore be socially manufactured.

The Critical / Transformative worldview locates its research on issues related to social justice. This worldview seeks to address issues related to politics, society, and economics, which lead to social oppression and injustice, and tries to oppose social oppression and create social justice (Mertens 2007). According to Guba and Lincoln (1988), studies conducted within the transformative paradigm is characterized by promoting human rights, creating equal power within social structures, and examining the conditions of a group of individuals in a social

situation and position with a central focus on revealing social oppressive practices that are hidden, leading to freedom, liberation and social justice.

Pragmatists come with another position about worldviews which is pragmatism which according to Tashakkori, Teddlie, and Teddlie (1998) is significant in social science research. Onwuegbuzie and Leech (2005) explained that the central ontology of pragmatism is actions and change. Pragmatists believe that people's knowledge and actions are inseparable (Goldkuhl 2012).

Morgan (2013) believed that, from a philosophically pragmatic perspective, human action is linked to previous experiences and beliefs that have developed from those experiences and are related to the consequences of those actions. Therefore, objective reality does not occur since the consequences of any action is dependent on the situation in which the action occurs. According to Morgan (2013), consequences can change as situations change and hence it is impossible to experience similar situations twice, so the beliefs related to actions are innately conditional, and that actions can change whenever the consequences of those actions change. Moreover, pragmatists believe that no two individuals have similar experiences and hence no two worldviews are alike. Therefore, worldviews are individually unique and socially shared (Morgan 2013). According to Creswell (2014), a pragmatist researcher combines quantitative and qualitative inquiries in one study and is free and utilizes all existing approaches to understand the problem.

The researcher selected the Pragmatic paradigm to conduct this research study which guided the choice of the study methodology and had permeated the topic, the research questions, the selection of participants, data collection procedures and tools, as well as data analysis. The researcher found that pragmatism had the potential to offer a suitable framework for this study

allowing the plurality of views and methods (Fraenkel & Wallen 2009; Creswell 2014); hence fits closely with the aim of this study. The concept of disability is a multifaceted social phenomenon that requires utilizing diverse data collection approaches to data collection to understand and reveal these complexities and to have a better knowledge of the concept under study (Creswell & Clark 2010). Moreover, pragmatism brings together scientific and human side domains to understand reality (Dooley 1974) which is relevant to this study as nursing education embraces both aspects of humanism and scientific inquiry which is viewed by pragmatists as a natural part of the world aiming at improving people's condition by accommodation and adaptation (Morgan 2014). Furthermore, through adopting the pragmatic paradigm, the researcher may have contributed to solving the problems of social injustices that persist in society by using different research methods that helped the researcher to look at the nature of knowledge, reality, and inquiry regarding the concept of disability from a flexible and non-dogmatic stance that cannot be captured by using only one research method (Maxcy 2003).

Moreover, an important justification to embrace the pragmatism paradigm is that special and inclusive education is centered on problem-solving which is central to the philosophy of pragmatism (Kaushik & Walsh 2019) which justifies the importance of promoting diversity and creating a supportive environment for marginalized learners. Teaching students with disabilities requires constant planned activities and continuous problem-solving processes to provide proper support. Educators must identify the problems and find different ways to solve them and do the necessary to deal with the problems as they arise. Inclusive educators, as pragmatists, reject premade and rigid solutions and promote freedom and possibility over absolute truths (Vasianovych et al. 2020) and hence value flexibility in teaching methods to accommodate students with disabilities.

Besides, the pragmatism approach, consistent with that of mixed methods, uses different ways to understand the best ways students with disabilities can learn and therefore is essential in inclusive education as it provides unique value to solving problems that have many layers that require different and multiple methods of data collection and hence embrace a plurality of methods (Florian, Rose, & Tilstone 2002). The philosophical analysis of pragmatism values the creation of knowledge for social justice-oriented professions that are linked to pursuits of social justice (Morgan 2014). Pragmatism suggests that it is important to consider the different environmental factors in the contexts of individuals in order to understand them fully (Kaushik & Walsh 2019).

3.4 Rationale for Study Design

Creswell and Clark (2010) listed different types of mixed methods designs that are frequently used in educational research which are the concurrent mixed method and sequential mixed method designs. There are two sequential designs: the explanatory sequential design and the exploratory sequential design (Johnson & Christensen 2019). In an exploratory sequential design, the researcher starts with the qualitative stage to explore the phenomena by collecting qualitative data from a specific sample in order to use its findings for the next quantitative stage. The aim of this sequential design is to build a suitable instrument that can be used on a sample of population and check whether the qualitative data can be generalised to the population in the quantitative stage (Creswell 2014). This design differs from the explanatory sequential approach, which starts with the quantitative phase to develop issues resulting from numerical data that serve the qualitative phase, in which more information will be obtained to follow up and perfect the quantitative results (Fraenkel & Wallen 2009).

In this study, the researcher used exploratory design for several reasons. Firstly, the phenomenon of disability inclusion in nursing education has not been well explored. The literature review related to disability inclusion in nursing education in the UAE showed few findings to guide the researcher, therefore, the qualitative phase was rewarding in allowing the researcher to detect new themes and variables and helped in identifying a larger range of topics to understand how individuals frame their understanding around disability inclusion phenomenon in nursing education. As a result, the delay in quantitative data collection was due to the researcher's requirement for further conceptual leverage connected to nursing education before developing a questionnaire. Therefore, the exploratory sequential mixed method design was sought to allow the researcher to identify new themes and variables related to disability inclusion in nursing education that may not be well known in the UAE context.

Secondly, it is important in this research study to give nursing education stakeholders' the opportunity to talk freely about their views towards the factors affecting the inclusion of students with disabilities including the barriers to their participation in nursing education programs and which requires in-depth collection and analysis of the data they provide. Therefore, the participants' views and opinions have been given priority.

Thirdly, nursing educators and nursing students in the UAE nursing schools had rarely been asked about their perceptions towards the inclusion of nursing students with disabilities, as a result, the researcher attempted to develop a questionnaire as a tool that can be used to collect data about perceptions of these groups of nursing education stakeholders towards the inclusion of nursing students with disabilities, a room about which there is limited knowledge. Therefore, collecting data from open-ended interviews was assumed to help in the identification

of a series of major themes, which the researcher converted to a series of questionnaire items that were well suited to the study participants.

Another reason was related to the fact that quantitative methods typically require prearranged research procedures before they are used. As a result, there are few options for amending a quantitative study after data has been collected. Therefore, it is imperative to start with the best possible content for the questionnaire since if the wrong questions were asked the whole study might be jeopardized. Since the researcher is not specialized in the field of nursing education and to ensure that appropriate content for the questionnaire is included, starting with a qualitative study was thought to be valuable and needed. So, the two databases were created at different times, one following the other (Creswell 2014).

3.5 Rationale for Using Three-Part Exploratory Sequential Mixed Methods Design

Morgan (2013) explained that a three-part exploratory sequential mixed methods design, that includes the conduction of qualitative studies before and after a quantitative study, is the most common format of three-part sequences. The first qualitative study is to maximize the effectiveness of the quantitative study while the second qualitative study follows up on the results of the quantitative study and investigates issues that go beyond the quantitative study. Morgan (2013) explained that follow-up qualitative studies can help in either illustrating results that conform to the predictions of a survey or to investigate results of a survey. Morgan (2013) gave an example of a study conducted by Luyt (2012) and by Farquhar, Ewing, and Booth (2011) who used qualitative follow-up to learn more about why a certain program performed in the way that it did and to learn more about the practical performance of the program.

Therefore, in this study, the researcher extended the basic sequential mixed methods design by increasing their number from a Two-Part design to a Three-Part design: QUAL → quan → QUAL as follows. In the first phase, the researcher used a qualitative method, through conducting open-ended in-depth individual unstructured interviews with a group of nursing education stakeholders to uncover their views on topics to be included in the questionnaire, to discover new topics that should be added, and to develop the content for a set of questions that would “operationalize” some information related to the inclusion of nursing students with disabilities and the barriers to their inclusion that was gathered from literature review and finally to define the actual wording of the questionnaire items.

In the second phase of the study, the researcher applied the quantitative method. In this phase, the researcher used a cross-sectional survey that was designed to investigate a large number of the nursing education stakeholders’ perceptions towards the inclusion of students with disabilities. Muijs (2011) and Creswell (2012) declared that it is the most popular in education and social science research to measure how people perceive issues and their beliefs and opinions. Therefore, it is suitable to be implemented in this study to explore the nursing education stakeholders’ perceptions towards disability inclusion in nursing education programs.

The last phase was a qualitative follow-up study that was conducted through the employment of semi-structured interviews with a group of nursing education faculty members, nursing education students, and administrators with the purpose to explain the questionnaire results in relation to how a number of suggested inclusive practices and accommodations can facilitate the inclusion and participation of students with disabilities in nursing education programs in the UAE (Figure 5). Moreover, the researcher sought of adding more value to the

study by supplementing the generality of quantitative results with UAE context-specific depth and detail that qualitative methods can provide.

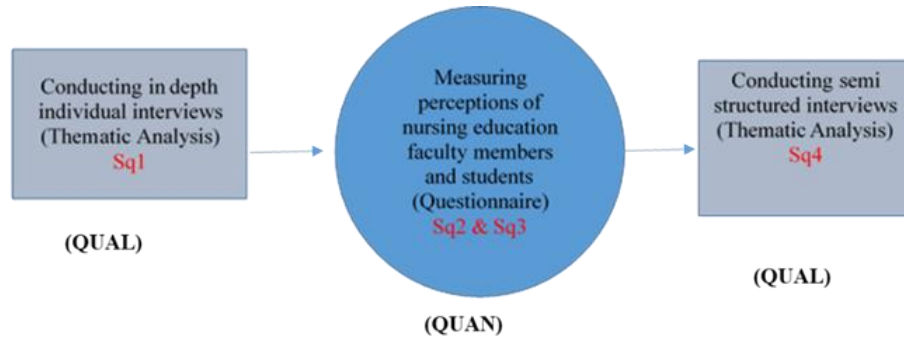


Figure 5: Exploratory Sequential Mixed Method Design

(Source: Author's Own)

Furthermore, the following Table 2 illustrates the research approach and design adopted in this study.

Table 2: Research Approach and Design

Purpose	To explore nursing education stakeholders' perceptions about the inclusion of nursing education students with disabilities in nursing education programs in the UAE and the barriers and the facilitators to their inclusion.					
Approach	Mixed Method					
Design	Exploratory Sequential Mixed Method Design					
Research Sub questions	Approach	Site	Participants	Sampling Technique	Instrument /Tool	Data Analysis
Sq1. What are the nursing education stakeholders' views on the barriers to the inclusion of nursing education students with disabilities in nursing education programs in the UAE?	Qualitative	Health sciences academic institution (Abu Dhabi, Ajman, and Al Ain campuses)	1 Acting chief nurse officer 1 Chief operating nurse officer Health sciences academic institutions 1 head of the nursing program 1 head of campus 1 supervisor student services 1 nursing education faculty member 1 Year 3 nursing education student	Purposive sampling (Nurse officers, head of the nursing program, head of campus, supervisor of student services Convenience sampling (nursing education faculty member and nursing education student	In-depth unstructured interviews	Thematic analysis (Braun & Clarke 2006)
Sq2. What are the nursing education faculty members and nursing education students' perceptions of the	Quantitative	Health sciences academic institution (Abu Dhabi, Ajman, Al Ain, and Al Dhafra campuses)	284 nursing education students 29 nursing education faculty members	Convenience sampling	Questionnaire	Descriptive and inferential statistics using SPSS software

inclusion of nursing education students with disabilities?						
Sq.3 Are there any demographic differences in the nursing education faculty members and nursing education students' perceptions of inclusion of nursing education students with disabilities?	Quantitative	Health sciences academic institution (Abu Dhabi, Ajman, Al Ain, and Al Dhafra campuses)	284 Nursing education students 29 nursing education faculty members	Convenience sampling	Questionnaire	Descriptive and inferential statistics using SPSS software
Sq.4 What are the facilitators to the inclusion of nursing education students with disabilities in the nursing education programs in UAE as viewed by nursing education stakeholders?	Qualitative	Health sciences academic institution (Abu Dhabi, Ajman, Al Ain campuses)	2 administrators 7 nursing education students 5 nursing education faculty members	Purposive sampling Convenience sampling	Semi-structured interviews	Thematic analysis (Braun & Clarke 2006)

3.5.1 Hurdles in Disability Research in the UAE

Despite the progress in nursing education in the UAE since 2010, admission to nursing education programs in the UAE remains below the desired level and there is a slow adoption of global advances (Al-Yateem et al. 2021) including moving towards a more diverse nursing education programs and nursing workforce (Gonzalez & Hsiao 2020). In fact, the cultural context in the UAE creates a hurdle in disability research. Morgan (2021) explained that the UAE as well as other countries in the gulf region is rooted in Bedouin culture, tradition, and history, which tends to be conservative, patriarchal, and organized along tribal lines. In Bedouin society, illness, and disability harm the bloodline and are viewed as topics not to be openly discussed since they bring shame. Gharaibeh (2009) explained that in most Arab countries, the honor of the tribe, reputation and social standing are important. Genetic defects and congenital disabilities are stigmatizing because they diminish the tribe's social standing which according to Al-Jadid (2013) creates difficulties in conducting research on disability related issues. Some cultural issues were people feel ashamed of having disabled relatives and tend to avoid participation in research. Moreover, the limitation in resources on disability including accessibility and dissemination of disability in Arab countries is a major challenge to conducting scientific research in disability (Hadidi & Al Khateeb 2015). This result was confirmed by Al-Jadid (2013) who stated that the lack of information about disability as well as poor disability statistics make it difficult to conduct disability research.

Moreover, Barnes (2003) argued that although people with disabilities are the experts on their own situations and should have their long-silenced voices heard, yet according to Barnes (2003) people with disabilities should not be the subjects of research - rather it is the disabling society that should be examined. Barnes (2003) argued that by focusing on the individual

experiences of individuals with disabilities we may undermine or ignore the significance of the environment in which those experiences are shaped - both inside and outside the educational context and there may be a risk of reverting to an individual model framework. There is indeed a very real danger that the use of personal experience as the only analytical tool 'can obscure the collective nature of disablement as a form of social oppression (Stone & Priestley 1996). Clifton (2004) explained that in order to remove barriers to equality in education, solutions must be sought at various levels - at the macro level 'through legislation, policy and guidance'; and at the micro level, because people like educators and pupils can make significant differences to the lives of others. Therefore, the attention should be turned on the society in which disabled people are forced to live their lives as the experiences of people with disabilities should be discussed within an environmental and cultural context in order to highlight the disabling consequences of a society that is increasingly organised around the needs of a non-disabled majority. Furthermore, according to Barnes (2003), within disability studies, it is important to only undertake research where it will be of some practical benefit to the self-empowerment of people with disabilities and for the removal of disabling barriers. Barnes (2003) explained that although quantitative research methods have been somewhat discredited within disability studies as it was accused of disempowering their disabled research participants and producing little in the way of positive change, policy makers however can make use of figures and statistics to add weight to their arguments and to justify particular actions or policy developments and to highlight the various deprivations encountered by people with accredited impairments, and to research disabling barriers in society, hence quantitative research must also have some potential. The disabled people's movement has used quantitative data not to research individual disabled people, but to highlight the various deprivations encountered by people with accredited

impairments, and to research disabling barriers in society. Therefore, Barnes (2003) stated that there were calls for a blending of quantitative and qualitative approaches when conducting research in 'special' education.

Accordingly, this study involved looking at disability in nursing education but not focusing on the voice of students with disabilities in nursing education in order to avoid any ethically problematic power differentials. Disability researchers discuss the difficulties researchers have when they are not members of the community, culture or group that they study (Dahl 2010). Those who research particular cultures or specific social issues such as poverty or HIV/AIDS, are often not members of those groups. I am a person with no disability, yet my research includes nursing stakeholders with no reported disability; as such, my research seeks to understand the perceptions of a group which I am a member of. While I acknowledge the moral and practical importance of listening and hearing the voice of disadvantaged students, I know there is an explicit need for my study. Hence, this study used mixed methods approach to help in exploring the concept of disability inclusion in nursing education in the UAE, as an important step towards the empowering students with disabilities in nursing education and to identify the barriers and the facilitators to their inclusion through the nursing education stakeholders' eyes who are at the micro, meso, and macro levels.

3.6 Research Methods

3.6.1 Site Selection

Since the study revolves around nursing education programs in the UAE, health sciences academic institutions in different emirates were the starting point. According to the UAE government portal, there are five accredited universities that offers a Bachelor of Science in Nursing (BSN) in the UAE: University of Sharjah (in Sharjah), Ras Al Khaimah Medical and Health Science University (in Ras Al Khaimah), Higher Colleges of Technology, Fatima College of Health Sciences (in Abu Dhabi and Ajman), and Gulf Medical University (in Ajman).

This research was undertaken at one of the nursing educational institutions in the UAE that has a pre-licensure on the Bachelor of Science Nursing (BSN) program. The college has four campuses in four different regions across the UAE: Abu Dhabi, Al Ain, Al Gharbia, and Ajman which offers a Bachelor of Science (B.Sc.) degree in nursing education program in addition to more than 10-degree programs at BSc. and Diploma levels in health sciences. The sample was dependent on the consensual accessibility of the health sciences academic institutions in conducting this research. The selected health sciences academic institution had the primary accreditation for the nursing program in UAE higher education when it was established in 2017. It is approved by SEHA, and the MOH and fully approved by the UAE program's board of nursing the Emirati Nursing Association (ANA). The academic institution was affiliated with other international universities in Australia such as Griffith and Monash to design and develop their nursing and healthcare curriculums. In the year 2022-2023 when this study researcher collected her data there were around 1386 students enrolled in the nursing program at different levels in all campuses.

3.6.2 Population and Sampling Technique

3.6.2.1 Population

A study population can be defined as a complete set of individuals from any definite group, events, or artifacts, having similar characteristics and are associated with the conditions identified for study by the researcher while the sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population (Creswell 2012; Johnson & Christensen 2014). The population for the quantitative study of this research was a sample of 284 nursing education students and 29 nursing education faculty members while the population for the qualitative studies was a sample of 21 nursing education faculty members, students, administrators and chief nurse officers.

Table 3 summarizes the participants of the study for the qualitative and quantitative approaches as per the instrument used, which is outlined as below.

Table 3: Summary of the Qualitative and Quantitative Approach Participants

Number of Participants from Each Group	Unstructured Interviews	Semi Structured Interviews	Questionnaire
Nursing education faculty members	3	5	29
Chief nurse officers	2	0	0
Administrators	1	2	0
Nursing education students	1	7	284
Total	7	14	313

3.6.2.2 Sampling Technique

The identification of the populations leads to sampling design as the next step in the research process. Sampling is essential because it informs any researcher's interpretations from the primary data collected (Cohen, Manion & Morrison 2011; Onwuegbuzie & Collins 2007). In this research, two types of sampling strategies were applied. Convenience sampling was applied to recruit participants to the unstructured and semi structured in depth interviews while quantitative sampling was applied to the questionnaire participants of nursing education faculty members and students. Detailed next is the sampling size and strategies for every sampling type, in addition to the rationale for adopting them.

3.6.2.3 Qualitative Sampling for the In-depth Interviews

Seven participants were recruited for the unstructured in-depth interviews. The researcher used purposive sampling to select the head of nursing education programs in the selected health sciences academic institution, the head of health sciences campus, and the supervisor of student services working in the same health sciences academic institution. According to Palinkas et al. (2015), the purposive sampling technique allows the researcher to select informants based on their ability to clarify and explain a specific phenomenon. Purposive sampling is about selecting participants in a non-random manner based on certain characteristics as per the research requirements (Creswell 2018; Johnson & Christensen 2017). For this study, the sampled participants were assumed to be able to provide rich information related to disability related laws and policies in higher education, the admission requirements to nursing education programs, and accommodation provision to students with disabilities.

Similarly, the researcher used purposive sampling to select two chief nurse officers from one private and one public healthcare organizations. The two nurse officers were selected from their corresponding organization websites. The website showed the profile of each participant which described their duties at operational level and hence were assumed to provide valuable insights regarding employment criteria of nursing staff and the legal and regulatory climate in nursing in relation to nurse staff with disabilities and nursing students with disabilities in clinical placement. The website also showed their contact details including their email addresses.

High accessibility, availability, proximity to the researcher and achieving a representative sample are the best rationales for using convenience sampling (Creswell 2014). The convenience sampling technique represents available and volunteer contributors who agree to participate in the study (Johnson & Christensen 2014). Convenience sampling minimizes time and costs in relation to access (Johnsen & Christensen 2017). As a result, convenience sampling was used to select nursing education faculty members and nursing education students to explore their views related to factors that may impede the inclusion of nursing students with disabilities in nursing education programs. Nursing education faculty members have valuable knowledge in relation to the competencies needed to be acquired by students in order to graduate successfully from nursing education programs. Moreover, they have experience in teaching theoretical and clinical practice to undergraduate nursing education students and were assumed to be knowledgeable in different teaching strategies to respond to the academic needs of diverse learners and hence are believed to provide important insights related to the barriers that students with disabilities may face in theory classes and clinical sites. With regards to nursing education students, they were selected as they were believed to have exposure to the challenges faced by students in theory and clinical practice which was assumed to help in providing valuable insights

about the factors affecting the inclusion of nursing students with disabilities. Moreover, nursing education students could identify, from nursing students' perspectives, how to successfully support nursing students with disabilities as some students might have interacted with peers with different challenges and may have gained knowledge on how students with reported or unreported disability overcome their barriers in the program so getting students' insights were assumed to be valuable.

Moreover, the researcher opted for semi-structured interviews with another group of 14 nursing education stakeholders including 5 nursing education faculty members and 7 nursing education students who were recruited using convenience sampling. Purposive sampling was used to select two administrators to answer the fourth research question about the facilitators for the inclusion of nursing students with disabilities and to elaborate on the results of the questionnaire with regards to how the inclusion of nursing students with disabilities can be facilitated considering the different inclusive practices and accommodations that surfaced from the responses of nursing education faculty and nursing students to the questionnaire.

The email addresses of the participants were provided by the administration of the institution and the health organizations they are working in. An email with a consent form was sent to each of the participants to introduce and to describe the purpose of the study and to seek their participation. The written approval consent form outlined the participants' rights to quit at any time, their voluntary participation, and their right to be protected from any harm or risk. After obtaining their consent and reconfirming their willingness to participate in the study, an email was sent to them to arrange for the interview time, date. The researcher set up interviews with each participant by sending them emails to explain the purpose of the interview, the reason for their choice, and the expected duration of the interview. The interviewees' informed consents

were obtained and signed that showed their acceptance to participate in the study and to record the interview (See Appendix D).

Regarding the sample size, Polit and Beck (2006) explained that in qualitative interviews, the sample size is generally 10 or until the researcher gets data saturation. According to Constantinou et al. (2017), the lowest sample size for saturation is 5 interviews. Hence, during the recruitment of participants, the researcher wanted to collect information that was important to answer the research questions (Johnson & Christensen 2014). Using this technique, the researcher continued to add new interviewees until the study reached the point where new meaningful data ceased to be obtained from the participants (Sarantakos 2004). This was possible because the researcher analysed the data during the qualitative phase so that the analysis could inform the researcher if the data collected was becoming repetitive and if new and meaningful data was not being generated. As a result, 7 participants were recruited for the unstructured in-depth interview and 14 participants were recruited for the semi structured interviews as no newer information resurfaced.

3.6.2.4 Quantitative Sampling for the Questionnaire

The population for the quantitative study was a convenience sample of 284 nursing education students and 29 nursing education faculty members working in one of the health sciences institutions. Creswell and Clark (2007) recommend that there must be enough participants to make the sample representative of the target population. Therefore, all nursing education students (a combination of different student's levels – the first, second, third- and fourth-year nursing students from one cohort who are still enrolled in the nursing program and

who were still attending the same health sciences institution) and all nursing education faculty members who were working in the same institution were recruited for the study.

With regards to sample size Creswell (2014) explained that the sample size can be calculated by using sample size formulas which provide an accurate estimation of the sample size. In this study, the population size of nursing education students was estimated to be 1386 and that for nursing education faculty members was 62; hence, the target sample size for nursing education students is 301 where the margin of error is 5% and a confidence level is 95%.

The email addresses of the nursing education faculty members and nursing education students were provided by the administration of their institution. An email was sent to each participant to describe the purpose of the study and to seek their participation. The two groups of participants were provided with a link to the questionnaire. The introductory page of the survey outlined the participants' rights to quit at any time, their voluntary participation, and their right to be protected from any harm or risk. 284 nursing education students and 29 nursing education faculty members signed the consent, agreed to participate in the quantitative study and completed the questionnaires.

3.7 Instruments

This section describes the different instruments that were used to collect data for the study. The first section mainly discusses the qualitative data collection methods that were employed to interview nursing education stakeholders while the second section describes comprehensively how the questionnaire, as a quantitative data collection method, was constructed and used to examine the the nursing education faculty members and nursing education students' perceptions of the inclusion of nursing education students with disabilities.

Instrumentation is a process of constructing research tools that can be used appropriately in collecting data in a study (Creswell 2014). The research instrument is generally determined by the researcher and is tied to the study methodology. During the instrumentation process, the researcher defines what data need to be gathered, and when and how the data will be collected and analyzed to answer the research questions adequately (Zohrabi 2013).

3.7.1 Qualitative Data Collection Methods

3.7.1.1 In-depth Interviews

When collecting qualitative data for educational purposes, an in-depth interview is a useful technique for thoroughly examining respondents' viewpoints, actions, and emotions around a certain problem (Kvale 1996). In-depth interviews are often used to provide a more complete picture of a topic that are usually used to develop or refine items of future questionnaires of a certain group (Boyce & Neale 2006). It encompasses direct, one-on-one meetings with a small number of respondents that can take place face-to-face, or through other communication services (Boyce & Neale 2006). Fontana and Frey (2005) explained that interviews can be categorized based on the degree of structuring, into structured interviews, semi-structured, interviews, and unstructured interviews. In a structured interview, the researcher has a set of predefined questions, and the questions are asked in the same order for all participants. Minichiello et al. (1990) defined unstructured interviews as interviews in which neither the question nor the answer is determined by the researcher beforehand. However, it relies on the social natural flow of interaction and the spontaneous generation of questions in response to the interviewees' narration to not limit the field of inquiry (Patton 2002). A semi-structured interview is one in which the questions are loosely structured and provide

interviewees with more opportunities to fully express themselves. The interviewer does not firmly follow a predetermined list of questions (Longhurst 2003). Semi-structured interviews have a more flexible nature. Usually, a researcher prepares an interview guide that includes both closed and open -ended questions.

In this study, the researcher conducted unstructured interviews with a group of nursing education stakeholders (nurse officers, nursing education faculty members, nursing education students, and an administrator in a health sciences institution) to answer the first research sub question about the factors that may challenge the inclusion and the participation of students with disabilities in nursing education programs.

The interviews were carried out with seven nursing education stakeholders. Table 4 provides a summary of the nursing education stakeholders who took part in the interviews, which is presented below.

Table 4: Profile of Participating Interviewees

Participant	Gender	Emirate	Position	AC/HO	KSWD	IWSD	TCD
Participant 1	Female	Dubai	Chief operating officer	Private hospital	Yes	Yes	Yes
Participant 2	Female	Al Ain	Acting chief nursing officer	Government hospital	Yes	Yes	No
Participant 3	Female	Ajman	Head of a campus	Health sciences academic institution	Yes	Yes	Yes
Participant 4	Female	Al Ain	Supervisor student services	Health sciences academic institution	Yes	Yes	No
Participant 5	Male	Abu Dhabi	Head of a nursing program	Health sciences	Yes	Yes	Yes

				academic institution			
Participant 6	Male	Abu Dhabi	Nursing education faculty member	Health sciences academic institution	Yes	No	No
Participant 7	Female	Al Ain	Year 3 nursing student	Health sciences academic institution	Yes	No	No

Note: KSWD=Knows someone with a disability; IWSD= Interacted with a student with a disability; TCD= Took a course about PWDs; AC/HO=Academic institution/Health Organization

The decision to use in-depth interviews as data collection methods was governed by both the study research paradigm and objectives. Pragmatists adopt a pluralist attitude by combining methods that work in relation to the research purpose (Goles & Hirschheim 2000). Using unstructured interviews were sought to enable the researcher to understand the realities about the challenges facing the inclusion of nursing students with disabilities as viewed by nursing education stakeholders. Zhang and Wildemuth (2009) recommended the use of unstructured interviews when the researcher wants to gain an in-depth understanding of a particular phenomenon within a particular cultural context in which the reality is assumed to be socially constructed. Since it is argued that the concept of disability is a socially constructed (Asch & Fine 1988) and considering that the study has an exploratory nature, the researcher adopted unstructured interviews with a limited number of subjects to have in-depth discussion that can lead to a better understanding of the challenges facing disability inclusion in nursing education from the individual perspectives of a group of nursing education stakeholders who are involved with it without imposing too much structure on the interview in order to provide more freedom for interviewees responses to get a complete understanding of the phenomenon. Moreover, the emergence of valuable information related to the inclusion of nursing students with disabilities

are assumed to be instrumental in developing a questionnaire to measure the perception of nursing education faculty members and students regarding the inclusion of students with disabilities in nursing education programs. The researcher avoided using focus group. Gibbs (1997) argued that individuals in a focus group may be limited from expressing their own definitive individual view and hence may be difficult for the researcher to clearly identify an individual message. Moreover, focus groups may discourage certain people from participating and from trusting others with sensitive information and maintaining anonymity and confidentiality may be difficult (Gibbs 1997). Since there is deficiency in the information related to disability inclusion in nursing education in the UAE, using unstructured interviews to explore this phenomenon was helpful (Zhang & Wildemuth 2009).

The researcher also conducted semi-structured interviews with a group of nursing education stakeholders (nursing education faculty members, nursing education students, and administrators) to answer the fourth research sub- question about the facilitators for the inclusion of nursing students with disabilities. In total, fourteen nursing education stakeholders responded to the interview including 7 nursing education students from different year levels and 5 nursing education faculty members were selected by convenience sampling and 2 administrators working as supervisors of student services were selected by purposive sampling. Table 5 provides a brief summary of the nursing education stakeholders who took part in the interviews, organized by gender and campus, those who knew someone with a disability, interacted with a student with a disability, and having taken a course on disability.

Table 5: Profile of Participating Interviewees

Participant	Gender	Campus	Occupation	KSWD	IWSD	TCD
Participant 1	Male	Al Ain	Nursing faculty member	Yes	Yes	No
Participant 2	Male	Abu Dhabi	Nursing faculty member	Yes	Yes	No
Participant 3	Female	Al Ain	Nursing faculty member	Yes	Yes	Yes
Participant 4	Female	Abu Dhabi	Nursing faculty member	Yes	Yes	No
Participant 5	Female	Abu Dhabi	Nursing faculty member	Yes	Yes	No
Participant 6	Female	Abu Dhabi	Year 3- Nursing student	Yes	Yes	Yes
Participant 7	Female	Abu Dhabi	Year 4- Nursing student	Yes	Yes	No
Participant 8	Female	Abu Dhabi	Year 4-Nursing student	Yes	Yes	No
Participant 9	Female	Al Ain	Year 4- Nursing student	Yes	Yes	Yes
Participant 10	Female	Ajman	Year 3- Nursing student	Yes	Yes	No
Participant 11	Female	Al Ain	Year 2- Nursing student	Yes	Yes	No
Participant 12	Female	Al Ain	Year 1- Nursing student Nursing student	Yes	Yes	No
Participant 13	Female	Al Ain	Administrator	Yes	Yes	No
Participant 14	Female	Ajman	Administrator	Yes	Yes	No

KSWD=Knows someone with a disability; IWSD= Interacted with a student with a disability; TCD= Took a course about people with disabilities; AC/HO=Academic institution/Health Organization

The researcher included items in the questionnaire related to disability laws and institutions policies, accommodations and inclusive practices, barriers, and attitudes toward the

inclusion of nursing students with disabilities. Hence, conducting semi-structured interviews allowed the participants to elaborate on the questionnaire responses in addition to sharing their knowledge and experience on how to facilitate disability inclusion in nursing education programs.

The in-depth interviews were conducted in a private room through the Zoom application. The record feature of Zoom was used to record the sessions. All interviews lasted an average of 35 minutes. English was used to conduct the interviews. With the participant's consent, the researcher recorded the audio of each interview. After each interview, the recordings were transcribed, analyzed, and thematically coded by the researcher.

3.7.2 Quantitative Data Collection Instrument

3.7.2.1 Questionnaire

As a quantitative data collection method, the researcher created a questionnaire to answer the second and third research sub-questions about the nursing education faculty members and nursing education students' perceptions of the inclusion of nursing education students with disabilities as well as to determine whether there were demographic differences in these perceptions. The items of the questionnaire were developed in relation to the aim of the study, and conceptual framework and based on the qualitative findings of the in-depth unstructured interviews, and revision of the literature.

Artino Jr et al. (2014) explained that questionnaires are important tools to know more about a specific educational context and in a specific period. Moreover, it helps in collecting information from a large number of anonymous respondents for generalizability of the results, which gives them the chance to reply freely to a set of questions. Hanson et al. (2005) stated

that information collected by questionnaires can be simply and quickly analyzed by using software to get results that later can be discussed by the researcher. Despite the advantages of questionnaires in gathering quantitative data; there are some disadvantages related to the limitations of questionnaires in allowing participants to elaborate on or explain results (Hanson et al. 2005). Therefore, to reduce the disadvantages of the developed questionnaire and to capitalize on its advantages, the researcher did semi-structured interviews with a small sample of nursing education faculty members, nursing education students, and administrators to provide participants with a chance to give comprehensive responses to explain the results of the questionnaires (Rattray & Jones 2007).

The questionnaire was constructed in several steps. First, the researcher conducted a review for the literature to check for the existence of an instrument that can measure the perceptions of nursing education faculty members and nursing students toward the inclusion of nursing students with disabilities. The review of the literature showed the existence of different instruments to measure the attitudes of nursing educators towards people with disabilities in general and not specifically towards the inclusion of nursing students with disabilities who have special attributes of being potential caregivers and patients at the same time (Carroll 2004) which might have compromised the internal validity of the study. As a result, the researcher decided to construct a new tool.

Second, the researcher reviewed literature related to inclusivity within nursing education including nursing faculty knowledge, beliefs, and attitudes regarding the inclusion of nursing students with disabilities (Matt 2012; Sowers & Smith 2004; Moríña & Orozco 2020; Carroll 2004; Metzger et al. 2020; Calloway & Copeland 2021; Neal-Boylan 2020; Meyer 2021). Inclusive education is a social construct (Anderson, Boyle, & Deppeler 2014); it depends on

interactions between individuals and societal systems to become constructed into inclusive education. Considering that inclusive education has a social aspect, any effort to analyze it must address the interactions between individuals and society processes involved in its production. As a result, focusing on environmental factors and understanding their impact on inclusivity by centering the nursing education student as described by Bronfenbrenner's (1976) Ecological Model of Human Development was critical. The knowledge, beliefs, and attitudes of the people in the direct and indirect environment of students with disabilities have a significant influence on the adoption of inclusive education. Solís, Pedrosa, and Mateos-Fernández (2019) explained that the success or failure of inclusion is impacted by the knowledge, beliefs, and attitudes of the educational community towards disability since it can facilitate or hamper the learning and participation of students with disabilities.

Beliefs are the best predictors of peoples' behaviors (Bandura 1986). This suggests that if people do not believe that they can produce the desired effect through their actions, they will not be motivated to behave accordingly. Pajares (1992) explained that beliefs around a certain situation or individuals are formed on the basis of their societal views of that particular phenomenon or individual and are thought to be strong predictors of behaviors. Therefore, understanding the beliefs about inclusion is crucial as positive attitudes towards inclusion are one of the strongest predictors of the success of inclusion restructuring (Avramidis & Norwich 2002).

Alfaro, Kupczynski, and Mundy (2015) explained that determining the perceptions of teachers toward students with disabilities by looking specifically at their knowledge of policies and procedures is important to ensure that decisions related to inclusion are done legally and with the best interest of students. Other researchers highlighted the importance of examining the

beliefs about the provision of accommodations as a construct relevant to the inclusion of students with disabilities and the challenges facing inclusion in order to increase the level of administrative support (Papadakaki et al. 2022; Fuchs 2010; Forlin et al. 2011). Therefore, based on this data, the researcher of this study focused on analyzing nursing education faculty members' and nursing education students' perceptions towards the inclusion of nursing students with disabilities in nursing education programs in the UAE.

The quotes of the participants in the unstructured interviews constituted the questionnaire items that were used in unison with the literature review. The items in the questionnaire were mapped to a matrix that provided content validity by connecting the survey items to the corresponding literature (Ashcroft et al. 2008; Calloway 2019; Sowers & Smith 2004; Moodley & Mchunu 2022; Matt, Maheady, & Fleming 2015; Betz, Smith, & Bui 2012; Ramluggun, Jackson, & Usher 2021; Rankin et al. 2010; Neal-Boylan, Marks, & McCulloh 2015; Morris & Turnbull 2007; Azzopardi et al. 2014; and Calloway & Copeland 2021) (Appendix E) to create a 5-point Likert-type questionnaire that consisted of 33 items. The 33 items explored a variety of areas, including nursing faculty and students' knowledge regarding the country's legal framework, beliefs about available resources and inclusive practices, beliefs about the challenges to inclusion, and attitudes towards inclusion.

Researchers have suggested many factors that were crucial to take into account when determining what nursing educators and nursing education students believed about the inclusion of nursing students with disabilities. These factors include the educators' gender, age, knowledge of disability issues, contact with people with disabilities, and experience teaching students with disabilities. (Levey 2014; Magilvy & Mitchell 1995; Sowers & Smith 2004; Alghazo & Naggari 2004; Marcone, Caputo, Esposito, & Senese 2019). Hence, the demographics for this study

ranged in age, gender, emirates, having known someone with a disability, having interacted with students with disabilities, and having taken a course related to people with disabilities.

3.8 Participant Characteristics

The health sciences academic institution from which quantitative data was collected provided the breakdown of its undergraduate students' and faculty members' age population. The institution reported that the ages of its students were within the ranges of 17 to 38 of age with the majority of undergraduates between 17 and 27. Some students have chosen to come into nursing later in life. Similarly, the age of faculty members ranged from 28 to 62 of age with the majority between 40 and 50. Accordingly, the researcher identified the age categories that the age data fell into and created fixed age ranges: 17- 27, 28-38, 39-49, 50-59, and 60+. This categorization was sought to help in identifying participant students who had more deliberate and thoughtful career moves despite life challenges and may impact their attitudes towards nursing students with disabilities who may have to face several hurdles to fulfil their dreams to graduate and work as nurses. Moreover, this categorization may help in identifying old adults. Jacobzone (2000) argued that aging creates many health issues that may directly lead to disability which may impact the attitudes of older adults towards nursing students with disabilities.

Items L1 through L6 applied to knowledge of disability related laws and institutions policies; items A1 to A7 applied to beliefs of accommodations and inclusive practices in nursing education, items B1 through B9 applied to beliefs of barriers to inclusion; and items T1 through T4 applied to attitudes towards the inclusion of nursing students with disabilities and items and items P1 to P7 applied to beliefs related to inclusivity.

Participants were asked to rate their level of agreement or disagreement with their knowledge of disability related laws and institutions policies regarding the inclusion of nursing students with disabilities, beliefs of accommodations and inclusive practices, beliefs of barriers to inclusion, and attitudes towards their inclusion on a 5-point Likert scale (Strongly disagree/Strongly agree). The knowledge of disability laws and institutions policy related to the inclusion and support of nursing students with disabilities was measured by listing different disability laws/ policies related to the inclusion, admission, or support of students with disabilities in nursing education. Respondents have either to strongly agree, agree, be neutral, disagree or strongly disagree with each item.

The beliefs of accommodations and inclusive practices that are commonly used to support students with disabilities in nursing education programs were measured by strongly agreeing, agreeing, be neutral, disagreeing or strongly disagreeing with a list of accommodations and inclusive practices. The accommodations and inclusive practices were the following: use assistive technology, extension of submission deadlines, using alternative devices in clinical practice, assess what skills they can do, using diversified teaching strategies, students' preference of accommodation, and the presence of accessible infrastructure. Moreover, the inclusive practices included students with any disability category, providing clinical and nonclinical tracks, exposure to variety of clinical settings, opening more subspecialties in nursing, and using simulation in clinical practice.

The beliefs of barriers to inclusion were measured by strongly agreeing, agreeing, be neutral disagreeing or strongly disagreeing with a list of barriers that were the following: social stigma, admission requirements to nursing programs, negative attitudes, lack of clear support policies, lack of resources, lack of professional development, disability non-disclosure, and lack

of collaboration and communication between educators and nursing stakeholders and potential employers.

Finally, the attitudes towards inclusion were measured by strongly agreeing, agreeing, be neutral, disagreeing or strongly disagreeing with a list of statements of belief that empathy facilitates inclusion, inclusion will lead to learning new skills, acceptance creates inclusive environment, and that people in nursing school can create compassion and a sense of inclusion (See Appendix A).

Demographics analysis of nursing students and educators have been represented in the following table and interpreted accordingly (Table 6).

Table 6: Demographic Analysis of Participants

Demographics	Distribution	Nursing students (N = 284)	Nursing Educators (N = 29)
		Frequency (Percentage)	Frequency (Percentage)
Gender	Male	0 (0%)	15 (51.7%)
	Female	284 (100%)	14 (48.3%)
Age	17-27 years	275 (96.8%)	-
	28-38 years	9(3.2%)	10 (34.5%)
	39-49 years	-	16 (55.2%)
	50-59 years	-	3 (10.3%)
Emirates	Abu Dhabi	194 (68.3%)	20 (69.0%)
	Dubai	16 (5.6%)	1 (3.4%)
	Ajman	20 (7.0%)	7 (24.1%)
	Al Sharjah	19 (6.7%)	1 (3.4%)
	Ras Al Khaimah	21 (7.4%)	-

	Um Al Quwain	6 (2.1%)	-
	Al Fujairah	8 (2.8%)	-
Knows someone with disability	Yes	169 (59.5%)	22 (75.9%)
	No	115 (40.5%)	7 (24.1%)
Interacted with a student with a disability	Yes	113 (39.8%)	14 (48.3%)
	No	171 (60.2%)	15 (51.7%)
Took a course about disability	Yes	39 (13.7%)	7 (24.1%)
	No	245 (86.3%)	22 (75.9%)

From the above table, it can be observed that most of all the nursing students that participated in the study are females. However, that is not the case with educators as the participants represent almost equal number of males and females in the current research. In terms of age, most of the students belonged to the age group of 17 to 27 years and most of educators belonged to the age group of 39 to 49 years. Most of the students and educators were from Abu Dhabi and Ajman Emirate.

Participants were also surveyed about their interactions with people of disabilities and if they are trained, which is further related to their perceptions of disability. Majority of nursing students (N=169) know individuals who have disabilities, which can be considered as contributing factor in understanding inclusivity because students with this knowledge may have a better understanding of the needs and challenges of individuals with disabilities. On the other hand, 115 nursing students do not know people with disabilities. While this number is smaller than those who do, it's still a significant portion of the nursing student population. This indicates that there is a subgroup of students who may have limited exposure to individuals with disabilities, which could potentially impact their understanding and empathy in providing care.

In terms of nursing educators, it was found that most educators know someone with disability (N=22), which is a contributing aspect as they play a crucial role in shaping the attitudes and perspectives of future nurses. This is because when educators know someone with a disability, then that can positively influence the attitudes and perspectives of future nurses by fostering empathy, understanding, and an inclusive approach to patient care. This connection may result in more compassionate, patient-centred nursing practice. However, a very small portion of nursing educators do not know someone with disability (N=7). Even though the number is very small, it's essential to ensure that educators, who are responsible for training the next generation of nurses, also have exposure to individuals with disabilities to be aware of their challenges and their potentials and to find ways to help them overcome these challenges and to build on their strengths which can lead to foster a more inclusive educational environment. Having knowledge about people with disability is highly different than the interaction with them as personal or professional interactions with a person who has disability can highly influence one's behaviour in a positive or negative manner. In that regard, most of the nursing students (N=171) and nursing educators (N=15) have not interacted with people who have disability. A high number of people representing the population that have not interacted can have a major impact on inclusion of students with disabilities in practice. Limited interaction can have an influence on students and educators' perceptions in terms of their empathy, understanding, skill development, bias, and professional practice. In terms of being trained about disability, a significant number of samples from students and educators were representative of not being trained as they did not take any course about disability. In this regard, it was observed that most of nursing students (N=245) and educators (N=22) did not take any course on disability, which can have a significant effect on their perceptions regarding the inclusion of students with disability. Not

trained individuals can bring their attitude and perceptions in the workplace, which can lead to creation of a non-inclusive environment as it may impact, policy making, admission criteria and accommodation. Also, when they are not trained enough to manage students with disabilities and they show empathy and provide support to students by holding their ethical standards, then that it can be unfair to other students. Also, the goal of nursing programs for students with disabilities should be related to creating an inclusive environment by ensuring equality and fairness for all students.

Overall, the participant responses showed a good deal of diversity, as evidenced by the above analysis of demographics of the participants, which showed that the sample of nursing faculty members came from different genders, age groups, and emirates and had a variety of experiences and knowledge regarding people with disabilities.

3.9 Validity, Reliability, and Trustworthiness

This study entails a mix of both quantitative and qualitative research approaches. Therefore, notions of validity and reliability should be identified and justified for both approaches (Fraenkel & Wallen 2009; Mears 2009). While it takes many forms, validity can be generally described as the extent to which the instrument accurately describes and measures what it is intended to describe and measure (Cohen, Manion & Morrison 2011 2019; Fraenkel & Wallen 2009). Because of the errors that can occur during the research (examples include sampling, question formulation, and data collection for quantitative research, the subjectivity of the respondent and the researcher in the qualitative research), validity concerns cannot be eliminated; however, they can be minimized (Gronlund 1981). Reliability reflects the

consistency and replicability of the research over time, the instrument, and target groups (Cohen, Manion & Morrison 2011; 2019).

3.9.1 The Trustworthiness of In-depth- Interview Questions

The researcher maintained the trustworthiness of in-depth interview questions through clearly defining the research objectives before developing interview questions in order to ensure that the questions are aligned with the study's purpose and enable you to gather relevant and meaningful data (Silverman 2020). Moreover, the researcher used open-ended questions to encourage participants to provide detailed and thoughtful responses that provide rich data for analysis. The researcher allowed flexibility during interviews and adapted the interview questions and probing techniques based on participants' responses to delve deeper into specific topics or explore unexpected insights. This flexibility helps capture a more comprehensive understanding of the research topic (Patton 2015). Additionally, the researcher made sure that the interview questions are clear, concise, and easily understandable by participants. Use simple language and avoid technical jargon or complex terminology that may confuse or alienate participants. The researcher was also mindful of her biases that may influence the interview questions and tried to minimize any potential bias in the wording or framing of questions in order to strengthen the overall validity and credibility of your research study (Fontana & Frey 2005). With regards to the unstructured interviews, the interview questions were developed by the researcher after reviewing the available literature on the impediments to disability inclusion in nursing education. Respondents were asked about the factors that may challenge the inclusion of students with disabilities in nursing programs. They were also queried about elements in the direct and indirect environment of nursing students with disabilities including home, school, college, clinical sites and the outer community that may impact students' inclusion.

In relation to the semi structured interviews, the findings of the quantitative method guided the interview questions. There were direct questions to explore further nursing education stakeholders' views about how different inclusive practices and accommodations, such as the admission policy for students with disabilities, assistive technology the type of accommodations that can be provided in theory and clinical sites, the teaching strategies that can be employed, the type of assessments to be used, different disability categories inclusion, subspecialties in nursing that can assimilate students with disabilities, and the accessibility of the campus, may help in removing the barriers and improving the participation of students with disability in the nursing program. These results were assumed to lead to important guidelines for support provision. The research question was coupled with off-script and probing questions when new insights were gained related to how the inclusion of nursing students with disabilities can be facilitated. An interview protocol was used to guide the administration and employment of the interviews to confirm consistency between interviews and to increase the reliability of the findings (see Appendix B and Appendix C).

Van Wijk and Harrison (2013) emphasized the relevance of conducting a pilot test to detect any potential flaws in the early stages of research that may necessitate instrument modifications and to provide credibility to the research. As a result, the trustworthiness of the in-depth interview questions was achieved by asking three experts in the fields of nursing, special and inclusive education to review and evaluate the validity of the in-depth interview questions (Johnson & Christensen 2019) to ensure the clarity of the questions. Turner (2010) advocates that the interviewees should have similar criteria as possible to the interviewees for the main study. Therefore, in this research, the researcher used pilot interviews to obtain a valid and reliable draft of the questions that will be used in the real study. Consequently, one nursing

education student and one nursing faculty member and the head of the nursing program agreed to take part in the pilot interviews study via Zoom. After the pilot interview of the questions that will be asked in the unstructured interviews, the responses were revised. There were no serious alterations to the questions indicating that the unstructured interview questions were valid and reliable and hence could be used for the real study. Therefore, all responses were kept in the database. The semi structured interview questions were framed by the researcher in light of the questionnaire results. Two nursing students and one nursing faculty and one administrator agreed to take part in the pilot semi structured interviews study via Zoom. There were no serious alterations to the questions indicating that the semi-structured interview questions were clear and hence could be used for the real study. Therefore, the responses of the pilot group were kept in the database.

3.9.2 Validity and Reliability of the Questionnaire

The researcher utilized several tests to guarantee the validity of the produced questionnaire in order to assess its trustworthiness. According to Tavakol and Dennick (2011), validity is critical for a questionnaire's dependability. Johnson and Christensen (2012) defined validity as "the accuracy or honesty of conclusions drawn from research outcomes." In this study, the researcher used different methods to validate the generated questionnaire. Face validity, content validity, construct validity, and ecological validity were chosen as tests by the researcher. The degree to which a test seems to assess what it promises to measure is referred to as face validity (Creswell 2005). The researcher established face validity by having a group of four specialists in the field of special and inclusive education, as well as two nursing educators, look over the questionnaire to see if it properly captured the issue under consideration. The validity of the content and the context of the questionnaire items in connection to the study

topics were to be evaluated by the experts (Tolmie, Muijs, & McAteer 2011). The experts recommended that questionnaire be made shorter so that participants can finish it, and some items to be eliminated to prevent duplication.

Another step that the researcher took to evaluate the appropriateness of the questionnaire in collecting the required data in line with the study objectives is to assess its content validity. Content validity refers to the extent to which the items on a survey are representative of the entire domain the test seeks to measure (Creswell 2005). For the researcher to examine content validity, the questionnaires were piloted on a sample of 30 nursing education students and 20 nursing education faculty members. The targeted sample size of the pilot group was selected by using 10 % of the 301 nursing education student participants in the quantitative phase of the study (Kotrlik & Higgins 2001). For the nursing education faculty members, since the population size was 62, the researcher piloted the nursing faculty members' questionnaire on 20 participants. The first drafts of the questionnaires were sent to the pilot groups through their emails. The researcher invited the participants to share their inquiries and feedback and made changes as appropriate. The two pilot groups critiqued and evaluated the quality of the individual items and the time needed to complete the questionnaire (Rattray & Jones 2007). Moreover, the items of the questionnaire were revised to check if it adequately represented the area of interest which is the perceptions of nursing stakeholders towards the inclusion of nursing students with disabilities, if it was suitable for the sample/population, and whether the questionnaires were comprehensive enough to gather all the data needed to address research questions. Since no modifications were suggested, the responses from both pilot groups were kept in the database.

In order to have ecological validity of questionnaire data, researchers should choose theoretically meaningful contextual data for specific research questions; therefore, the researcher followed the recommendations of Wilkinson, Ferraro, and Kemp (2017) and contextualized the questionnaire items by using simple language that addresses the cultural context and language status of the target population to avoid the use of advanced terms that might lead to confusion (Bastos et al. 2014). Although the data was gathered from an Arab-speaking sample population that knew English, yet some items were rephrased so that participants could understand. For example, the term “accommodation” might not be clear to both faculty and students so “meeting the needs of students” was used instead. Additionally, the researcher made sure that the manifestation of some concepts that were abundant in the faculty and students’ questionnaires did not differ between the two groups. The terms “inclusion” and “disability” for example, are clear to Eastern and Western cultures; hence faculty and students from these cultures are less likely to manifest the two concepts differently. As a result, the items that incorporated the concepts mentioned above did not need any adaptation as they reflected the cultural definition of both concepts.

The questionnaire was tested for its reliability and internal consistency. Reliability refers to the ability of a tool to consistently get similar results when the test is repeated under similar conditions (Johnson & Christensen 2014; Streiner 2003). From the pilot study of the questionnaire, numeric data were analysed. Cronbach alpha values for each domain were calculated and analyzed using SPSS to check the internal consistency of participants. According to Creswell (2009), a reliability coefficient with a value of 0.70 or higher indicates acceptable reliability so the instrument can be used to predict future behavior.

In nursing education students: The Cronbach's alpha values for the four factors are as follows: total scale ($\alpha=0.95$), laws and policies ($\alpha=0.78$), barriers ($\alpha=0.93$), accommodation ($\alpha=0.94$) and attitudes ($\alpha=0.91$).

In nursing education faculty: The Cronbach's alpha values were as follows: total scale ($\alpha=0.96$), laws and policies ($\alpha=0.61$), accommodation ($\alpha=0.95$), barriers ($\alpha=0.94$), and attitudes ($\alpha=0.94$).

3.10 Data Analysis

To maximize the benefit of the data collected in the mixed methods research design, Onwuegbuzie and Teddlie (2003) suggested using several data analysis strategies. Quantitative and qualitative data collected by the researcher which included unstructured and semi-structured interviews with two groups of nursing education stakeholders and questionnaire surveys with nursing education faculty members and nursing education students, were separately analyzed for addressing the research questions as they were collected for different purposes and at different spans.

Research sub-question 1: The views of the nursing education stakeholders regarding the barriers to the inclusion of nursing students with disabilities were analyzed by thematic analysis of the interview transcripts.

Research sub-question 2: The perceptions of nursing education faculty members and nursing education students of the inclusion of nursing students with disabilities were analyzed by calculating the frequencies and percentages of the items in the questionnaire.

Research sub-question 3: The demographic differences in the nursing education faculty members and nursing education students' perceptions of the inclusion of nursing education students with disabilities were analyzed by calculating the means and standard deviations of the questionnaire items.

Research sub -question 4: The views of the nursing education stakeholders regarding the facilitators to the inclusion of nursing students with disabilities were analyzed by thematic analysis of the interview transcripts.

The overall purpose of the analysis of this exploratory mixed method study is to explore the perceptions of nursing education stakeholders towards the inclusion of nursing students with disabilities in nursing education programs and to identify the challenges and facilitators to their inclusion in an attempt to improve the participation of nursing students with disabilities in nursing education programs in the UAE.

The responses to the unstructured interview and semi-structured interview open ended questions from two groups of nursing stakeholders according to their characteristics and knowledge were gathered and analyzed through the thematic analysis approach that is considered appropriate for qualitative studies and can examine the collected interview data and capture the response patterns to answer the research question(s) (Creswell 2014; Vaismoradi, Turunen & Bondas 2013). Themes (patterns) within the data were analyzed and reported using the six phases of Braun and Clarke's (2006) methodology. The recommended six steps were as follows: familiarization with the collected data, coding, finding themes, reviewing themes, naming themes and reporting as represented in the following Figure 6.



Figure 6: Thematic analysis phases

(Source: Braun & Clarke 2006)

In the first phase, the collected transcripts from the unstructured and semi-structured interviews were handled in a similar way. The researcher reviewed the records and transcripts repeatedly in order to become intimately familiar with the complete body of information. The first research sub-question, "What are the nursing education stakeholders' views of the barriers to nursing students with disabilities' inclusion in nursing education programs in the UAE? and the fourth research questions "What are the strategies to overcome the barriers to the inclusion of nursing students with disabilities in nursing education? were of particular interest to the researcher. Hence a degree of deductive analysis was utilized to ensure that the coding helped in generating themes that were meaningful to the research question (s). In the second phase, each transcript was coded separately, the researcher coded each chunk of data that seemed to be relevant or to address the first and fourth research questions. Data related to challenges and facilitators to the inclusion of nursing students with disability were extracted and logged into two excel spreadsheets. As the researcher worked through transcripts, new codes were generated, and sometimes existing ones were modified. The researcher used hard copies of the

transcripts and pens and highlighters to identify and label the codes to appropriately represent their meanings. In searching for themes, the researcher examined the codes and some of them fitted together into a subtheme. At the end of this step, the codes had been organized into broader subthemes and themes that seemed to say something specific about the research questions. Furthermore, the researcher assessed the themes' compatibility with the study's overarching conceptual framework and established their relevance to the study's objective (Yin 2009) and hence were modified as needed. The researcher examined the data associated with each concept and determined if the data supported it. The researcher then evaluated how well the themes matched the overall context of the data. The researcher initiated the process of defining themes by finding the relation between the codes and the themes and subthemes (Braun & Clarke 2006). The definition of each theme was based on the relationships of data and the codes- subthemes- themes relationships. In the last phase, the vast amount of data was summarized and presented in tables that highlighted the themes and sub-themes discovered through the interviews and all codes were incorporated within the corresponding subject. The researcher discussed the collected themes from each interviewee in chapter four using the actual responses with their specific details of the participants' quotes. Contextually, interviewees from the two groups of nursing education stakeholders preferred to speak in English because their knowledge of nursing education was conveyed through this communication channel. Hence, the responses in English facilitated the interpretation of the participants' feedback which helped the researcher in commencing data analysis and interpretation.

On the other hand, the quantitative data generated from the responses of the nursing education faculty members and nursing students to the questionnaire were analysed using Statistical Packages for Social Science (SPSS 23.0) software to produce descriptive statistics

including frequencies, percentages, means and standard deviations. The findings from the descriptive statistics were presented in tables to make them visually clear and easier to understand. Moreover, inferential analysis was conducted using independent T-test and analysis of variance (ANOVA), Pearson correlation and linear regression analysis and reliability tests (Muijs 2011). Statistical analysis in the quantitative part started with refining data and generating descriptive statistics for the rate of nursing education faculty members and nursing education students' perceptions towards the inclusion of nursing students with disabilities in nursing education programs. Moreover, the analysis included testing any statistical differences among nursing education faculty members and nursing students' perceptions based on the six demographic variables, including the gender, the age group, the emirates of living, knowing someone with a disability, have interaction with a student with a disability, and taken a course about people with disabilities.

3.11 Ethical Considerations

To assure the validity of the study and to protect the study participants, the researcher was cautious to follow ethical protocols. The researcher requested that the British University in Dubai (BUiD) send a letter allowing the researcher to collect data. To perform the study on the four campuses, the researcher acquired an ethical permission letter from the health sciences academic institution. An email invitation with a consent letter introducing the researcher, outlining the objectives of the study and informing participants that they could withdraw at any time without penalty and that the data collected would be kept private and used only for research purposes, as well as a link to an online questionnaire, were sent to the email addresses of all nursing education faculty members to recruit participants for the quantitative study (See

Appendix F). Regarding the recruitment for the in-depth interviews, individual email invitations were sent to the chief nurse officers in healthcare organization 1 and 2, to the head of nursing education programs, the head of a campus, and the supervisor of student services. The researcher provided participants with an explanation of the study's goals and requested them to sign a permission form after outlining its advantages and risks. Participants were free to withdraw from the study at any time (Cohen, Manion & Morrison 2017). The un-structured and semi-structured interview sessions were made at the participants' convenience (See Appendix D). The researcher tackled the challenges when dealing with the personal information and identities of the participants by anonymizing their names. When conducting interviews, pseudonyms for the participants were used to protect participants anonymity. The participants were assured that their responses were kept confidential and that would be used only for research purposes. Interview recordings and the transcribed information were kept safe using password-secured computer folders. The researcher prevented identifying the small number of healthcare institutions and healthcare organizations by replacing the names with numbers (e.g., Health sciences academic institution 1, Organization 1, etc) (Saunders, Kitzinger, & Kitzinger 2015). However, such anonymization could result in decontextualization which might limit the scope for data analysis (Baez 2002); yet the researcher avoided decontextualizing the places by indicating the emirate in which the sites were located. The data collection tools were not expected to create any kind of physical or emotional threats to the participants. The researcher used different ways to deal with the possible insider bias. The obtained data were analyzed with an unbiased mind. The researcher adopted “reflexivity” by engaging herself in questioning and challenging her perceptions and distancing herself emotionally and socially from the participants in a way that is appropriate and logical through a continuous re-evaluation of the interviewees’ impressions

and responses and through ensuring that pre-existing assumptions (Dwyer & Buckle 2009). Additionally, the researcher tried to remain neutral when interpreting and reporting the findings through respondent validation which included inviting participants to comment on the interview script and to check whether the final themes and concepts sufficiently reflect the phenomenon being studied. The researcher also used triangulation by using different sources of data that support the interpretations to give more confidence that what was found was legitimate. Rich descriptions of the participants' statements were also used to support the results and two colleagues of the researcher helped in coding the data to obtain consistency between their interpretations and that of the researcher.

The researcher served as the main tool to conduct the research and took the responsibility to collect and analyze data as well as to respect research ethical guidelines throughout the study. The researcher chose to present herself as both an insider and an outsider. On the one hand, the researcher was an insider because she works in the health sciences academic institution and hence has similar teaching experiences to those of the study participants. On the other hand, the researcher was an outsider to the culture of nursing education which was new to her as is specialized in special and inclusive education and worked as an instructor of Psychology in the same health sciences academic institution from which data was collected. Being trained in human counseling helped the researcher in building the needed rapport and reciprocity with the participants to facilitate reporting their words, stories, and realities objectively. Moreover, the researcher used her internal knowledge related to special and inclusive education as a strength to critically analyze the findings instead of clouding them.

It is significant to note that, despite the researcher's identity, values, and beliefs not being eliminated from the process because the researcher's self is inextricably linked to research

activity and analysis, the researcher believes that being aware of her presumptions, experience, and knowledge about the issues surrounding inclusion and disability allowed her to remain sufficiently distant and somewhat neutral.

3.12 Chapter Summary

Research methodology is the heart of every research. It is used to achieve the research objectives by answering the research questions and deriving recommendations. This chapter discussed the methodology of the study and outlined the pragmatic worldview of the researcher. A rationale for using the mixed methods approach and the three-part sequential mixed methods design was shared. Various data collection methods including survey and interviews were presented and rationalized. In addition to ethical considerations, the role of the researcher was detailed to identify and control any potential bias. The next chapter presents the analysis and results of the unstructured and semi structured interviews with two groups of nursing education stakeholders.

Chapter 4 Barriers and Facilitators to Disability Inclusion in Nursing Education

4.1 Introduction

The purpose of this research is to explore nursing education stakeholders' perceptions about inclusion of students with disabilities in nursing education programs in the UAE and the barriers and facilitators to their inclusion. This chapter uses qualitative methodology to convey the data analysis and findings for the research topic. The study used a three- part exploratory sequential mixed-method design and employed unstructured open-ended interviews and semi structured interviews in the qualitative part and a cross-sectional survey in the quantitative part. This chapter presents the analysis and results of the unstructured and semi structured interviews with two groups of nursing education stakeholders to answer the first research sub-question "What are the nursing education stakeholders' views on the barriers to nursing students with disabilities' inclusion in nursing education programs in the UAE?" and the fourth research sub-question "What are the facilitators to the inclusion of nursing students with disabilities in nursing education in the UAE as viewed by nursing education stakeholders? Themes that were highlighted are in this chapter.

4.2 Unstructured Interviews with Nursing Stakeholders Analysis

To answer this question, interviews with the above listed participants were analyzed and concluded using the six steps of thematic analysis, which are as follows: "(a) familiarizing oneself with the data; (b) generating initial codes; (c) searching for themes; (d) revising themes; (e) defining and naming themes, and (f) producing the report" (Braun & Clarke 2006).

Phase 1: Familiarize yourself with the data. The researcher reviewed the records and transcripts repeatedly in order to become intimately familiar with the complete body of information. The second research sub-question, "What are the nursing education stakeholders' views on the factors affecting the inclusion of nursing education students with disabilities in nursing education programs in the UAE?" was of particular interest to the researcher, who used data analysis to try to answer this question. As a result, the researcher coded each chunk of data that related to or illustrated an intriguing aspect of the study issue.

Phase 2: Creation of initial codes. Each transcript was coded separately. Every segment of text that seemed to be relevant to or specifically address the second research question was highlighted. As the researcher worked through transcripts, new codes were generated, and sometimes existing ones were modified. The researcher used hard copies of the transcripts and pens and highlighters to identify and label the codes to appropriately represent their meanings. The codes were checked for redundancy and overlap.

Phase 3: Searching for themes. A theme is a pattern that captures significant or interesting information about the data and/or research question. There is no specific rule of what makes a theme. A theme is characterized by its significance (Braun & Clarke 2006). Hence, the researcher examined the codes and some of them fitted together into a subtheme. At the end of this step, the codes had been organized into broader subthemes and themes that seemed to say something specific about the barriers to the inclusion of nursing students with disabilities in nursing education programs in the UAE.

Phase 4: Reviewing themes. The purpose of this step was to analyze the quality of the themes and ensure that they were backed by facts. As a result, the researcher evaluated, changed, and expanded on early themes. Furthermore, the researcher assessed the themes' compatibility

with the study's overarching conceptual framework and established their relevance to the study's objective (Yin 2009). The information related to each topic was color-coded. The researcher examined the data associated with each topic and determined if the data supported it. The researcher then evaluated how well the themes matched the overall context of the data. The researcher also searched for abnormalities, useless information, and strange connections.

Phase 5: Defining and naming themes. The researcher initiated the process of defining themes by finding the relation between the codes and the themes and subthemes (Braun & Clarke 2006). The definition of each theme was based on the relationships of data and the codes-themes. The aim of each theme and how the subthemes interact and relate to the main theme and how the themes relate to each other were conducted. Any missing data were promptly added and rearranged. The ongoing analysis of refining the characteristics of each theme led to named and defined themes.

Phase 6: Presentation of results. The vast amount of data was summarized and presented in an intelligible manner at this point.

4.3 Findings from Thematic Analysis of Unstructured Interviews Data

Eight main themes relevant to the views of nursing education stakeholders towards barriers to the inclusion of nursing students with disabilities in nursing education emerged: Nature of Disability, Knowledge of Nursing Faculty, Attitudes, Communication, Resources, Nursing Program Requirements, Admission and Support Policies, and Disability Outreach Activities. These themes illustrated the views of nursing education stakeholders towards barriers to the inclusion of nursing students with disabilities in nursing education programs. Using the

language of the participants the themes and subthemes are described and illustrated. Table 7 summarizes the themes and subthemes.

Table 7: Summary of the Concluded Themes and Subthemes

Themes	Sub-themes
Nature of Disability	Disability category Functional limitation of disability
Knowledge of Nursing Faculty	Conceptualization of “Disability” Lack of professional development for staff
Attitudes	Negative attitudes of family members Negative study/ training place attitudes
Communication	Poor communication between stakeholders Poor collaboration with mental care professionals
Resources	Lack of proper accommodations Lack of specialized manpower
Nursing Program Requirements	Admission requirements Clinical placement requirements Quality of care and safety of patients concerns Lack of non-clinical pathways
Admission and Support Policies	Disability non-disclosure Lack of clear institutional disability policies
Disability Outreach Activities	

4.3.1 Nature of Disability

The “Nature of Disability” captured the participants’ views as a barrier to the inclusion of nursing students with disabilities. Within this theme, two sub-themes were extracted: Disability category and functional limitation of disability. Most of the participants voiced a concern related to the impact of the disability category and the degree of functional limitation of students with disabilities on the success of their inclusion and on their ability to meet program expectations. Would a student with any disability category be able to safely practice nursing? Would a student with any disability work in any clinical venues?

4.3.1.1 Disability Category

Some participants explained that students with mental and cognitive disabilities lack the emotional and intellectual capability to provide care to patients and hence cannot work as nurses as they may jeopardize the safety of patients. Hence, the participants were less positive and less inclined to accept students with a certain category of disability to join the nursing education programs than others.

“I am not going to tell you that I will accept people with mental issues in nursing because they are responsible for people lives so they will not know what they are doing and they will not know what is the program.” (Female, Supervisor student services.) M

“For nursing, we can accept people who have vision problems hearing problems some movement disabilities and give them specific task to do in the hospital but mental disability I think it is difficult so we need to assess the disability and according to that we can decide which kind of disability we can accept in this program.” (Female, Supervisor student services.) M

“They have to do one on one or follow up tutoring or anything like that again depending on the type of disability. If it is cognitive disabilities, it would be very different”. (Female, Chief nursing officer.) S

“People who have cognitive issues, are not going to be interested to study nursing. They need someone to give them care so I don’t think to go and look after somebody to give care because they are lacking these things they need somebody to give them care.” (Female, Chief nursing officer.) S

Regarding including students with physical disabilities in nursing programs, the participants’ perspectives fluctuated between opponent and a proponent. Some participants opposed the idea of including students in wheelchairs as they have limited mobility in some clinical situations which may restrict them from meeting the needs of patients and may cause health risks to themselves and others.

“But one person with a disability on a wheelchair cannot move and go into the patient room because there may be stuff on the floor they may not be able to go and come easily”. (Female, nursing education student.) GZ

“This depends on the level of disability. you know in nursing she needs to go to clinical and do physical tasks and this may be hard for people who have movement disability, or they have a mental disability.” (Female, Supervisor student services.) M

On the contrary, one female chief nursing officer described different roles that nursing students with physical disabilities can have that do not require them to be at the bedside yet are highly needed in the nursing care field such as working as patient educators, patient advocates, or even work in management. It was indicated that not all nurses practice in hospital settings and that students with disabilities can be placed in a variety of settings to meet clinical objectives.

“There are nursing jobs that are very much needed like discharge plans, care, management, nurse educators, patient advocate, patient educators. Some roles can assimilate nurses with physical disabilities for example.” (Female, Chief nursing officer.) Z

4.3.1.2 Functional Limitation of Disability

Other participants highlighted the impact of the functional limitations of disability on the success of the inclusion of nursing students with disabilities. According to some participants, their inclusion depends on the severity of their disability and the subspecialty, unit, or clinic that they will work. The participants believed that not all students with the same disability have the same limitations and same restrictions to work in special clinical settings or to perform a specific task. The severity of the functional limitations due to disability were sought to be a factor that affects the decision of work placements of nursing students with disabilities when they graduate. Mental specialties and outpatient departments were given as examples that can include students with disabilities depending on the severity and level of disability.

"The severity of disability will play a major role in whether to include or not include because not all disabilities they can do or perform. (Male, Nursing education faculty member.) AB

One chief nursing officer mentioned that the nature and level of functional limitation are negatively correlated with self-concept and self-confidence which may affect the way they deal with patients and on the quality of care provided.

"Maybe people who are on the wheelchair are dependent on their family for daily living activities such as dressing up, cleaning feeding them, they don't have confidence in themselves." (Female, Chief nursing officer.) S

4.3.2 Knowledge of Nursing Faculty

The interviews conducted with participants identified a theme about “Knowledge of Nursing faculty” that is seen to affect the inclusion of nursing students with disabilities. The views of the participants indicated two subthemes related to the conceptualization of “Disability” and the lack of professional development for staff.

4.3.2.1 *Conceptualization of disability*

Although the participants were not asked about their personal definition of disability, most participants implicitly indicated how each and everyone understood the meaning of disability. Participants had different conceptualizations of “Disability”. People with a disability were viewed as having a physical or mental problem, a health condition, or functional incapacity and limitations who need to adapt to and get assistance with. Hence, the majority understood disability in terms of functional abilities that may affect patient care as they are seen as individuals who need continuous help and support and who may not be able to provide it to others.

“It’s a kind of limitation”. (Male, Nursing education faculty member.) AB

“Disability comes in all terms and shapes including physical disabilities and mental illness.” (Female, head of a campus.) E

“They don’t have confidence in themselves to study nursing. People with cognitive issues are not going to be interested to study nursing. They need someone to give them care. I don’t think they can go and look after somebody to give them care because they are lacking these things and they need somebody to give them care.” (Female, Chief nursing officer.) S

Some faculty members described disability from a nursing student framework. These participants focused on what students were not able to perform related to skills required in

nursing programs. In fact, there were different expectations of nursing students with disabilities than students without disabilities. According to one participant, they must work harder than students without disabilities in order to demonstrate their talents to others and be more persuasive to society in order to be included and accepted as nurses.

“They are minorities you need to continue by showing me extraordinary performance but if they make mistakes they will be rejected by society. So, this is a change and the change should be persuasive. You should show me something different so I can change.” (Male, Nursing education faculty member.) AB

Consistent with the way disability was understood by participants, nursing students with disabilities were referred to as “these people”, “not normal” or “those category of people” reflecting how some nursing stakeholders understand disability as being different than normal. Hence, the meanings of disability implied being not normal or different.

“They are not normal people where they can utilize their time to study or to train or to go to practice areas and so we have to have different things”. (Female, Chief nursing officer.) S

“They always try to support these categories of people” (Female, Supervisor student services). M

“At the end, we are trying our best to merge these people with normal people because at the end of the day they are human beings. They always try to support these kinds of categories of people” (Female, Supervisor student services). M

One participant detested the term disability and understood disability from a human variation lens. According to the participant, disability is who you are as a human variation. The participant referred to a student with a disability as a neurodiverse student which reflect the beliefs of some nursing faculty of the value of the diversity of individuals and that the many different ways that people use to interact with the world around them should not be viewed as deficits.

"I don't even like the term disability in there because it is not a disability it is just you. You have skinny, you have blond you have black hair, you get little anxiety you get little hypertension." (Male. Head of the nursing program) A

"Teachers need support when they have neurodiverse students in class." (Male. Head of the nursing program) A

4.3.2.2 Lack of professional development

Throughout the course of interviewing, concerns related specifically to nursing faculty emerged. Most of the participants mentioned that nursing faculty members lack the experience working with nursing students with disabilities and that supporting staff on how to provide the needed help for this group of students is very important.

"Most of our normal school they don't have the background of how to deal with special needs students so when the country decided to merge them with other students. They should provide them with the right resources and facilities." (Female, Supervisor student services). M

Expressing a similar situation, one participant mentioned that teaching students with disabilities requires educators to know different teaching strategies on how to educate students with diverse needs and different nature and category of disability.

"Teachers may lack the ways of how to deal with these students because they need specialized way." (Female, nursing education student) GZ

"You know Amani, these students they need special way of dealing with them. If they are not going to provide them with right faculty and right instructor and right environment all these factors will affect them. (Female, Supervisor student services). M

" We need to prepare for them the facilities that help them to finish their education smoothly and also to provide them with qualified tutor/ teachers/ instructors who understand their nature because as you know they come with different kind of disabilities." (Female, Supervisor student services). M

In addition to lacking knowledge about working with students with disabilities in general, some participants noted the difficulty of not knowing that they would be teaching a student with a disability until the student is in clinical placements. They received no advance notice, which according to the participant is problematic. Receiving no notice left little time for faculty to prepare the needed accommodations in theory and clinical sites. One participant mentioned that the lack of awareness of the campus resources and not knowing the proper formal channels for accommodation provision may delay the support for students with disabilities.

“The only time we get to know about who has a disability once they are in clinical sites. Well, we are all nurses here so most of the time they pick it up and request a further explanation of how students can do that.” (Male, Head of nursing program). A

“Staff needs to know where to go to get support. To support students, it may come naturally for some people. They may need what to do and where to direct students for further help but for some staff, it is not natural and they may struggle to support them.” (Female, Head of a campus.) E

As a result, the lack of training on how to educate nursing students with disabilities, the lack of knowledge related to disability itself, and lack of awareness on the right process for accommodation provision were viewed by the study participants as barriers to the inclusion of nursing students with disabilities.

4.3.3 Attitudes

Attitudinal barriers were perceived by the study participants as common barriers that individuals with disabilities face to become and practice as nurses. According to the study participants, attitudes, both positive and negative, can impact inclusion.

4.3.3.1 *Negative attitudes of family members*

The role families play in supporting their children with disabilities and that help usually starts from home. Various participants described how the attitudes of family members influence their child's educational choices to become a nurse. One participant believed that supporting parents play a great role in enhancing their children's self-efficacy and hence positive parental attitude is seen as a supportive pillar and a catalyst for the successful inclusion of nursing students with disabilities.

“Now recently, I feel the families support their sons and daughters, and they try to give them a good education. Sometimes we tell the families that the policy does not allow them to take this job because it is hard. They are telling us yes they can do it. Sometimes, I feel that they believe in the abilities of their sons and daughters so from our side we need to support these people.” (Female, Supervisor student services). M

Other participants pointed out that parents' negative attitude towards the ability of their children to become nurses as well as their over-protection and guardedness, fear of their failure and rejection by society will negatively impact their children's motivation to pursue a career in nursing and reinforce the feeling of helplessness.

“They may be protective like my child got this disability I don't want her to fail I don't want her to be stigmatized. I don't want her to become vulnerable I want to protect her and dissuade her from doing this which parents often do.” (Female, Head of a campus.) E

One participant mentioned that families of children with disabilities fear the social stigma and ridicule attached to any form of disability which push them to hide their children with disability leading to their invisibility and social isolation which negatively impacts their education and rehabilitation.

“It starts at home and there is still a little bit of hiding long way to accept disability. There is hiding of kids when they have disability. It is very rare to see people disability around in campuses. They are not mainstreamed they go to special schools. We need to start with home accepting disability”. (Female, Chief nursing officer.) Z

Another participant noted that the way parents react to their child with special needs partly depends on how they perceive disability and the practical implications the disability has on their children’s ability to become nurses. This creates negative emotions of helplessness and inadequacy leading to discouragement from enrolling in nursing programs.

“Some family they will support their family members, but they can also be part of their failure because they may tell them no one will accept them, how will you help the patients, which facilities will accept them or you are not going to learn as fast as others so they are going to give him their negative emotions.” (Female, a nursing student.) GZ

4.3.3.2 Negative study/ training place attitudes

Besides mentioning the impact of the attitude of family members on their children’s motivation and self-efficacy to become nurses, some participants reported that teachers' attitudes towards nursing students with disabilities have an enormous impact on their education and the success of their inclusion. The study participants believed that nurse educators play an essential role in integrating students with disabilities and that students’ experience is shaped by the attitudes of educators which influence how they work with them. Therefore, it was believed that

nursing faculty members should be role models for disability inclusivity, empathy, and compassion.

*“I think having understanding and inclusive teachers. Is very important They are role models.” (Female, Chief nursing officer).
Z*

This perspective was confirmed by one of the participants who was a nursing student who believed that the positive attitude of people around nursing students with disabilities can positively influence their academic performance and encourage them to continue and graduate successfully from the nursing program.

“I believe if we show a positive attitude towards them like you did well on this exam or oh you did better than me on the exam they will be encouraged.” (Female, nursing student). GZ

Most participants shared a common perspective of the importance of developing a community that accepts and embraces nursing students with disabilities in order to develop their self-concept and help them adjust to their disability which greatly enhances how their abilities are perceived by the public and coworkers in the healthcare field.

“Students should be accepted as part of the community that yes get something that they need like little support but that does not make them any different or any better or any worse than others.” (Female, Head of a campus) E

“I feel accepted by others, society, and attitude of people is very important like accepting them as they are and accepting them to do a procedure for them.” (Male, nursing faculty member) AB

Other participants believed that the way people view and understand disability affects their attitude towards people with disabilities. People who view disability as an anomaly and deviation from the norm often have negative and prejudicial views leading to social isolation and feelings of low self-esteem. It was mentioned that it is important to acknowledge the

differences brought about by disability which are assumed to enrich not only the community but the lives of the people who live within. They also mentioned that nursing students with disabilities will add diversity and uniqueness to the nursing programs and will make nurses more compassionate.

“We should get away from disability viewed as something weird, odd or different. It should be embedded in the culture that every single person is different” (Female, Head of a campus) E

“All categories can be included and they can all add diversity to the classroom that we don’t have. They will undoubtedly make other nurses better nurses.” (Male, Head of nursing programs) A

Two participants appreciated the notion of fear of rejection as a factor that would discourage people with disabilities to pursue a career in nursing and as result, they would not apply to nursing education programs hindering by that their inclusion and representation in the program. The participants believed that society may not accept nurses with a disability to be in the nursing profession as patients may not trust the care given by a nurse with a disability and hence may affect their career choice of people with disabilities who are willing to become nurses. The participants also associated the fear of rejection with the fear of disclosure of disability as a way nursing students with disabilities would avoid negative attitudes as they progress through their studies.

“Second they fear, that they will be not accepted and they fear that patients will not allow them to treat them or help them.” (Female, a nursing student.) GZ

“But in any application to nursing they, say ask if you have a health condition or chronic diseases and this will lead to having false negatives because they will not report if they will be rejected, or the medical insurance will have more restrictions.” (Male, nursing faculty member.) AB

4.3.4 Communication

The “Communication” theme captured the participants’ views as a barrier to the inclusion of nursing students with disabilities. Within this theme, two subthemes were extracted: poor communication between nursing education stakeholders and poor collaboration with mental care professionals.

4.3.4.1 Poor Communication Between Nursing Education Stakeholders

The study participants emphasized the importance of cooperation and communication between healthcare academic institutions and healthcare facilities and the government to guarantee suitable job opportunities based on the abilities of nursing education students. One participant mentioned that if the government did not provide nursing students with disabilities with opportunities for education and employment, this group of students will stay at home and no support system will be created based on their needs. Therefore, the lack of communication between nursing education stakeholders delays the accommodation plan to support nursing students with disabilities and help them graduate successfully from the nursing program

“If the country did not open the door for these people their families will still hide them and there will be no chances for them. The cooperation has to come from both sides.” (Female, Supervisor student services). M

Another participant believed that without proper cooperation between the health organization and academic institution, the eligibility of students with disability to work as nurses cannot be determined which will affect their inclusion and employment.

“So, there should be cooperation between the hospital and educational intuitions to try to determine which disability they can accept in the hospital because at the end they will work in the hospital and what kind of job they can do it” (Female, Supervisor student services). M

Other participants argued that the lack of correct statistics related to the number and profile of students with disabilities is a barrier to including and supporting them in higher education institutions. Hence, communicating with the ministry of education is deemed necessary.

“This is something we need to work on with the ministry of education.” (Female, Chief nursing officer). Z

4.3.4.2 Poor collaboration with mental health professionals

Working with psychologists and counsellor was also seen as a factor that will help in raising awareness to address stigma and discrimination against nursing students with disabilities that will help in creating an accepting and welcoming environment as well as provide them with the needed help to meet the academic standards while considering both their strengths and challenges as a result of their disabilities.

“I think counsellors and social workers have to be very close to the person who has or who developed a disability. You need a psychologist at the campus that can facilitate their acceptance.” (Female, Chief nursing officer) Z

“I have a big hope to start bringing mental health people to at least start the conversation.” (Male. Head of the nursing program) A

4.3.5 Resources

“Resources” theme was developed by the various participants. Most participants shared a common view that the lack of proper accommodations, and the shortage in specialized manpower are barriers to the inclusion of nursing students with disabilities.

4.3.5.1 Lack of proper accommodations

One of the participants raised clear concerns related to the lack of proper accommodations to help nursing students with disabilities progress in the nursing program. Students are not provided with additional time to finish examination or reading tasks. Moreover, students don't have a private room to take exams. Neither students with visual impairments and blindness are allowed to use Braille. According to the participant, the lack of proper accommodations in the laboratories is a real challenge to the inclusion of nursing students with disabilities. This was reflected in the statements below.

"We provide no formal services for them. Admin provides no accommodations for them. It is never brought up." (Male, Head of a nursing program.) A

" Arguably, there is no support for them. There are no extra exemptions or reading time we don't allow braille we don't allow taking your exam in a private room. None of that is here." (Male, Head of a nursing program.) A

"We don't want people to just point at someone and say they look we are inclusive because we are not inclusive if we don't modify labs and desks. right?" (Male, Head of a nursing program.) A

Additionally, investing in technology and using digital devices to facilitate the execution of clinical tasks was mentioned by participants as facilitators that can help nursing students with disabilities in overcoming their functional limitations due to disability. One participant gave an example that much equipment in one of the health care organizations are manual and need visual and cognitive abilities which may be challenging for certain groups of students with disabilities.

"We don't have equipment that are digital. All are manual and require visual and cognitive abilities." (Female, Chief nursing officer) S

"I have trained nurses that had dwarfism. they are tiny they don't even go to the top of the bed but they have completed the nurse training program. They can make a bed but what we did is that we got them steps so they had mobile steps and it worked so the curriculum has to be flexible. (Female, Head of a campus.) E

"We can invest in technology. I don't know if zoom does it. Does all transcripts for you? That is not too hard. There are many sorts of things that do not take a lot of money." (Male, Head of a nursing program) A

However, the use of technology was not seen as effective by all participants. One participant raised concerns related to the complexity of some digital devices and the abilities of some groups of nursing students with disabilities to handle and use these devices effectively and safely.

"One machine we brought newly is digital but you need to touch and see people with disabilities cannot really do. This is the advanced the unit now we received." (Female, Chief nursing officer) S

4.3.5.2 Shortage in specialized manpower

Various participants raised a concern related to the impact of the lack of resources on the support of nursing students with disabilities which included the shortage in manpower and specialized staff in order to know how to deal with students with disabilities.

"We are running now 44 to one as a student to teacher ratio. I don't have time to figure out if someone has a disability to provide the needed support." (Male, Head of nursing program). A

4.3.6 Nursing Program Requirements

As part of their stories in this study, the participants described concerns about the nursing program requirements in particular the admission requirements, the requirements of clinical placements, worries about maintaining the quality of care and ensuring patient safety as well as the heavy focus of nursing programs on clinical experience.

4.3.6.1 Admission Requirements

Most of the participants used the terms "physical fitness" and "being fit," which most participants used to refer to the physical health condition of individuals including their abilities to move and walk, interchangeably with the term "medical fitness," which refers to various tests conducted by the country's Healthcare Department to screen people for a range of diseases, such as HIV/AIDS, Tuberculosis, Syphilis, and Hepatitis B. Considering this finding, the researcher tried to reflect this reality by pointing out the inconsistency of this term and the ambiguity around its meaning in relation to how it was used and narrated by the various nursing stakeholder participants.

"I am thinking because first of all the criteria put by the college itself we have to have medical fitness before going to this. Medical fitness is one of the acceptance criteria similar to high school transcripts not less important." (Female, Chief nursing officer) S

"We screen for chronic diseases because there is a high chance of them missing work more than someone who is perfectly fit." (Female, Chief nursing officer). Z

Exploring this subtheme more deeply, one nursing faculty member raised the concern of meeting the "rules" related to the physical ability requirement. It was clearly expressed that physical requirements in the nursing field can be a barrier to the inclusion of nursing students with disabilities since most careers within the field of nursing and healthcare can be physically demanding that need a range of sensory and functional abilities. Hence, physical and mental fitness is seen by participants as essential for clinical practice and students should be physically and mentally able to meet the requirements of the nursing program outlined as necessary for a professional nurse.

"In particular nursing, many factors can be barriers to preventing those with disabilities to become nurses, one of them is a physical requirement mainly focus on physical tasks to do with patients because we don't only prescribe things we have to do physical

contact like physical examinations.” (Male, nursing faculty member.) AB

“Yes, they have to pass clinical fitness in clinical. Well technically in the program but no one will look at it until you go to the technical stage.” (Male, Head of nursing programs.)” A

The health care professionals especially nurses have to be physically fit and mentally well so they can perform different tasks and responsibilities. (Male, nursing faculty member.)

AB

4.3.6.2 Clinical placement requirements

Because of the complexity of the requirements and the heavy focus on physical ability to perform many tasks at clinical sites, some participants believed that the nursing curriculum’s requirements is a real barrier preventing the a student with disability from becoming a successful nurse as they need to stay for long period of time in wards checking on patients and walking between wards which is very physically demanding and exhausting especially for students with physical health conditions and disabilities.

“Physical fitness is an element that needs to be considered. Thinking of nursing skills as a nurse, studying, placement takes hours, you need to have stamina, you need to have an element of fitness. I see how this can put people off but physical fitness is important because again you are a nurse in clinical practice.” (Female, Head of campus). E

“Another factor that can affect their inclusion is shifts and long time and duty timing in wards because we are working in all different parts of the ward 12 hours shift. For those who have any kind of joint problem or joint pain they cannot tolerate it what about those with disabilities.” (Male, Nursing education faculty member). AB

The views of some participants showed that the nursing curricula are rigid and not flexible in terms of topics and skills which makes it not adaptive and irresponsive to the needs

of diverse learners and hence is perceived as a challenge to the inclusion of nursing students with disabilities. Moreover, the high-stress levels in the nursing field were sought to affect students' health and well-being and may put them under emotional exhaustion which in turn affect the quality of care given to patients.

"I think the nursing curriculum is more rigid and we are still news added. We want to deliver a curriculum that is approved. Teachers should have some flexibility, but they have to get it from them directly." (Female, Chief nursing officer) Z

"In nursing. Topics are fixed. It is fixed you cannot change it. It is not like a university. The curriculum is fixed and rigid and is not flexible. No flexibility in the nursing curriculum if they think to bring these people into the field. They have to plan very well according to the people's needs." (Female, Chief nursing officer) S

"Another factor is stress because the health care field, in general, is stressful so I think for those with disabilities it will be a barrier for them." (Male, nursing faculty member.) AB

4.3.6.3 *Quality of care and safety of patients concerns*

This subtheme was captured through the participants' emphases on the importance of employment requirements of quality of care in order to provide care that is effective, safe, and offers a positive experience to patients. All participants referred to patient safety at some point. This concern centered on the fact that, during their academic programs, nursing students spend significant time caring for patients in different situations in courses that provide clinical experience. A concern for patient safety is a priority for schools of nursing while students are in a clinical setting. These points were reflected in the statements below.

"Also, most preceptors 80% of them don't want you to affect their patients negatively and not to cause harm to the patients and they will be responsible for patient safety. "(Female, nursing student.) GZ

*“They are working with their hand on plus they are working on patients’ life which cannot wait a min until I move my wheelchair.”
(Female, Chief nursing officer.) S*

Various participants explained that all healthcare organizations work towards the quality of care by improving patient satisfaction and ensuring patients’ safety which is sought to be jeopardized if nursing students with disabilities were included. This was echoed in the statement below.

*“Another thing is about the quality. Most institutions work towards quality-based care. They will question the quality.”
(Male, nursing faculty member.) AB*

In line with this view, participants added that the concerns of academic institutions and healthcare organizations related to the productivity of nurses with disabilities and disability-related costs which are dependent on the person's functional difficulties, health conditions, and support needs, can be a barrier for the inclusion of nursing students with disabilities.

“This means employee productivity vs, Money. Now a day in healthcare, unfortunately., That means they need to employ anybody they can get productivity.” (Female, Chief nursing officer.) S

“Another main factor is the costs because to have people with disabilities and in the common understanding they have more health problems and that will reflect on the cost.” (Male, nursing faculty member.) A

4.3.6.4 Absence of Nonclinical Academic Tracks

The participants explained that the absence of nonclinical tracks while students with disabilities are still in the nursing program will hinder them from graduating successfully to work in nursing areas that align with their potentials, abilities and strengths. Some participants highlighted the importance of joining clinical tracks as an essential requirement to graduate as

nurses since it equips nursing students with disabilities with the needed skills and knowledge to graduate successfully and work as nurses.

“We know nursing their lots of avenues you can take when you become qualified you can be a nurse educator or outpatient clinic you can be a specialist, you are not in clinical practice working shifts that demand a lot of energy; however, to get to these routes you still need to be a clinical nurse. You still have to have this clinical experience to become a nurse educator.” (Female, Head of a campus.) E

“For now we don’t have different streams of nursing here because nursing is a block you cannot take part and leave another part so it is not like you have a disability you can be an instructor no because they cannot because they should have clinical experience so they can have both clinical and academic experiences that will be better.” (Male, nursing faculty”) AB

Yet, some participants mentioned that the different nursing avenues provide opportunities for employment to nursing students with disabilities upon graduation since not all nursing avenues requires nurses to be doing bed side work all the time which may include working as a discharge planning nurse, management, nurse educator, patient advocate, patient education and work in the care management.

“There are different types of nursing. We are lucky to have different types. If you have physical disabilities. It does not have to be something that you always need to stand on your feet. There are nursing jobs that are very much needed like discharge planning, care management, nurse educator, patient advocate, patient education.” (Female, Chief nursing officer) Z

“For example, in the college instead of going as general nursing, they can be in informatics, because all our record now is not any more handwriting so they can be specialized in this.” (Female, Chief nursing officer) S

“Maybe they can be involved in the maternity ward because they have to focus on one patient and I believe they can do it because they are asking patients to push and encourage the patient to push.” (Female. Nursing student) GZ

4.3.7 Admission and Support Policies

The “Admission and Support Policies” theme captured the participants’ views on the impact of poor admission and support policies on the inclusion of nursing students with disabilities. Within this theme, two subthemes were extracted: Disability non-disclosure and lack of clear institutional disability policies.

4.3.7.1 Disability non-disclosure

Participants cited disability declaration as an influential element that affects the inclusion of nursing students with disabilities and limits their access to sufficient assistance and reasonable accommodations. Participants stated that nursing students with disabilities may choose not to declare or reveal their impairment in order to avoid negative stereotypes, marginalization, rejection, and prejudice. It was believed that students with disabilities may not wish to disclose personal, sensitive information about themselves that may impact their healthcare insurance services.

“But in any application to nursing they, say ask if you have a health condition or chronic diseases and this will lead to having false negatives because they will not report if they will be rejected, or the medical insurance will have more restrictions.” (Male, nursing faculty member.) AB

However, it was believed that this will delay adjustments to be made to enable students to fulfill their potential and achieve the learning outcomes. Hence, participants believed that it is important for everyone working with the student to be told about his/ her disability as they believed it would be easier to be inclusive and to meet the student’s needs if faculty and clinical staff were informed of the disability.

“This is massive and I think if awareness that this person has a disability even if they did not declare the disability to start with.

The earlier that the disability can be identified, the quicker the support can be given to students.” A

Frustration was verbalized about not being informed of a disability beforehand. This came out in discussing previous experience working with students with disabilities. The head of nursing program stated,

“The only time we get to know about who has a disability once they are in clinical sites. Well, we are all nurses here so most of the time they pick it up and request a further explanation of how students can do that.” (Male, Head of nursing program). A

The head of the nursing program talked about how the nursing education faculty members address the student personally and at one to one to offer ways of support. This included things like adapting the environment to meet students’ needs without informing the student services.

“We handle that at one to one faculty student bases. And we hide it from student services. So if she has a migraine, we put the student with a faculty member in a break out room to remove her from a certain situation. But none of this is institutionalized”. (Male, Head of nursing program). A

As a result, the willingness to access needed support is core in student disclosure; yet disclosure risks discrimination as seen by participants.

4.3.7.2 Lack of clear institutional disability policies

Various participants shared concerns related to the lack of clear admission policies to the nursing program for students with disabilities. One of the participants raised a concern related to the absence of information related to students with disabilities in the college. The participants doubted the effectiveness of the admission criteria used to identify students with disability considering the absence of any statistics related to students with disabilities.

“I wonder what criteria the college is using when they reported that they don’t have people of determination.” (Female, Head of a campus) E

Other participants mentioned that it is important that college policy and procedure documents and student manuals to have clear policies stating how students with disability are admitted and supported so student applicants will be aware that students with disabilities are welcomed, accepted and supported in the college which will encourage them to enroll in the nursing program.

“I think if the institution put very clear guidelines for example if you are physically disabled you will 1,2 and 3 so they will be encouraged to apply and they will be allowed to be admitted.” (Male, nursing faculty member) AB

“If the disability is not mentioned in the policy or student manual it means that they are not represented and not accepted so if the college do not have clear policy, then they feel that they are not part of this society.” (Female, Nursing education student).GZ

Some participants pointed out that there are no specific penalties attributed to not implementing the policies proactively when compared to law enforcement policies in the U.S.A.

“Here you cannot do the American approach. The American approach here is if I have a disability and you don’t let me in I can sue you for a lot of money for billions of dollars so places are forced to do writing centers and do buildings for wheelchairs and

ready to take neurodiverse students.” (Male, Head of a nursing program) A

Other participants raised the need for having a clear policy related to the right of people with disabilities to be employed in the healthcare field as healthcare providers with disabilities are currently excluded from being employed in healthcare organizations and are not protected by the existing right to employment laws.

“In the admin positions, we have disabled people and a really good number and they mandated each facility in government entity to have a % of people with disabilities. But unfortunately, physicians, nurses, and allied health are not included under this rule.” (Female, Chief nursing officer) S

4.3.8 Disability Outreach Activities

The “Disability Outreach Activities” theme was highly elaborated by the various participants. The lack of disability inclusion awareness was brought by various participants. Many participants stressed the importance of raising disability awareness to reduce stereotypes and correct misconceptions about the abilities of nursing students with disabilities so that the issue is brought to the forefront. This notion was highlighted by one chief nursing officer who pointed out that disability visibility matters to people in the management as they may rethink assumptions about health care providers with disabilities. Additionally, disability visibility was seen to offer an additional narrative about disability which permits the widening of viewpoints that can help in changing the culture to be more accepting of nurses with disabilities.

“Nowadays we established our patient call center so nurses have to be in this call center to answer so they can answer calls, give advice, and direct patients where to go but still we could not support this staff. If more cases are such will alert the senior team. They will relook at these categories.” (Female, Chief nursing officer) S

Having representation, whether in the media or taking part in competitions and celebrating success was viewed by other participants as an important factor in motivating students with disabilities to be more visible in society and in encouraging them to choose nursing as a career.

“Also, it is important to see yourself in advertisements and championships. it is very impacting for mental health. this encourages them and makes them value themselves.” (Female, nursing student) GZ

Exploring this theme more deeply, some participants mentioned that health sciences institutions must commit to efforts that reflect the diversity of their student body in their marketing materials and practices that should not be a one-time exercise. Using real success stories and showcasing the capabilities of nursing students with disability are assumed to encourage and pursue future students with disabilities to join the program and reflect how the institution is dedicated to celebrating diversity.

“I think if we have marketing because it is about culture if we make a change in the culture the institution will accept it.” (Male, Nursing faculty) AB

“We have a huge center of disability in the area, do we do clinical there do we spend any days there. Do we market over there?” (Male,

Head of a nursing program) A

4.4 Findings from Thematic Analysis of Semi-Structured Interviews Data

The researcher was motivated to explore further from nursing education stakeholders' perspectives how a number of suggested inclusive practices and accommodations can facilitate the inclusion and participation of students with disabilities in nursing education programs in the UAE. Therefore, the purpose of conducting a follow-up qualitative study was to produce broad

insights and explanations of the participants' subjective interpretations of how the positively perceived accommodations and practices can be used to develop guidelines for inclusive nursing education. Moreover, the researcher sought of adding more value to the study by supplementing the generality of quantitative results with UAE context-specific depth and detail that qualitative methods can provide.

The same sampling procedures used to identify survey respondents were used to locate participants for the follow-up study. The researcher emailed all nursing faculty members and nursing education students (Year 1-4) to invite them to participate in an individual semi-structured interviews. An email was also sent to two administrators working as supervisors of student services to invite them to participate in individual semi-structured interviews

All transcripts of the conducted 14 interviews were subject to thematic analysis. After multiple thorough readings of participants' answers, codes were assigned to each input using an inductive approach (Braun & Clarke 2006). The participant's responses to the fourth research sub- question, "What are the facilitators of inclusion of nursing students with disabilities in the nursing education programs in the UAE as viewed by nursing education stakeholders?" were used to assign codes to the participant responses. After comparing and analyzing the allotted codes, subthemes were created from which themes were created. Eight themes emerged from the thematic analysis. All identified themes and sub-themes were summarized in Table 8. Furthermore, statements from participants in the transcribed interviews were used to support each subject.

Table 8: Summary of Concluded Themes and Sub-themes

Category	Themes	Sub-themes
Prior Program Admission	Disability Laws and Policies	Establishing clear policies Law enforcement procedures
	Disability Awareness	Early career counseling Community outreach activities
	Establish Early Detection of Cases	Early detection through early disclosure Early detection through voluntary disclosure
	Education and Training Programs	Professional development Ensure the right choice of preceptors
During the program	Creative Access	Structural accommodations Classroom accommodations Clinical accommodations Establishing nonclinical nursing paths
	Attitudes	Attitudes of students with disabilities Attitudes of other people
	Communication to Meet Needs	Communication with students Interdisciplinary communication
Post-graduation	Collaboration with Potential Employers	

The following is an analysis of each of the main themes under the umbrella of facilitators to the inclusion of nursing students with disability as viewed by nursing education faculty members, nursing education students and administrators. These themes are categorized into facilitators that can be provided prior to program admission, those that can be provided during the program, and facilitators that can be provided to nursing students with disabilities post-graduation.

4.4.1 Disability Laws and Policies

The literature review mentioned that the unregulated power on individual institutions to determine who among the disabled people can or cannot be enrolled into nursing programs in addition to the lack of guidelines for support may have contributed to few nursing students with disabilities being admitted to these institutions. Consequently, the development of equitable admission and accommodation policy for the recruitment and training of nursing students with disability is a first step towards correcting the inequities in nursing education programs in the UAE. Hence, it is important before nursing schools decide to include students with disabilities to evaluate the current their existing structures and current program policies and administrative support to make sure it supports equity (Calloway & Copeland 2021; Fontenot & McMurray 2020; Murray & Noone 2022). Ensuring the availability of clear policies, and the establishment of law enforcement procedures were among the most recurrent suggestions shared by the study participants. The study participants repeatedly highlighted the importance of having clear written policies to ensure the rights of students with disability to access nursing programs and to receive reasonable accommodations to be able to graduate successfully as nurses. Hence, the establishment of effective avenues for referrals and policies outlining techniques to facilitate the inclusion and support of students with disability in addition is crucial.

4.4.1.1 Establishing Clear Policies

Many participants highlighted the fact that all policies, initiatives and processes should consider intentional actions that improve access, remove obstacles in the face of students with disabilities. The establishment of clear written policies would facilitate the selection of nursing students with disabilities to the nursing program and would clarify and organize the way of dealing with them and supporting them while in the program. Many participants explained that faculty cannot make their own accommodations. These must be developed through proper channels and in collaboration with the office of disability services. Hence, there should be clear guidelines and adequate instructions to students and educators on what accommodations to be provided, when to be provided and in what settings and conditions to ensure consistency and prevent unfair discrimination against nursing students with disabilities.

“For admission to nursing programs they should launch a policy regarding students with a disability what they are allowed to do and what they are not allowed to do. So, with the policy, things will be clear for instructors and students.” (Female, a nursing student.) BK

“If there is a policy at the admission criteria stage in a way reporting, identifying, accommodating and supporting. There should be a whole set of policy to support these students and we need a policy at different year levels. How do we support students in the classrooms, in the hospitals and in the second and third year level. Is there any special accommodation during stressful periods like exams. What are we doing for those with hearing disabilities, visual disabilities. Now we don’t have anything to support these disabilities within the program so yes to start with policy and formal records there should be data and numbers to start off” (Female, nursing faculty member.) BR

Some student participants explained that it is essential to have a clear delineation of institutional policy and procedures that include student notice that students with disabilities are

accepted, and it should clearly explain the requirements needed to facilitate their admission and support and to have specific policies in relation to each disability category.

“Also, they can be put in categories. The first category (Small problems) they have everything like us but in stage 2, these students will have a special class for them.” (Female, a nursing student.) AK

“The college should put a goal like we want to accept 5 % students with disabilities in our college may be students with disabilities become excited to join the college.” (Female, a nursing student.) MS

4.4.1.2 Law enforcement procedures

One of the participants mentioned that nurse educators have the responsibility of upholding federal laws ensuring that students have equal access to the nursing profession. Nurse educators also have the responsibility to make admission and retention decisions that promote successful student outcomes as well as patient safety. High standards should be held for all nursing students. The participant elaborated that it is imperative that nursing education programs develop enforceable guidelines for admission and retention of students in nursing programs in order to prevent inconsistent and discriminatory admission practices, reduce implicit and explicit biases in selection and to provide equitable chances for education for students with disabilities who want to pursue a career in nursing.

“So, policy is important. If you have the philosophy to support but the policy should say I, 2,3 but they don’t have the door for such students that they have the right to all kind of support in the curriculum and in the lab. So, we should have a policy to include them but also considering not harming the program standards”. (Female, nursing faculty member.) HA

“It is important to respond to the mandate of the government to include people of determination in the work force therefore they should be educated and supported to provide quality care to patients.” (Female, nursing faculty member.) HA

4.4.2 Disability Awareness

The participants suggested ways to mitigate challenges encountered by applicants with disabilities including putting in place and offering prior to the admission of the program support measures and awareness activities to better prepare students for what is expected and make them ready for the professional obligations and requirements of the nursing programs before transitioning to higher education.

4.4.2.1 Early Career Counseling

The study participants believed the procurement of applicant interest in the nursing profession stems from high school counselor mentorship hence it is judicious to establish collaborative working relationships to demystify common misconceptions involving nursing careers. It is fundamental for high school guidance counselors to recognize the entry requirements and benefits of an education in nursing. According to the participants, faculty must work with school guidance counselors as early as middle school to expose a diverse group of students to the concept of becoming a nurse and how careers in nursing involve various opportunities.

“So, early career counseling will help her because she will know exactly what field she wants to be in, maybe it is not a health sector or maybe something else but she did not figure it out or she did not explore her skills till now.” (Female, students’ supervisor.) FS

“I believe that visibility of disability is important and awareness too. If you are giving them all the chances at school. How come later you will leave them at the college and then you are asking them to join the job. So the lack of pipeline is in the college so we have to have continuous communication between general and higher education and workforce because they are aware that we have students with disabilities in the schools and they are willing to study such specialty and we can support them by having a policy to let them join give us some freedom to give them some support

or clear instructions to decide what type of skills they are fit to do and what are the other things that they are not able to do.”
(Female, Nursing education faculty.) HA

4.4.2.2 Disability Outreach Activities

The lack of understanding among students with disabilities about their potential and what they may truly achieve, as well as the possibility of inclusion in nursing programs, was addressed by the study participants. For that, the participants suggested increasing the awareness of students with disabilities about their abilities and their knowledge about the success of nursing students and nurses with disabilities in the health field. Such increased knowledge may be achieved through community outreach and / or awareness raising through outreach to faculty, staff and students during orientations. It was also mentioned that students with disabilities will be more confident in following their dreams and in making people more open to seeing nursing students with disabilities in the healthcare sector especially after seeing success stories of students with disabilities in the health field and how they can contribute with their uniqueness and special outlook to the therapeutic field. This was mentioned to be done through early awareness about the abilities of nursing students and nurses with disabilities through social media to advertise disability inclusion in nursing programs. Equally effective might be providing videos about people with disabilities in different community settings and listening to nursing students and nurses with disabilities talking about themselves. The below statements support this finding:

“I believe there should be awareness extended everywhere. There are people with disabilities in their 30s and late 20s who have a dream to become a nurse, but because of their disability, they closed the door on themselves.” (Female, a nursing student.) MH

“Including them in health skills competition is very important for their visibility and self-esteem and confidence and will motivate

others to encourage other students with disabilities who want to be nurses in the future.” (Female, nursing faculty members.) HA

“It should be promoted as inclusion is a positive thing without the stigma attached to it. There should be proper awareness of how these people can contribute to the profession.” (Female, nursing students’ instructor.) BR

Increasing the early awareness of children since school days about the abilities of nursing students with disabilities and normalizing their presence among us and to increase their acceptability in societies is crucial.

“At the school level, from primary, we should teach people around us that people of determination are normal people and that they can do what we are doing.” (Female, a nursing student.) AK

“The key point here is that the student should be aware that this environment will accept him regardless of his disability.” (Female, nursing faculty member.) HA

“The most important we need to teach the community is that a disabled person is like me. There is no difference, and they can afford sometimes more than what I can offer.” (Female, a nursing student.) SU

The study participants expressed that nursing students with disabilities need to be aware of their existing support systems. According to the study participants, it is important to instill knowledge of the available resources into their campus communities so students with disabilities may less frequently miss out on needed accommodations.

“Now all people are on social media So I think they should do photos and posts and include people of determination so they will know that the college accepts these students without mentioning clearly that we accept students of determination.” (Female, a nursing student.) AK

“Maybe to create a program or something to support anywhere on social media that students with disabilities can be admitted to FCHS.” (Female, nesting student.) MS

4.4.3 Establish Early Detection of Cases

As noted in the review of literature, selective admission processes and models are factors contributing to the underrepresentation of nursing students with disabilities in nursing education programs and poor diversification in the nursing workforce. Hence, there were calls to make nursing programs more open, receptive, and accommodating to students with disabilities to promote disclosure from students.

When the participants were asked how they think the admission processes to the nursing program should be in order to facilitate the inclusion and support of nursing students with disabilities, the majority suggested different ways to early detect students with disabilities and those who may be at risk of failing to offer them the needed support in theory and clinical classes to prepare them for the program requirements. The suggestions included different ways related to the admission criteria that should not be discriminatory, bias and use unnecessary restrictions to exclude students with disabilities but rather to accommodate them modeling by that inclusivity in all nursing education settings and providing more equitable admission processes of applicants which according to the participants can be achieved through early detection of cases through early disclosure or through voluntary disclosure

4.4.3.1 Early detection through early disclosure

The interviewees mentioned various recommendations to include early detection of cases of nursing students with disabilities among nursing students and applicants. These were mainly related to screening for disability cases since the admission and registration phase and

to have this written and organized in a policy document because if disability is identified early enough and with proper planning in place, it makes the course much more manageable for all parties concerned. Also knowing about disability by chance is time consuming process causing delays in both teaching and learning.

“The student will provide us a report from the hospital that they are cleared and that they can be a student, cleared regarding general health conditions. Maybe interviewing the student after she is applying” (Female, students’ supervisor.) FS

One of the participants mentioned that policies and procedures for requesting accommodation can be published on the web site of the institution and provide contact information for the disabilities coordinator or office can be provided so prospective students are not required to disclose their disability and need for accommodation prior to admission, but they must do so upon admission if they desire an accommodation. The requirement for disability disclosure and an accommodation request should be done in collaboration with education stakeholders.

“If we get approval then we can modify the website and we will do some admission part for special needs that students with special needs will be filling. We will do some modifications internally and then we will collaborate with the ministry of education and other entities.” (Female, students’ supervisor.) FS

Some participants suggested that during the admission and before joining the nursing programs, nursing education faculty should meet with the student to identify her needs and strengths. As a result, students will know that they are not automatically excluded due to their disability and that faculty will support them in achieving the required course objectives and support their specific accommodation needs. As a result, it is critical that the discussion should be reframed regarding how the institution will respond to students who need accommodation

and not whether the student does or does not have a disability, so the admission process is not discriminatory against a student on the basis of a disability. Therefore, faculty should allow students time to identify their needs in specific situations and to determine what works to achieve successful results.

“During interview we can involve somebody from the nursing department or a panel including an administrator, nursing faculty, special education specialist, a psychologist or a councilor will be perfect to make a decision and to create a support plan.” (Female, students’ supervisor.) FS

“In admission, I think they should change the form or something. They have to include criteria for disability because if they enroll in the college they will be treated in a different way. How the college will know that there are students with disabilities. They will not give them excuses. So, it is important to accept students and not to reject him/ her and treat them in a way to support their needs. They can ask them about their abilities in any major.” (Female, Nursing student.) AM

“They are scared from rejection. Rejection from us, rejection from work setting later on. So, we should inform them that they are welcomed and that they will not be rejected and that we have special methods to deal with them, a special curriculum. So, they need to be encouraged in such a way.” (Female, Nursing faculty.) HA

4.4.3.2 Early Detection through Voluntary Disability Disclosure

Other participants empathized the importance of using alternative procedure for recruitment and selection of students which should encourage voluntary disclosure within enabling and supportive environment by a multidisciplinary committee. It was mentioned that screening should occur during face-to-face interviews conducted by nursing staff with applicants or potential students in order to respect their legal rights and choice of not disclosing their disability, yet, making them feel welcomed, accepted and supported to achieve their academic goals successfully.

“In my opinion during registration, we should not put a disability option. They should register like us with disability/normal options and in the interview, the teacher will know that she has disabilities.” (Female, Nursing student.) SS

“For me as a teacher I evaluate student abilities to achieve her objectives and to look for any barriers whether physical and mental. If I see that these barriers are significant and are impairing her ability to achieve her clinical objective, then I refer her to the clinical coordinator for further evaluation and decision regarding the issue.” (Male, Nursing education faculty.) EM

4.4.4 Education and Training Programs

Literature showed that the lack of training regarding accommodation and disability law and lack of education is shown to perpetuate negative attitudes (Neal- Boylan 2012; Marks 2000). Working with a student with a disability is usually a new situation for faculty and can result in unnecessary barriers that inhibit the student’s ability to successfully complete the program. To minimize this possibility, having knowledge of the ways students with disabilities can be educated and supported in addition to being aware of the available resources to help students with disabilities meet existing standards of nursing practice are crucial to success. When knowledge is gained and integrated into a nursing program’s culture and curriculum, students’ disabilities can successfully complete nursing programs and move forward to provide excellent care to clients and serve the profession and their communities.

4.4.4.1 Professional development

Continuous professional development for everyone working with students with disabilities was proposed by the study participants so educators, students and clinical instructors keep up to date with ways that are relevant to accommodating and supporting nursing students with disabilities. The study participants suggested education and training programs regarding disability issues in educational and clinical settings to include appropriate and legal methods for

working with students with disability. Hence, improved knowledge and training of educators on the inclusive practices in the classroom as well as reasonable accommodations in the practice-based setting are some of the recommendations. The study participants mentioned that without good support from teachers, preceptors, and supervisors, students with disability will face complicated challenges. It was believed that nursing education faculty members can help students transition from academic environments to clinical placements.

“Everyone in the college should be educated and trained. They should understand what disability is and how to react and talk to a student with a disability.” (Female, a nursing student.) MH

“Teachers should be prepared to deal with these students in a different way and to make sure that they are properly performing the procedure by observation all the time but they have to have different evaluations not like us.” (Female, a nursing student.) AM

“There should be a workshop for faculty and staff from hospitals together to see how to meet the needs of students with disabilities. This will definitely help.” (Female, Nursing faculty) BR

“I had a student with dyslexia and hyperactivity, Initially I spoke to her because I don’t know she has a problem. I went and studied about it and how we help these student”. (Female, Nursing faculty) NZ

One participant mentioned that it is also important that faculty members should be aware of the statistics and number of students with disabilities who are admitted or will be admitted to the program in order to provide the needed support and help.

“Students with disabilities are not reported. We don’t have clear statistics and number of how many students are with disabilities. We need to identify in order to help.”. (Female, Nursing faculty) NZ

4.4.4.2 Ensure The Right Choice of Preceptor

Preceptors have the responsibility to educate students in clinical settings. It was considered that selecting the correct preceptor or any staff member who is expected to work with and support students with disabilities is critical since not all employees have the necessary knowledge. Preceptors, according to the participants, should be prepared to teach and help students who may struggle in clinical settings, and educators must understand their role in assisting preceptors in training nursing students with disabilities.

“It is important to choose a preceptor who can deal with special needs. Some of them have the patience to deal with special needs. Maybe some can give the support and help and who can be there whenever she needs her.” (Female, nursing students’ supervisor.)
FS

“We had so many issues with the attitudes of preceptors. Any student with a disability should be with a fixed preceptor. This preceptor should be chosen depending on her ability to educate students with disabilities.” (Female, a nursing student.) MH

“We have to put special preceptors for students with disabilities who focus on them and teach them how to deal with patients.” (Female, a nursing student.) AK

4.4.5 Creative Access

The literature review showed that safety is overwhelming concern voiced by nursing faculty regarding the inclusion of people with disabilities in nursing, yet safety has not been demonstrated to be a problem especially when reasonable accommodations and creative access is implemented (Neal- Boylan & Smith 2016; Maheady 1999; Dupler et al. 2012). When reasonable accommodations are made students with disabilities pose no greater safety risks than students without disabilities and hence the limitations related to the disability can be minimized through reasonable accommodations and creative access so students with disabilities can fulfill clinical and professional requirements (Horky 2019).

The study participants were aware of the available concerns related to patient safety. Yet, they suggested ways to improve accessibility and support for students with disabilities while they are in nursing education programs without jeopardizing the program standards in relation to quality of care. The literature review suggested adopting creative access to allow for reasonable accommodations as it focuses on the outcome and acknowledges that more than one process can be used to attain a goal (Nashleanas 2000). Students with disabilities may be able to perform a task using a method other than the traditionally accepted method to reach the same end results hence flexibility in how these skills are actually performed is needed.

Accommodations suggested by the study participants to support nursing students with disabilities while they are in the program were grouped into four categories.

4.4.5.1 Structural Accommodations

Various types of accommodation for students with disabilities were suggested. These ranged between physical structural accommodation and accommodations related to the program of studies including the introduction of physical accommodation to the campus such as having disability friendly infrastructure such as the parking, building, ramps, and special bathrooms to make them accessible for students with disabilities as well as relocate equipment and electric sockets to be accessible to students on wheelchairs. The statements below are in support of accommodations that can be provided in the laboratory.

“Firstly, they should provide special elevator for them. They can go to level 1, level 2 to the labs to attend their classes. Also, they should consider students with disabilities and make the classes down in the ground floor.” (Female, a nursing student.) BK

“We know that we have parking we have slots that the wheelchair will be coming from but this is not enough we need extra things to just have these students in the college and making them

comfortable without any risks or hazards nearby. If on a wheelchair I should make sure that I am using all the facilities without any issues. Also, we have to have toilets we have to do a lot of things.” (Female, Student supervisor) FS

“If she needs charger, the socket should be in perfect place for her. She will be able to do everything without asking help.” (Female, Student supervisor) SH

Classroom accommodations. Some of the classroom accommodations that were suggested by the participants included educators using simple but effective ways to explain difficult topics, using diverse teaching strategies to meet the diverse needs of students, diversifying the way the material is presented and delivered, reduced assignments and workload, extension of assignment submission deadlines, providing them with extra time to accomplish a written task in class and rehearsal of skills prior to a clinical as well as providing students with special tutorials to reinforce some concepts and skills.

“Doctors should explain topics in simple ways and teach in simple ways, especially for students with disabilities and make tests very easy for them.” (Female, a nursing student.) MS

"Special tutorials, a special support system for some students individually can help. All of these things I feel are taking care of the problem at a particular time. So, a tutorial for a particular lesson or an extension of the deadline for a particular quiz." (Female, nursing faculty member.) BR

“You can give her more time to do exams. You can modify and change anything related to theory classes” (Male, a nursing faculty.) OM

4.4.5.2 Clinical Accommodations

Accommodations suggested by the study participants to support students with disabilities in clinical experiences were grouped into four groups.

Accommodation to Skill Performance

This group of accommodations included modifying skill techniques to be applied on mannequins but not on patients, providing extra time for skill practice, repetition, increasing supervision and providing feedback on skill performance as well as modifying skill techniques in light of the disability.

“In placement, the preceptor will decide to allow him/her to apply the technique on mannequin or patients.” (Female, a nursing student.) AK

“For the psychomotor skills in the lab, we provide them with more time to practice skills, but we don’t know how she will progress with her career” (Female, nursing faculty member.) NZ

“I will be for example repeating slowly the part that is missing. I can give her feedback once the lecture is finished. I can sit with her 15 min or more and ask her to do the skill again.” (Female, Student supervisor.) FS

“One student used to have back pain, I told her now adays we are using many tools in clinical that can help you limit back injury so avoid this technique and you are fit to do many other things”. (Female, nursing faculty member.) HA

“She may need some assistance. She may need some shadow personnel to be with her. We don’t have a shadow here but we may have in the future” (Female, Student supervisor.) FS

“Teachers should be prepared to deal with these students in a different way and to make sure that they are performing the procedure in a proper way by observation all the time but they have to have different evaluation not like us.” (Female, a nursing student). AM

Special Equipment Uses

Recently, technology is playing a very important role in health care services and is making various previously human-implemented tasks much easier and sometimes not made by

human beings anymore. In their suggestions, the study participants highlighted the importance of the proper use of the newest technologies to facilitate the experiences students with disabilities in clinical placements and in nursing careers later. According to the study participants, identifying skills essential for the nursing profession and determining skills that are able to apply accommodation without harming the integrity of professional competence may reduce barriers.

The special equipment uses group for clinical accommodations included moving or lifting assistance, auditory aids, visual aids, and advances technological devices for measuring and reading vital signs and other laboratory and clinic related skills and tasks. The below statements support this finding:

“There is the newest device to measure height and weight. It is automatic no need even to raise anything. This is new technology. I saw it in SSMC. It is automatic. Once the patient stands on it. But bedside it will be much difficult for some category.” (Female, a nursing student.) BK

“There are some instruments and technology that help students. If I am not hearing I need something to help me. If I have students who are blind there are some technologies that are helpful. (Female, Student supervisor.) FS

“In our college, we have labs with advanced technology like dummies fully computerized they can cry, they can talk”. (Female, nursing student) MH

“We have a new tool that help nurses lift patients so you will not hold patients like we used to do. Things are changing.” (Female, nursing faculty member.) HA

“For example, now a days IV line for a patient is not a big issue. If he does not have good veins instead of punching many times. It is very common in hospitals. This is very good for students with disabilities.” (Female, nursing faculty member.) HA

Other common accommodation related activities

The other common clinical accommodation related activities that the study participants suggested included encouraged clinical site visits prior to clinical experiences, supporting students in disclosing issues, encouraged communication with instructors/ peers / preceptor to assess and meet needs, making referral for counseling, peer mentorship and teamwork, liaison physiologist/psychiatrist, and using adaptive assessments.

“Before going to the clinical site, we should introduce the hospital to those what we are going to do there, and what the objectives are and on the orientation day we should go to the hospital so they can see.” (Female, a nursing student.) SS

“They are scared from rejection, rejection from us, rejection from work setting later on so we have to inform them that they are welcomed and that they will not be rejected and that we have special methods to deal with them so they need to be encouraged in such a away so they themselves open up and tell us about their condition and needs”. (Female, nursing faculty member.) HA

“Usually, we accommodate as much as possible by calling the student and asking her what is the problem and to ask her to get an evidence as well. But the problem is in the clinical. The students are with their preceptors but actually they are responsible for patients lives. So in these type of situation what I have tried is to hear the students out first calling her specifically and asking her and talking to her about how she is and how does she feel about it.” (Female, nursing faculty member.) BR

“I encourage talking to students trying to find out the problem leading to issues and if she needs to be referred to a psychologist before she is accepted in nursing program.” (Male, nursing faculty member.) EM

Some participants suggested the use of alternative assessments to test students' knowledge related to doing a specific skill but not to challenge them with tasks that focus on what they cannot do. Hence, assessments need to be made on an individual bases considering the disability of students and their individual learning needs.

“Same assessment can be given but it should be in a way that is suitable for their needs. So, if they have hearing issues so we have

to change some assessments and replace it with something that is proper for them because disabilities are not all the same. There are different categories of disabilities.” (Female, a nursing education students). AM

“I think we should make exams easier for them so we can test their knowledge but not to challenge them by asking them to perform a task beyond their abilities.” (Female, a nursing education students). AK

The importance of assessing students individually to check the nature of disability and to assess the level of functional limitations was indicated by some participants as important steps to be considered before allowing students to practice in clinical settings so that the right support and help be given.

“We should assess the severity of disability because it can prevent her from doing the needed tasks” (Male, a nursing faculty) OM

“Usually in clinical practicum courses we evaluate students’ mental abilities and physical disabilities to perform skills without any barriers so if there are issues related to these domains then we evaluate student and we suggest seeking treatment before she continues with nursing program”. (Male, a nursing faculty) EM

Some participants suggested more ideas related to creative access especially when a technical standard exists that cannot be accomplished even with accommodation, task trading and team working was assumed to be creative solution. This allows students with and without disabilities to divide tasks, so each student maximizes his /her own strengths. In this way, strengths and limitations are counterbalanced.

“We can always seek help from anyone. We always work as teamwork. A student with disability can ask help no worries. There is no restriction from asking help. If she cannot do or perform it alone than she can do it with a partner or colleagues.” (Female, a nursing student.) BK

“Doctors and nurses in clinical placement should work as a group to support these students” (Female, a nursing student.) BK

4.4.5.3 Establishing Nonclinical Nursing Paths

Many participants also suggested opening nonclinical academic tracks in nursing education during the prelicensure program in order to assimilate and include students with disabilities who are not interested in bedside work when they graduate and who may have great potentials and strong abilities in communication, management, critical analysis, informatics, advocacy and education which are so needed in the nursing profession. As a result, and based on the abilities of students with disabilities, qualified people with disabilities will have the chance to provide humanistic care and use their nursing knowledge to guide clinical placement. The study participants argued that some areas of nursing practice may be less accessible to individuals with particular disabilities and that the incompetency in some skills can jeopardize patients' safety, but in the UAE, students should do general nursing and have clinical experience in order to graduate as it is the heart of the nursing curriculum and student should possess a broad nursing knowledge base. The participants believed that people with disabilities have strengths and limitations just like everyone else. The limitations related to the disability can be minimized through creative access to the program such as opening nonclinical nursing academic tracks to enable them to pursue their dream to become a nurse by choosing the area of their interest that aligns with their abilities and potentials, yet still be able to provide high quality patient care without harming the program standards.

“If I think of this student from a physical perspective, it will be difficult for this student to care for a patient at the bedside for example because our work is heavy, and our care requires physical strength and power. However, if we think of nursing in general there are subspecialties that do not need certain abilities to care for the patient for example health educator but to finish BSc degree they need to go through all preparations to be a general nurse so they can go to subspecialties but now we don't have.” (Female, Nursing faculty.) NZ

“In nursing program, there is nothing called you will be a triage nurse in the future. She has to finish first same requirement as other students. In the UAE, you graduate as a general nurse to have a knowledge of everything in nursing not only in specialty but in Europe they have subspecialty pediatric nurse, midwifery.” (Male, Nursing faculty.) OM

“We don’t have subspecialties in nursing program in the UAE similar to Europe or Australia or state, but I think it will help. Now we are improving the program but so far, we have only nursing programs though we have new programs in hospitals like wound care nurse and dialysis nurse.” (Male, Nursing faculty.) EM

4.4.6 Attitudes

Nursing faculty members are charged with admitting, educating, and graduating students, with or without disabilities. Hence, their attitudes and the attitudes of the people around them play an essential role in reducing discrimination and stereotyping and promoting acceptance and respect. The study participants also mentioned that the attitudes of nursing students with disabilities and their self-awareness of their strengths and limitations in nursing and their responsibility towards themselves and towards patients influence the success of their inclusion. \

4.4.6.1 The Attitude of Students with Disabilities

Although the external support provided to students with disabilities is essential for their success, their attitude towards their share of responsibility in this matter is essential. The study participants mentioned this issue and linked it to the sensitivity of the nursing field and to the shared responsibility of all stakeholders in efforts to deliver the best quality of health services. It was also mentioned that nursing students with disabilities need to be responsible and not abuse the accommodations provided to them:

"The personality and attitude of the student play a role. I will give students many chances. If the student will not work with these chances, then I will say that this student is not committed and that she is not helping herself to achieve her goal." (Female, nursing students' supervisor.) FS

"So, if we can show them that we are opening doors for them and that we are giving them opportunities and they will be assessed before studying and they will be assessed before practicing their job because at the end if I give you responsibilities." (Female, a nursing student.) MH

4.4.6.2 Attitudes of Other People

On the other hand, the attitude of people also affects the inclusion of nursing students with disabilities in the nursing field. The study participants, as mentioned previously, explained that nursing students with disabilities have a constant fear of being rejected, stigmatized, or excluded. Marginalization, discrimination, and negative attitudes are viewed as barriers to students with disabilities applying to nursing education programs. For that, the participants highlighted the importance of having a supportive, tolerant, and inclusive culture to offer proper accommodations. People dealing with nursing students with disabilities should be very careful and sensitive with the way they deal with them. They must be at the same time very accommodating, encouraging, and supportive, but without stigmatizing nursing students with disabilities or letting them feel that they are different:

"We have to not let them feel that they are different from us. The way we deal with them is important because it will shape their personality." (Female, a nursing student.) AM

"I think there should be an awareness relating to this. I don't know if people are aware of how to be inclusive and accept students with disabilities knowing that I am not very comfortable sharing the students' needs. I don't want my students to be marginalized so I want to be very careful." (Female, nursing faculty member.) BR

Having a positive attitude towards students with disabilities and creating a friendly and positive relationship with them was also mentioned and discussed during interviews to make the learning process smoother and easier for all concerned and to encourage voluntary disability disclosure.

*“There should be a friendly relationship between both instructors and students with disability. So, the student will feel more as part of the nursing program. She is not different from other students.”
(Female, a nursing student.) BK*

“You need students to have love to the teacher because sometimes they feel like it is a formal relationship till, they reach you to talk about the difficulties they are facing. When you reach that point. You can support them.” (Female, nursing faculty member.) HA

4.4.7 Communication to Meet Needs

According to those who participated in the interviews, including students with disabilities in nursing programs would not be possible without meaningful communication and open and caring dialogue between students with disabilities and nursing education stakeholders that would facilitate providing the best experience possible for students. As a result, disability experts, university faculty and key personnel from practice should collaborate to design individualized educational plans for support with reasonable adjustment.

4.4.7.1 Communication with students

At the individual level, the study participants made clear suggestions related to the importance of individualized accommodations support, which aims to provide students with disabilities as much agency in the accommodation process as possible. Many participants verbalized that they would work with the student, communicating about individual needs and to help make their experience in theory classes and clinical setting a positive one. Participants

discussed adapting their teaching strategies and providing support per individual needs and accommodating the student to the best of their ability. This helped in creating a safe, compassionate and caring environment which encouraged students to disclose their disability to their instructors to get the needed support and accommodations.

“Usually, we accommodate as much as possible by calling the student and asking her what is the problem, how does she feel about it and what help she needs” (Female, nursing faculty member.) BR

“Unless you were able to approach a student in a special way where students approach you and trust you and talk about their problems” (Female, nursing faculty member.) HA

4.4.7.2 Interdisciplinary Communication

Dealing with students with disabilities is not an easy task and necessitates close follow-up with those students and continuous assessment of their cases. Within this context, interviewees emphasized the importance of having good and proper coordination among all concerned staff to make the study journey as profitable, smooth, and joyful as possible for students with disabilities. Open communication and collaboration between key stakeholders regarding support and reasonable accommodation for nursing students with disabilities is assumed to be critical to enhance inclusion. This included communicating with psychologists, psychiatrists, and social counsellors to provide mental and emotional support to students as well as to raise awareness towards diversity, inclusion and disability among students, staff and the community.

“Cooperation is needed between psychologists, and physiotherapists to support a student. It is a collaborative work.” (Male, nursing students’ instructor.) OM

“We as educators, need to have a meeting to have a strategy. We in the nursing department need to meet to see how to help students.

It is good to have instructor meetings to talk about such case to make them understand how to deal with such situations.” (Female, nursing students’ instructor.) NZ

Communication and collaboration in the clinical facilities were perceived as key elements to enhance the inclusion experiences of educators and nursing students with disabilities. The study participants mentioned that it is crucial to meet the needs of the individual student and not assume that one approach works for everyone with a disability even if the disability is the same or similar to someone else. Hence, extending the open communication to clinical settings to avoid misunderstanding with healthcare professionals who are uncertain as to how to accommodate nursing students with disabilities and how to create a system of support around these students was highly emphasized by all the participants. The following quotes signifies the importance of planning and communicating with colleagues, managements and clinical facilitators.

“With a good preceptor, the preceptor will guide her what are the assessments, and bedside assessments. They should get guidance from the preceptor. The collaboration between students, teachers, and preceptors is important.” (Female, a nursing student.) BK

“There should be a workshop for faculty and staff from hospitals together to talk about views what are the type of students we have and what are their needs.” (Female, nursing faculty member.) BR

“There should be communication between college and hospital so staff in the hospital will focus on students because at the end of the day we are one team.” (Female, a nursing student.) AK

“There should be an agreement between the college and the hospital from the beginning. We cannot shock them like we have special needs whatever issues she has.” (Female, nursing students’ supervisor.) FS

Some participants suggested collaborating with the government to get clear statistics on students with disabilities in higher education in order to have the needed justification for the

management to create admission and support policies for students with disabilities and to provide them with financial incentives in efforts to further encourage them to enroll in nursing program and to support them when they are enrolled.

“We can introduce incentives because our government allocates extra things for people of determination even we as students we have monthly salaries and incentives depending on GPA so if they add monthly salaries and provide employment so this may support them more.” (Female, a nursing student.) MS

“We will do some modifications internally and then we will collaborate with the ministry of education and other entities that if they are ware of students with disabilities, you can guide them to register in our college but we need to be ready from our side. (Female, nursing students’ supervisor.) FS

4.4.8 Collaboration with Potential Employers

The study participants mentioned that securing employment in the nursing workforce is another barrier facing nursing students with disabilities. According to the interviewees, healthcare organizations have a legal obligation to respect the country legal mandates in recruiting a certain number of employees with disabilities. However, if not guided by proper employment protocol, there is risk of placing nursing graduates with disability in a role that is unsuitable, and a multitude of consequences could arise and can yield unfavorable and detrimental results. As a result, employing nursing students with disabilities in the absence of proper assessment of the available resources of the workforce and its ability to assimilate and employ graduates with disability will pose a risk to the success of their social inclusion. Therefore, it is important to both protect and optimize the transition from higher education to the workplace to protect the nursing graduates with disabilities and to ensure that their work is sustainable and to prevent any unfavorable outcomes. According to the participants, the pre-employment phase is the time to prepare nursing graduates with disabilities for the transitional

employment phase, which is the time for health organizations to make the necessary preparations to include the graduates and to give them the best possible chance of succeeding and to ensure their overall well-being. This can be achieved through ongoing coordination and collaboration between nursing schools and potential employers are important at early stages of the nursing programs. According to some participants, students with disabilities should be examined overtime, to better understand the issues they face as they complete the program, graduate and find a job. Searching for the first job should start with proper orientation with nurse preceptors in order to identify the clinical requirements, recognize the challenges that they encounter and develop strategies to mitigate these challenges.

“So, the lack of pipeline is in the college so we have to have continuous communication between general and higher education and workforce.” (Female, nursing students’ instructor.) HA

“Collaboration with the workforce is important. Like now our college collaborates with Nafess program. They signed an MOU together and now the graduates will be paid 10000 dhs per month and they can work in different hospitals. So, colleges can do the same thing with students with disabilities.” (Female, a nursing student.) MH

“For example, I am Burgeel Hospital and your college will come and say I have 10 students with disabilities, please find them positions that they can work in. We should make sure to secure a job upon graduation.” (Female, a nursing student.) MH

4.5 Chapter Summary

While exploring the nursing education stakeholders’ views on the challenges facing the inclusion of nursing students with disabilities and the facilitators to their inclusion, eight themes related to barriers emerged: Nature of Disability, Knowledge of Nursing Faculty, Communication, Attitudes, Admission and Support Policies, Nursing Program Requirements, Resources, and Disability Outreach Activities. Moreover, eight themes equally emerged when

exploring the nursing education stakeholders; views on the facilitators to inclusion: Disability Laws and Policies, Disability Awareness, Establish Early Detection of Cases, Education and Training Programs, Creative Access, Attitudes, Communication to Meet Needs, and Collaboration with Potential Employers.

Nursing education stakeholders who were interviewed perceived multiple barriers to a student with disability being able to practice effectively. Throughout the interviews, participants raised concerns related to the impact of the disability category and the degree of functional limitations of disability on the success of the inclusion of students with disabilities in nursing programs and on their abilities to meet program expectations. Moreover, the lack of knowledge of nursing faculty towards disability related issues and how they conceptualize disability challenges the success of students with disabilities to graduate successfully and work as nurses. Additionally, the poor communication and collaboration among nursing stakeholders was seen to impede the effective participation of students with disabilities in nursing program and limit their chances of employment. Furthermore, throughout the course of interviewing, participants believed that the requirements of the nursing program and the heavy emphasis on physical abilities to meet the nursing program outcomes are barriers to the participation of students with disabilities in the programs. The lack of resources to educate and support nursing students with disabilities in theory and clinical sites was believed to hinder faculty and staff working with students to provide them with proper support and accommodations. Furthermore, attitudinal barriers from family members and in the study/ training sites were perceived by the participants as a common barrier that students with disability face to become and practice as nurses. Finally, the nursing education stakeholders interviewed viewed the lack of disability outreach activities and the ambiguous admission and support policies as impediments to disability promotion and

disability visibility in nursing programs. These themes illustrated the barriers to the inclusion of nursing students with disabilities in nursing education programs.

Moreover, when exploring the nursing education stakeholders' views on the facilitators to the inclusion of nursing students with disabilities and to their participation in nursing education programs, the study participants suggested different strategies that can help nursing students with disabilities face.

their barriers that were grouped into three categories: facilitators that can be provided prior program admission, and those which can be provided during the program and postgraduation. According to the study participants before accepting and admitting students with disabilities it is important to evaluate the current existing structures, policies, resources, and attitudes to ensure a successful implementation of inclusion. Therefore, to ensure diversity at the entry point to the profession it is important to have clear written policies and law enforcement procedures to prevent inconsistent and discriminatory admission practices to nursing schools and to ensure the rights of students with disabilities to access nursing program and to receive reasonable accommodations as mandated by the country laws and policies so they can fulfil their potentials of becoming nurses. Moreover, it was suggested that raising awareness towards the potentials of people with disabilities to become successful nurses who can bring a unique perspective and set of skills to the profession through early career counseling and disability outreach activities so people will be more open to the idea of enrolling in nursing programs and having nurses with disability in nursing profession and more receptive to the care provided by nurses with disabilities. Additionally, improving the knowledge of people working with nursing students with disability of different disability related issues including the way they can be educated and supported through professional development of the nursing academic

community as well as the recruitment of specialized preceptors who are knowledgeable about educating and precepting students with disability as valuable methods to correct misconceptions and to gain new knowledge on how these students can contribute meaningfully to the nursing profession.

Furthermore, throughout the course of interviewing, participants mentioned various ways to eliminate the barriers that nursing students with disabilities may encounter in nursing program such adopting creative access to this group of students through the provision of reasonable accommodations to the infrastructure of campus building, academic accommodations as well as clinical accommodations where students face the most challenges. Moreover, it was suggested to open nonclinical nursing paths that can assimilate the different abilities and potentials of students with disability without restricting them to technical standards that put emphasis on set of skills that may not have due to their disability. Having positive attitudes towards self and the positive attitudes of the people around students with disability play an essential role in reducing discrimination and stereotyping and promoting acceptance and respect. Finally, the participants believed that inclusion will not be possible without meaningful communication and open and caring dialogue between students with disabilities and nursing education stakeholders and future employers that would facilitate providing them with the best experience. The findings of this study highlight that in order to create a welcoming inclusive environment to students with disabilities in nursing education programs, it requires an elevated level of collaborative thinking, creativity and planning in order to meet the dynamic needs of diverse students.

Chapter 5 Faculty and Students' Perceptions of Nursing Students with Disabilities Inclusion

5.1 Introduction

The chapter presents the quantitative data analysis and results of the questionnaire responses gathered from nursing education faculty members and nursing education students to answer the second research sub-question “What are the nursing education faculty members and nursing education students’ perceptions of the inclusion of nursing students with disabilities in nursing education programs in the UAE? and to answer the third research sub-question “Are there any demographic differences in the nursing education faculty members and nursing education students’ perceptions of the inclusion of nursing students with disabilities? contains four main sections. The first section presents the descriptive statistical analysis of the quantitative data of nursing education students and nursing education faculty members, the second section presents the correlation statistical analysis of the quantitative data of nursing education students and nursing education faculty members, the third section presents group comparison findings based on findings of t-test and ANOVA, and the last section presents findings of regression analysis.

5.2 Questionnaire Analysis and Results

This study was conducted at one of the universities in the UAE that offers programs in nursing and other health sciences and have campuses in Abu Dhabi, Al Ain, Ajman and the Western Region. The university offers a pre-licensure Bachelor of Science in Nursing (BSN) program that is approved by the UAE nursing board, SEHA, MOH, and the UAE Commission

of Academic Accreditation. To ensure adequate data collection for the study's goal, a cross-sectional online survey was sent to the institution's total population of nursing faculty members and nursing education students from Year 1 to Year 4.

The population size of the nursing education students was 1386 and that of the nursing education faculty was 62. Since one student and three faculty members namely the head of nursing program, the head of one of the campuses and a nursing educator were recruited for unstructured interviews in the qualitative study, they were excluded from the quantitative study sample in order to avoid any confounding factors (Creswell 2014). As a result, the online survey was sent to 1385 nursing students and to 59 nursing faculty members. 402 nursing students and 37 nursing faculty members started the survey after accessing it. Yet, 284 nursing education students and 29 nursing faculty members completed the survey. Hence, the completion rate was around 71% among students and 78% was the completion rate among nursing faculty members, which are acceptable response and completion rates in research. Questions regarding four independent variables, such as disability related laws and institutional policies, barriers, accommodation practices, and attitude and dependent variable that is inclusion of nursing students were included in the survey. Similar set of questions were asked to students and faculty members and accordingly two data sets were generated based on collected surveys. After finishing the data collection, all incomplete questionnaires were excluded using Excel's "Go To Special" command. For nursing faculty members and nursing education students, a frequency distribution was performed for all questionnaire items to detect any missing values or input mistakes (Creswell 2014). After cleaning the data and organising the data, the data analysis was performed with a total of 284 nursing students and 29 faculty members.

The statistical Package for Social Sciences (SPSS) software v.22 was used for all statistical analysis. The tests conducted were descriptive statistics, normality analysis, correlation analysis, evaluating group comparisons, and regression analysis to evaluate the impact of facilitators and barriers on the inclusion rate of nursing students with disabilities in the practice. The analysis gave an idea about the perceptions of nursing students and faculty members regarding the barriers and facilitators along with their perceptions regarding the inclusion.

Furthermore, normality analysis was performed to check if the data was normally distributed or not (Elliott & Woodward 2007). Skewness and kurtosis were calculated to ensure the normality of data. Students' data of 284 responses was normally distributed considering its skewness and kurtosis value ranged between the threshold values of -3 to +3 and -10 to +10, respectively. Even the nursing faculty member's data of 29 responses was normally distributed as its skewness and kurtosis value ranged between the threshold values of -3 to +3 and -10 to +10, respectively. This represents that there were no issues with normality of data.

It is very crucial to ensure the reliability of questionnaire using Cronbach's alpha (α) values. The threshold for Cronbach's alpha is 0.6 and Cronbach's alpha values for all variables in both data sets were greater than 0.6 as represented in Table 9, which implies that there were no issues with the reliability of data.

Table 9: Reliability Analysis

Dataset/Cronbach's alpha values of variables	Nursing students	Nursing faculty members
Disability laws and institutions policies	0.773	0.672
Accommodation practices	0.913	0.929
Barriers	0.931	0.937
Attitudes	0.914	0.938
Inclusion	0.895	0.866

It can be observed in the above table that the Cronbach's alpha values are greater than the threshold values, which indicate the scales used of all variables for nursing students and educators are reliable.

Furthermore, descriptive analysis, bivariate analysis, the independent sample t-test was used to compare two means, whereas the ANOVA test was used to compare three means or more. Pearson correlation tests were used to correlate two continuous scores. Linear regressions were conducted. Variables that showed a $p < 0.25$ in the bivariate analysis were entered as independent ones in the multivariable analysis models. Significance was set at $p < 0.05$. Results of each of the tests and their interpretation are done in the following sections.

5.3 Descriptive analysis of Nursing Students Data

Descriptive analysis was conducted to evaluate the statistical functions, such as mean, standard deviation, minimum, and maximum for all the items of each of the variables. These values were calculated to interpret the perception of students regarding a specific variable and their items. Also, it is important to note that all the items and variables were measured using a

5-point Likert scale, which will further help in interpretation of the values. Furthermore, the second objective of determining perceptions of nursing education faculty members and nursing education students regarding the inclusion of nursing education students with disabilities is met by analyzing and discussing the descriptive statistics. The following table represents the perceptions of participants regarding the variables and their items considered in the research (Table 10).

Table 10: Descriptive Statistics of Nursing Students Data

Items	Strongly disagree	Disagree	Not Sure	Agree	Strongly agree
Knowledge of Disability-Related Laws and Institutions Policies					
L1: I know the meaning of the term “disability”.	10 (3.5%)	2 (0.7%)	25 (8.8%)	116 (40.8%)	131 (46.1%)
L2: I know the UAE laws related to the rights of people with disabilities "People of Determination" in education.	5 (1.8%)	8 (2.8%)	61 (21.5%)	109 (38.4%)	101 (35.6%)
L3: I know that the UAE nursing and midwifery education standards clearly describe how the needs of diverse learners should be met.	7 (2.5%)	2 (0.7%)	67 (23.6%)	118 (41.5%)	90 (31.7%)
L4: I know that the admission policy to nursing programs in my institution supports the inclusion of nursing students with disabilities "Students of Determination".	10 (3.5%)	22 (7.7%)	108 (38.0%)	85 (29.9%)	59 (20.8%)
L5: I know that passing a medical physical fitness test is an important admission requirement to nursing education programs in my institution.	17 (6.0%)	21 (7.4%)	80 (28.2%)	94 (33.1%)	72 (25.4%)
L6: I know the disability policy in my institution on how to support nursing students with disabilities “Students of Determination”.	19 (6.7%)	32 (11.3%)	120 (42.3%)	70 (24.6%)	43 (15.1%)
Accommodations					

A1: I believe that assistive technology can help in meeting the needs of nursing with disabilities " Students of Determination".	4 (1.4%)	6 (2.1%)	25 (8.8%)	144 (50.7%)	105 (37.0%)
A2: I believe that extending the submission deadlines for tasks can be a reasonable way to support nursing students with disabilities " Students of Determination".	6 (2.1%)	4 (1.4%)	43 (15.1%)	127 (44.7%)	104 (36.6%)
A3: I believe that using alternative devices in clinical practice to perform a task can be a reasonable way to support nursing students with disabilities " Students of Determination".	6 (2.1%)	5 (1.8%)	35 (12.3%)	146 (51.4%)	92 (32.4%)
A4: I believe that nursing students with disabilities should be assessed on what skills they can do and not how they are doing the skills.	6 (2.1%)	14 (4.9%)	40 (14.1%)	130 (45.8%)	94 (33.1%)
A5: I believe that using diversified teaching strategies can help in the inclusion of nursing students with disabilities "Students of Determination".	5 (1.8%)	2 (0.7%)	23 (8.1%)	137 (48.2%)	117 (41.2%)
A6: I believe that asking nursing students with disabilities "Students of Determination" directly about how they like to be supported will help in their inclusion.	5 (1.8%)	2 (0.7%)	22 (7.7%)	116 (40.8%)	139 (48.9%)
A7: I believe that having an accessible infrastructure can facilitate the inclusion of nursing students with disabilities "Students of Determination".	4 (1.4%)	2 (0.7%)	29 (10.2%)	133 (46.8%)	116 (40.8%)
Attitudes					
T1: Empathetic educators and students help in the success of the inclusion of nursing students with disabilities	4 (1.4%)	7 (2.5%)	49 (17.3%)	94 (33.1%)	130 (45.8%)
T2: Peer interaction between nursing students with and without disabilities will help both groups to learn new skills.	2 (0.7%)	2 (0.7%)	29 (10.2%)	106 (37.3%)	145 (51.1%)
T3: Accepting nursing students of determination will help in creating an inclusive welcoming environment.	3 (1.1%)	3 (1.1%)	36 (12.7%)	10 (35.6%)	141 (49.6%)

T4: People in nursing school can create compassion and a sense of inclusion.	4 (1.4%)	3 (1.1%)	29 (10.2%)	98 (34.5%)	150 (52.8%)
Barriers					
B1: I believe that social stigma against people with disabilities" is a barrier for including nursing students with disabilities "Students of Determination".	7 (2.5%)	20 (7.0%)	48 (16.9%)	110 (38.7%)	99 (34.9%)
B2: I believe that the admission requirements to nursing programs are barriers to the inclusion of nursing students with disabilities "Students of Determination".	5 (1.8%)	17 (6.0%)	92 (32.4%)	94 (33.1%)	76 (26.8%)
B3: I believe that negative attitudes of educators towards students with disabilities "Students of Determination" are barriers to their inclusion.	6 (2.1%)	19 (6.7%)	67 (23.6%)	78 (27.5%)	114 (40.1%)
B4: I believe that the lack of a clear policy to support students with disabilities "Students of Determination" is a barrier to their inclusion.	3 (1.1%)	7 (2.5%)	57 (20.1%)	98 (34.5%)	119 (41.9%)
B5: I believe that the lack of resources in the nursing laboratories is a barrier to the inclusion of nursing students with disabilities "Students of Determination".	6 (2.1%)	11 (3.9%)	74 (26.1%)	95 (33.5%)	98 (34.5%)
B6: I believe that the lack of professional development on how to meet the needs of nursing students with disabilities "Students of Determination" is a barrier to their inclusion.	3 (1.1%)	8 (2.8%)	62 (21.8%)	100 (35.2%)	111 (39.1%)
B7: I believe that not disclosing the disability is a barrier to including nursing students of determination	4 (1.4%)	12 (4.2%)	91 (32.0%)	92 (32.4%)	85 (29.9%)
B8: I believe that lack of communication between educators and administration is a barrier for the inclusion of nursing students with disabilities.	7 (2.5%)	6 (2.1%)	65 (22.9%)	99 (34.9%)	107 (37.7%)
B9: I believe that the lack of collaboration between educators and nurses in clinical sites is a barrier for the inclusion of nursing students with disabilities.	4 (1.4%)	11 (3.9%)	63 (22.2%)	94 (33.1%)	112 (39.4%)
Inclusion of Nursing Students					

P1: I believe that students from any disability category are able to provide safe care to patients upon graduation.	10 (3.5%)	25 (8.8%)	82 (28.9%)	112 (39.4%)	55 (19.4%)
P2: I believe that providing nonclinical tracks in nursing can facilitate the inclusion of nursing students with disabilities "Students of Determination".	6 (2.1%)	8 (2.8%)	77 (27.1%)	133 (46.8%)	60 (21.1%)
P3: I believe that providing options for clinical and non-clinical tracks in nursing will maximize the strengths of students with disabilities "Students of Determination".	7 (2.5%)	4 (1.4%)	42 (14.8%)	138 (48.6%)	93 (32.7%)
P4: I believe that nursing students must be prepared for a variety of clinical settings and should not be limited to bedside work.	4 (1.4%)	2 (0.7%)	31 (10.9%)	127 (44.7%)	120 (42.3%)
P5: I believe that opening more sub-specialties in nursing can facilitate the inclusion of nursing students with disabilities "Students of Determination".	4 (1.4%)	2 (0.7%)	25 (8.8%)	134 (47.2%)	119 (41.9%)
P6: I believe that modifying the clinical practice to be inclusive of all areas of nursing will increase opportunity of including nursing students with disabilities.	3 (1.1%)	1 (0.4%)	38 (13.4%)	135 (47.5%)	107 (37.7%)
P7: I believe that using alternative experiences such as simulation can allow nursing students of determination to have a greater opportunity to fulfil clinical obligations.	4 (1.4%)	0 (0%)	37 (13.0%)	139 (48.9%)	104 (36.6%)

The survey shows that 86.9% of students are aware about the concept of “disability”, 74% of them know the UAE relevant laws related to the rights of people of disability, and 73% are knowledgeable about the educational standards that describe the requirement of diverse learners’ needs, and 58.5% have awareness about the important admission criteria related to passing a physical fitness test to be get admission. On the other hand, the majority of students (62%) are not aware that the admission policies support the inclusion of students with disabilities. The same applies to the lack of awareness of the policies that support students with

disabilities as only 42% are aware of this. Also, in cases (L1, L2, L3, L4, L5, and L6), a notable portion of respondents either strongly disagree, disagree, or are unsure about their knowledge. This suggests that there is a significant portion of the surveyed group with limited or unclear awareness of disability-related laws and policies. Also, the responses vary across different questions. The data suggests that there is room for improvement in educating individuals about disability-related laws and policies, especially in the context of nursing education and support for students with disabilities. Even though a high number of participants have positive perceptions about the laws and standards, the students with the limited perceptions can create significant challenges for including nursing students with disabilities.

In terms of accommodation practices of nursing students with disabilities, the nursing students surveyed indicated a high level of agreement to incorporate various accommodative practices that can help the universities to include and increase enrolment of nursing students with disabilities. Most of the responses to statements related to the accommodations and inclusive clinical practices in nursing education programs were directed towards the use of assistive technology (87.7%), extension of assignment deadlines (81.3%), using alternative devices and experiences (83.8%), focusing on what skills need to be acquired (78.9%) and asking students directly of how they like to be supported (89.7%) as well as modifying the clinical practice along with diversifying teaching strategies (89.4%), and having accessible infrastructure (87.6%). These statistics indicate that such practices can really help the nursing students with disabilities to develop their skills that they can use and incorporate in practice. However, a few participants have also showcased disagreement or were unsure about these accommodation practices, which also gives another perspective that a few students perceive that these practices also cannot help in accommodating students with disabilities.

Perceptions of students regarding how attitudes and behaviour of individuals are related to inclusion of students with disabilities were also interpreted. By analyzing T1 to T4 items, it was observed that most of the students agreed that empathetic educators (78.9%) and peer interactions (88.4%) can help nursing students with disabilities and students also agreed that inclusion of students with disabilities can have positive outcomes like creation of an inclusive environment (85.2%) and compassion (87.3%) in nursing schools. Even though most participants indicated a high-level of agreement regarding showing a positive attitude towards students with disabilities, few participants were unsure and showcased disagreement regarding the same. Mixed responses among students regarding attitudes and behaviour towards the inclusion of students with disabilities can significantly impact the educational and social experiences of all students.

It can be observed that the students had positive perceptions regarding the facilitators, such as knowledge about regulations, accommodations, and positive attitude. When the students were asked about barriers, a mixed array of responses was observed. Most of the nursing education students agreed to various barriers affecting the inclusion of nursing students. Students' agreement with existing barriers, such as social stigma against people with disabilities (73.6%), limited admission requirements to nursing programs (59.9%), negative attitudes of educators towards students with disabilities (67.6%), lack of clear policy to support students with disabilities (76.4%), lack of resources (68%) and lack of professional development (74.3%) indicate that they agree about these barriers hindering the inclusion of students with disabilities. There is also a generalized idea that the lack of communication between educators and administration (72.6%), lack of collaboration between educators and nurses in clinical sites and not disclosing disability (72.5%) are barriers to inclusion.

Overall, the students perceived that the facilitators, such as knowledge about the laws, attitude, and accommodation practices facilitate inclusion of nursing students with disabilities. However, in case of barriers, participants indicated that a high level of agreement regarding presence of barriers affecting the outcomes related to inclusion of students with disabilities. Apart from facilitators and barriers, descriptive statistics of inclusion-related items were also discussed. These findings collectively reveal a strong consensus among respondents about the need for inclusivity in nursing education and practice. There is a widespread belief in the capabilities of students with disabilities and a commitment to providing them with diverse pathways to succeed in nursing careers. Furthermore, these results underscore the importance of curriculum flexibility and innovation. They suggest that nursing programs should consider a multifaceted approach that includes nonclinical tracks, sub-specialties, and alternative learning experiences to cater to the diverse needs of their student body. This approach aligns with the principles of diversity and inclusion in education, fostering a more equitable and accessible learning environment for all aspiring nurses.

Similar items were also used in the survey with nursing educators to evaluate their perceptions about knowledge of regulations, accommodations, attitudes, barriers, and inclusion of students with disabilities are interpreted and discussed in the following section.

5.4 Descriptive Analysis of Nursing Educators Data

Six statements in this category pertain to the participants' understanding of laws and policies relating to disabilities. The analysis of the information gathered from faculty participants that is relevant to each of the six assertions in the area of knowledge of disability-

related laws and institutions policies are represented in the following Table 11. Data was calculated from 29 nursing educators using a 5-point Likert scale.

Table 11: Descriptive Statistics of Nursing Educators Data

Items	Strongly disagree	Disagree	Not Sure	Agree	Strongly agree
Knowledge of Disability-Related Laws and Institutions Policies					
L1: I know the meaning of the term “disability”.	1 (3.4%)	0 (0%)	1 (3.4%)	15 (51.7%)	12 (41.4%)
L2: I know the UAE laws related to the rights of people with disabilities "People of Determination" in education.	0 (0%)	2 (6.9%)	6 (20.7%)	13 (44.8%)	8 (27.6%)
L3: I know that the UAE nursing and midwifery education standards clearly describe how the needs of diverse learners should be met.	0 (0%)	0 (0%)	7 (24.1%)	13 (44.8%)	9 (31.0%)
L4: I know that the admission policy to nursing programs in my institution supports the inclusion of nursing students with disabilities "Students of Determination".	1 (3.4%)	4 (13.8%)	18 (62.1%)	5 (17.2%)	1 (3.4%)
L5: I know that passing a medical physical fitness test is an important admission requirement to nursing education programs in my institution.	0 (0%)	2 (6.9%)	8 (27.6%)	12 (41.4%)	7 (24.1%)
L6: I know the disability policy in my institution on how to support nursing students with disabilities “Students of Determination”.	0 (0%)	5 (17.2%)	18 (62.1%)	4 (13.8%)	2 (6.9%)
Accommodations					
A1: I believe that assistive technology can help in meeting the needs of nursing with disabilities " Students of Determination".	0 (0%)	3 (10.3%)	7 (24.1%)	12 (41.4%)	7 (24.1%)
A2: I believe that extending the submission deadlines for tasks can be a reasonable way to support nursing students with disabilities " Students of Determination".	0 (0%)	10 (34.5%)	4 (13.8%)	8 (27.6%)	7 (24.1%)

A3: I believe that using alternative devices in clinical practice to perform a task can be a reasonable way to support nursing students with disabilities "Students of Determination".	2 (6.9%)	6 (20.7%)	4 (13.8%)	10 (34.5%)	7 (24.1%)
A4: I believe that nursing students with disabilities should be assessed on what skills they can do and not how they are doing the skills.	0 (0%)	5 (17.2%)	1 (3.4%)	16 (55.2%)	7 (24.1%)
A5: I believe that using diversified teaching strategies can help in the inclusion of nursing students with disabilities "Students of Determination".	2 (6.9%)	1 (3.4%)	4 (13.8%)	11 (37.9%)	11 (37.9%)
A6: I believe that asking nursing students with disabilities "Students of Determination" directly about how they like to be supported will help in their inclusion.	1 (3.4%)	1 (3.4%)	3 (10.3%)	12 (41.4%)	12 (41.4%)
A7: I believe that having an accessible infrastructure can facilitate the inclusion of nursing students with disabilities "Students of Determination".	1 (3.4%)	1 (3.4%)	4 (13.8%)	14 (48.3%)	9 (31.0%)
Attitudes					
T1: Empathetic educators and students help in the success of the inclusion of nursing students with disabilities	1 (3.4%)	1 (3.4%)	3 (10.3%)	11 (37.9%)	13 (44.8%)
T2: Peer interaction between nursing students with and without disabilities will help both groups to learn new skills.	0 (0%)	2 (6.9%)	6 (20.7%)	7 (24.1%)	14 (48.3%)
T3: Accepting nursing students of determination will help in creating an inclusive welcoming environment.	1 (3.4%)	1 (3.4%)	5 (17.2%)	10 (34.5%)	12 (41.4%)
T4: People in nursing school can create compassion and a sense of inclusion.	0 (0%)	1 (3.4%)	1 (3.4%)	12 (41.4%)	15 (51.7%)
Barriers					
B1: I believe that social stigma against people with disabilities" is a barrier for including nursing students with	1 (3.4%)	6 (20.7%)	2 (6.9%)	12 (41.4%)	8 (27.6%)

disabilities "Students of Determination".					
B2: I believe that the admission requirements to nursing programs are barriers to the inclusion of nursing students with disabilities "Students of Determination".	0 (0%)	5 (17.2%)	7 (24.1%)	7 (24.1%)	10 (34.5%)
B3: I believe that negative attitudes of educators towards students with disabilities "Students of Determination" are barriers to their inclusion.	4 (13.8%)	3 (10.3%)	3 (10.3%)	11 (37.9%)	8 (27.6%)
B4: I believe that the lack of a clear policy to support students with disabilities "Students of Determination" is a barrier to their inclusion.	1 (3.4%)	2 (6.9%)	4 (13.8%)	10 (34.5%)	12 (41.4%)
B5: I believe that the lack of resources in the nursing laboratories is a barrier to the inclusion of nursing students with disabilities "Students of Determination".	1 (3.4%)	3 (10.3%)	5 (17.2%)	7 (24.1%)	13 (44.8%)
B6: I believe that the lack of professional development on how to meet the needs of nursing students with disabilities "Students of Determination" is a barrier to their inclusion.	1 (3.4%)	3 (10.3%)	2 (6.9%)	10 (34.5%)	13 (44.8%)
B7: I believe that not disclosing the disability is a barrier to including nursing students of determination	0 (0%)	5 (17.2%)	7 (24.1%)	12 (41.4%)	5 (17.2%)
B8: I believe that lack of communication between educators and administration is a barrier for the inclusion of nursing students with disabilities.	0 (0%)	4 (13.8%)	5 (17.2%)	8 (27.6%)	12 (41.4%)
B9: I believe that the lack of collaboration between educators and nurses in clinical sites is a barrier for the inclusion of nursing students with disabilities.	1 (3.4%)	4 (13.8%)	5 (17.2%)	7 (24.1%)	12 (41.4%)
Inclusion of Nursing Students					
P1: I believe that students from any disability category are able to provide safe care to patients upon graduation.	3 (10.3%)	13 (44.8%)	8 (27.6%)	5 (17.2%)	0 (0%)

P2: I believe that providing nonclinical tracks in nursing can facilitate the inclusion of nursing students with disabilities "Students of Determination".	2 (6.9%)	5 (17.2%)	6 (20.7%)	9 (31.0%)	7 (24.1%)
P3: I believe that providing options for clinical and non-clinical tracks in nursing will maximize the strengths of students with disabilities " Students of Determination".	1 (3.4%)	8 (27.6%)	5 (17.2%)	9 (31.0%)	6 (20.7%)
P4: I believe that nursing students must be prepared for a variety of clinical settings and should not be limited to bedside work.	0 (0%)	1 (3.4%)	2 (6.9%)	15 (51.7%)	11 (37.9%)
P5: I believe that opening more sub-specialties in nursing can facilitate the inclusion of nursing students with disabilities " Students of Determination".	1 (3.4%)	1 (3.4%)	5 (17.2%)	13 (44.8%)	9 (31.0%)
P6: I believe that modifying the clinical practice to be inclusive of all areas of nursing will increase opportunity of including nursing students with disabilities.	1 (3.4%)	4 (13.8%)	7 (24.1%)	9 (31.0%)	8 (27.6%)
P7: I believe that using alternative experiences such as simulation can allow nursing students of determination to have a greater opportunity to fulfil clinical obligations.	1 (3.4%)	6 (20.7%)	6 (20.7%)	10 (34.5%)	6 (20.7%)

The results of the survey show that 93% of educators are aware of definition of “disability”, 72% of them know the UAE relevant laws related to the rights of people of disability, 76% are knowledgeable of diverse learners’ needs should be met, and 65.5% are aware about a medical test requirement for admission purposes. On the other hand, the majority of educators (62%) are not aware that the admission policies support the inclusion of students with disabilities. The same applies to the lack of awareness of the policies that support students with disabilities as only 21% are aware of this. The survey results suggest varying levels of

awareness and knowledge among respondents regarding disability-related laws, policies, and support for nursing students with disabilities in their institutions. It appears that there is uncertainty or lack of awareness in some areas, particularly related to specific institutional policies and laws.

In regard to the importance of accommodation practices for inclusion of students with disabilities, some significant perceptions were observed. Most nursing education faculty members believed that common inclusive accommodation practices to inclusion such as the use of assistive technology (65.5%), extension of assignment deadlines (51.7%), using alternative devices and experiences (58.6%), focusing on what skills need to be acquired (79.3%) and asking students directly of how they like to be supported (82.8%) as well as modifying the clinical practice along with diversifying teaching strategies (75.8%), and having accessible infrastructure (79.3%) may help nursing students with disabilities to overcome their challenges. These solutions recognize that students have different skills and learning styles and need changes to achieve equal success. A large percentage of respondents think that nursing students with disabilities should be judged on their ability to perform essential skills correctly, regardless of the specific approach and that should be aligned with the ultimate goal of ensuring patient safety. Despite disabilities, this method values all students' skills. The focus on directly including nursing students with disabilities in support choices is student-centered and prioritizes individual preferences and requirements. Physical and digital accessibility are crucial to providing all students with educational materials and opportunities.

Most of nursing educators believed that empathetic educators and students help in the success of the inclusion of nursing students with disabilities and in creating sense of inclusion and that peer interaction will help students with and without disabilities to learn new skills and

that accepting nursing students of determination will help in creating an inclusive welcoming environment. It was observed that educators had more positive attitudes towards items T1, T2, T3, and T4, with a clear majority agreeing or strongly agreeing with these questions. However, T2 received the highest percentage of strongly agree responses at 48.3%, suggesting particularly strong agreement with this statement, indicating that high level of peer interaction can increase inclusion of students with disabilities.

In terms of barriers, educators' agreement with existing barriers, such as social stigma against people with disabilities (69%), limited admission requirements to nursing programs (58.6%), negative attitudes of educators towards students with disabilities (65.5%), lack of clear policy to support students with disabilities (75.9%), lack of resources (68.9%) and lack of professional development (78.3%), and no disclosure of their disability (58.6%), indicate that they agree about these barriers hindering the inclusion of students with disabilities. These barriers also include limited cooperation (69%) and collaboration (65.5%), which can have a negative impact on inclusion of nursing students. The combination of these impediments collectively contributes to the creation of an inhospitable and demanding academic setting for students with disabilities enrolled in nursing programs. In order to facilitate inclusivity, it is essential to holistically tackle these barriers via the cultivation of a nurturing and all-encompassing environment, allocation of sufficient resources, and establishment of unambiguous rules and guidelines that guarantee equitable chances for students, irrespective of their disabilities.

Nursing educators' data regarding inclusion of students with disabilities indicated that they do not have a positive perception toward the capabilities of students with disabilities to provide care safely to patients. In terms of implementing practices that can contribute to

inclusion of nursing students with disabilities, nursing educators perceived the practices by showcasing their agreement towards them. For instance, most nursing educators showcased agreement for including clinical and non-clinical tracks, providing them with opportunities to be ready for clinical settings, opening more sub-specialties, bringing changes to the clinical practices, and incorporating simulation-based experiences, which can allow the nursing students to grow in the field.

Overall, the descriptive statistics cast light on educators' varying levels of awareness and knowledge regarding laws, policies, and support for nursing students with disabilities. While a significant percentage of educators are aware of the definition of "disability" and have some knowledge of relevant laws and diverse learners' requirements, there are distinct gaps in understanding, particularly regarding admission policies and specific institutional support. Regarding accommodation practices for inclusion, nursing education faculty members agree that student-centred approaches are essential. It is believed that the use of assistive technology, assignment deadline extensions, alternative learning methods, and direct engagement with students' preferences are valuable tools for assisting nursing students with disabilities. This strategy acknowledges the diverse abilities and learning styles of students and places a premium on talent over performance. Regarding the role of empathy, peer interaction, and acceptance in the creation of an inclusive environment, educators hold favourable views. These factors contribute to the success of nursing students with disabilities, according to the majority. However, significant barriers persist, such as social stigma, limited admission requirements, negative attitudes, a lack of defined policies and resources, and insufficient professional development. Collectively, these barriers can create a difficult academic environment for students with disabilities. Regarding how students with disabilities are perceived to provide safe

patient care, there is room for improvement. Clinical and non-clinical courses, preparedness for clinical settings, sub-specialization, changes in clinical practices, and simulation-based experiences are supported by educators as inclusion-enhancing practices. These practices can help nursing students with disabilities excel and contribute to patient care.

5.5 Correlation Analysis

A correlation analysis was performed to examine and assess the relationship between the variables in the research. The metric quantifies the extent of their co-variation. A positive correlation denotes a situation in which both variables exhibit simultaneous increases or decreases, while a negative correlation signifies that an increase in one variable corresponds to a reduction in the other. The correlation coefficient serves as a measure of the strength and direction of the link between variables, with values ranging from -1 to +1. Pearson correlation co-efficient was calculated to evaluate the correlation between variables for the current research.

5.5.1 Correlation Analysis for Students' Data

Correlation between knowledge about laws and policies, attitudes, accommodation practices, barriers, and inclusion of students with disabilities was calculated. The findings indicated that there is a positive correlation between all the facilitators of inclusion but have different strengths of correlation. Furthermore, all the facilitators, such as knowledge about laws and policies has a moderate and positive correlation with inclusion ($r = 0.539$, $p < 0.01$), accommodation practices have a moderate and positive correlation with inclusion ($r = 0.806$, $p < 0.01$), and attitudes have a moderate and positive correlation with inclusion ($r = 0.609$, $p < 0.01$). These indicate that these with an increase in implementation of facilitators, inclusion of students with disabilities in nursing education programs will potentially increase.

Considering the correlation between facilitators and barriers, a negative and significant correlation was observed. For instance, there was: a negative correlation between knowledge about laws and policies and barriers ($r = -.0151$, $p < 0.05$), a negative correlation between accommodation practices and barriers ($r = -.456$, $p < 0.05$), and also a negative correlation between attitudes and barriers ($r = -.511$, $p < 0.05$). These negative correlation values indicate that with increase in facilitators, barriers will decrease. It can be interpreted that with appropriate knowledge about disability-related laws, effective implementation of accommodation practices, and positive attitudes will further assist in reducing the barriers to inclusion. From the correlation it was also observed that barriers have a negative and significant correlation with inclusion ($r = -0.431$, $p < 0.01$), indicating that high number of barriers will reduce the inclusion of nursing students with disabilities (Table 12).

Table 12: Correlation between the different scores among nursing students

	Knowledge about laws and policies	Accommodation practices	Attitudes	Barriers	Inclusion
Knowledge about laws and policies	1				
Accommodation practices	.515**	1			
Attitudes	.355**	.619**	1		
Barriers	-.151*	-.456**	-.511**	1	
Inclusion	.539**	.806**	.609**	-.431**	1
** Correlation is significant at the 0.01 level (2-tailed).					
* Correlation is significant at the 0.05 level (2-tailed).					

From the above correlation analysis, it can be observed that from students' perspectives, all the variables are significantly correlated to each other.

5.5.2 Correlation Analysis for Educators' Data

Correlation between knowledge about laws and policies, attitudes, accommodation practices, barriers, and inclusion of students with disabilities was calculated based on data of nursing educators. From the perspectives of educators, the findings indicated that knowledge about laws and policies does not have a significant correlation with inclusion ($r = 0.173$, $p=0.368>0.05$), which means that with increase in knowledge about laws and policies does not appear to have a meaningful impact on inclusion based on the data analyzed. This indicates that among nursing educators, knowledge of laws and policies does not appear to be strongly associated with the promotion of inclusion in their teaching or educational practices. However, other facilitators, such as accommodation practices ($r=0.861$, $p<0.01$) and attitudes ($r=0.790$, $p<0.01$) have a positive and significant correlation with inclusion.

Considering the correlation between facilitators and barriers, a negative and significant correlation was observed even from nursing educators' perspectives, except between knowledge about laws and barriers. However, a negative correlation between accommodation practices and barriers ($r = -0.794$, $p < 0.01$), and also a negative correlation between attitudes and barriers ($r = -0.511$, $p < 0.05$). These negative correlation values indicate that with increase in facilitators, barriers will decrease. It can be interpreted that with appropriate knowledge about disability-related laws, effective implementation of accommodation practices, and positive attitudes will further assist in reducing the barriers to inclusion. From the correlation it was also observed that barriers have a negative and significant correlation with inclusion ($r = -0.799$, $p < 0.01$), indicating that high number of barriers will reduce the inclusion of nursing students with disabilities (Table 13).

Table 13: Correlation between the different scores among nursing educators

	Knowledge about laws and policies	Accommodation practices	Attitudes	Barriers	Inclusion
Knowledge about laws and policies	1				
Accommodation practices	0.042, $p=0.83$	1			
Attitudes	-0.195, $p=0.311$	0.787**	1		
Barriers	0.03, $p=0.879$	-0.794**	-0.799**	1	
Inclusion	0.173, $p=0.368$	0.861**	0.790**	-0.786**	1
** Correlation is significant at the 0.01 level (2-tailed).					
* Correlation is significant at the 0.05 level (2-tailed).					

5.6 Group Differences in Perceptions

Group comparisons are done to identify the patterns, trends, and relationships within the data. Various groups in data are compared to understand how various factors influence the outcomes. For the current research, t-test and ANOVA statistical tests are conducted to evaluate the group comparisons between two groups and multiple groups, respectively. Group comparisons in data collected from students and educators are done in the following subsections.

5.6.1 Group Comparisons - Nursing Students' Data

The T-test findings for five variables of inclusive education are shown in the results section below when comparing two groups based on nursing students' data. Comparison of demographics with two groups is done to see if the perceptions change about the variables based on different groups. Group comparisons were conducted across various factors, including familiarity with individuals with disabilities, interactions with individuals with disabilities, and completion of disability-related courses. These comparisons were made across five variables: knowledge of disability-related laws, awareness of accommodations, attitudes towards disabilities, identification of barriers, and support for the inclusion of students with disabilities.

The individuals in the study were divided into two groups: those who answered "yes" and those who answered "no" to these factors. To assess the differences between these groups, t-tests were employed. The results of the t-tests indicated that there were no significant differences in perceptions between those who knew someone with a disability and those who did not in terms of their knowledge of disability-related laws ($p=0.572$), understanding of accommodations ($p=0.065$), attitudes towards disabilities ($p=0.359$), identification of barriers

($p=0.407$), and support for the inclusion of students with disabilities ($p=0.128$). The lack of a significant difference between those who know someone with a disability and those who do not suggests that awareness of disability-related laws may not be pervasive and is independent of personal relationships. In terms of accommodations, these practices are standardized in educational and professional contexts, which reduces the influence of personal connections on awareness. The absence of significant differences in attitudes towards disabilities between the two groups suggests that intimate experience with individuals with disabilities may not necessarily influence attitudes and barriers to inclusion. Inclusion of students with disabilities may imply that personal involvement plays a subtle role in shaping opinions on this topic, but the evidence is insufficient to be statistically significant. The result for the t-test is presented in the Appendix J (i).

When comparing two groups of people, namely those who have interacted with individuals with disabilities and those who have not, no significant differences were observed in their perceptions concerning accommodations ($p=0.156$), attitudes ($p=0.589$), and barriers ($p=0.134$). However, a significant difference in perceptions regarding knowledge about laws was found between individuals who had interacted with people with disabilities and those who had not ($p=0.014<0.05$, indicating significance). Furthermore, a notable difference in perceptions among nursing students was identified concerning the inclusion of students with disabilities. This difference was statistically significant ($p=0.018<0.05$). Similar exposure to disability-related information or education among both groups may account for the absence of group differences in certain variables. On the other hand, the significant group difference in legal knowledge may have resulted from direct interactions with individuals with disabilities, which may have led to a greater understanding of applicable laws and regulations. Significant

differences in nursing students' perceptions may be explained by differences in their coursework or clinical experiences. Those who have interacted with individuals with disabilities may have been exposed to more inclusive practices, resulting in different perceptions than those who have not. The result for the t-test is presented in the Appendix J (ii).

When comparing groups of nursing students, one that had completed a disability course and one that had not, there were no discernible differences in their perceptions regarding various variables. These variables encompassed knowledge about laws ($p=0.476$), accommodations ($p=0.466$), attitudes ($p=0.787$), barriers ($p=0.420$), and inclusion ($p=0.538$). This indicates that the lack of group differences across these variables suggests that certain aspects related to disability and healthcare may be commonly taught and understood within the broader nursing curriculum, regardless of whether students have taken a specialized disability course. The result for the t-test is presented in the Appendix J (iii).

Group comparisons of the variables was also done based on age. In students' data, responses were obtained from two age groups only, one was 17-27 years and 28-38 years, which is why t-test was conducted to compare differences between the two age groups. The findings indicated that there were no discernible differences in their perceptions regarding various variables, such as knowledge about laws ($p=0.276$), accommodations ($p=0.708$), attitudes ($p=0.712$), barriers ($p=0.535$), and inclusion ($p=0.938$) based on age. The result for the t-test is presented in the Appendix J (iv).

Group comparison based on Emirates was done using one-way ANOVA as there were multiple groups of Emirates. Based on the findings, there were no significant differences between the students of different Emirates for variables, such as knowledge about laws ($p=0.058$), accommodations ($p=0.413$), attitudes ($p=0.068$), barriers ($p=0.500$), and inclusion

($p=0.331$). This indicates that irrespective of the Emirates, the students belong to, they do not perceive these variables differently. This can be due to unified national standards for nursing education, a focus on diversity and tolerance, and mandatory training for all nurses. The result for the one-way ANOVA is presented in the Appendix J (v).

5.6.2 Group Comparisons - Nursing Educators' Data

The T-test findings for four categories of inclusive education were shown in the results section below when comparing two groups based on data collected from nursing educators. The researcher looked at whether faculty members' perceptions of the five variables, such as their knowledge about laws, accommodations, attitudes, barriers, and inclusion of students with disabilities varied depending on their demographic features that have two groups, such as gender, knowing someone with disability, interaction with someone with disability, and taking a course about disability.

Based on the results of t-test statistics, there were no significant differences in perceptions between male and female educators regarding regulations ($p=0.686$), accommodations ($p=0.783$), attitudes ($p=0.209$), barriers ($p=0.958$), and inclusion ($p=0.609$). This suggests that male and female nursing educators have similar perceptions of these variables. For instance, considering knowledge about regulations, both genders are inclined to have comparable perspectives on regulatory issues and accommodation, that are may be ascribed to the implementation of standardized training and rules and practices within the nursing profession, which are equally applicable to both men and women. In terms of attitude, the findings indicate that there is a convergence of views among male and female nursing educators, maybe attributable to the impact of a shared educational environment and

overarching objectives. There were no differences in the perceptions of barriers by male and female educators, suggesting that these barriers are not contingent upon gender but rather driven by external variables such as institutional regulations or curriculum-related expectations. The result for the t-test is presented in the Appendix K (i).

The study compared groups based on factors such as familiarity with people with disabilities, intimate interactions with people with disabilities, and enrolment in disability-related courses. These comparisons were conducted across five variables: knowledge of disability-related laws, accommodations, attitudes towards individuals with disabilities, recognition of barriers, and promotion of inclusion. Each of these factors was classified as "yes" or "no." T-tests were used to assess the differences between these categories. In terms of knowledge about disability-related laws ($p=0.644$), understanding of accommodations ($p=0.863$), attitudes towards disabilities ($p=0.957$), awareness of barriers ($p=0.384$), and support for the inclusion of students with disabilities ($p=0.884$), there were no significant differences in perceptions between individuals who have experience with a person with a disability and those who do not ($p=0.884$). The result for the t-test is presented in the Appendix K (ii).

Regarding nursing educators who had interacted with individuals with disabilities and those who had not, a significant difference emerged between the two groups across all variables, except for knowledge of disability-related laws ($p=0.198>0.05$). The findings underscored notable variations in the perceptions of nursing educators based on their prior interactions with individuals with disabilities, particularly in the realm of accommodations and related practices ($p=0.001<0.05$). This implies that nursing educators with previous experiences of interacting with individuals with disabilities perceive accommodations for nursing students with disabilities differently compared to those who lack such interactions. Similarly, significant distinctions

between the two interaction groups were also evident in other areas, including attitudes ($p=0.016<0.05$), barriers ($p=0.002<0.05$), and the inclusion of nursing students with disabilities ($p=0.005<0.05$). Interacting with persons with disabilities gives educators with a more nuanced awareness of the issues and demands in accommodating disabled nursing students. As indicated by the considerable differences in views, barriers, and inclusion identified in the research, this direct experience may lead to more favourable attitudes, better awareness of barriers, and a stronger commitment to inclusive practices. The absence of a substantial difference in understanding of disability-related regulations, on the other hand, shows that this element is less impacted by human connections and more dependent on formal education or training. The result for the t-test is presented in the Appendix K (iii).

In regard to nursing educators who had done a course related to disability and who did not, a significant difference was observed between the two groups for all variables, except for attitudes. The findings indicated a significant difference in perceptions of people who had taken a course and not taken a course related to disability for accommodations and its related practices ($p=0.006<0.05$). This indicates that nursing educators who are trained and aware about disability related conditions tend to perceive accommodations of nursing students with disability differently than people who are not trained or undertaken a professional course. Similarly, a significant difference between the two groups of interaction was also observed for other variables, such as knowledge about the laws ($p=0.025<0.05$), barriers ($p=0.046<0.05$), and inclusion of nursing students with disabilities ($p=0.041<0.05$). The result for the t-test is presented in the Appendix K (iv).

Group comparisons to compare age groups and Emirates-based groups were also done for the variables using one-way ANOVA. Based on the findings of ANOVA, it was observed

that there are no statistically significant differences for variables, such as knowledge about the laws ($p=0.793$), accommodations for inclusion ($p=0.852$), attitudes towards inclusion ($p=0.337$), barriers ($p=0.944$), and inclusion of nursing students with disabilities ($p=0.994$) based on their age as represented in Appendix K (v). Similarly, it was found that there no group differences based on Emirates for knowledge about the laws ($p=0.620$), accommodations for inclusion ($p=0.684$), attitudes towards inclusion ($p=0.597$), barriers ($p=0.601$), and inclusion of nursing students with disabilities ($p=0.954$). The result for the one-way ANOVA is presented in the Appendix K (vi).

Lastly, a group comparison between nursing students and nursing educators was done to evaluate if they perceive inclusion of students with disabilities differently. The t-test findings indicated that there is a significant difference ($p<0.01$) in perceptions of students and educators regarding inclusion of students with disabilities as represented in Appendix K (vii). The difference in perceptions can be attributed to the varying levels of exposure, experience, and understanding educators have compared to students. From the findings, it can be interpreted that educators can have a broader perspective based on their professional experience and these differences signify the importance of communication and collaboration between educators and students to create an inclusive and effective nursing education environment.

5.7 Regression Analysis

Using t-tests and ANOVA, we examined the differences between groups in the previous section, casting light on the statistical significance of group variations. In this section, we delve deeper into our analysis by employing regression techniques to identify the underlying relationships between the variables.

5.7.1 Regression Analysis – Nursing Students’ Data

Regression analysis was conducted to evaluate the impact of facilitators, such as knowledge about disability-related laws, accommodations, and attitudes and impact of barriers on inclusion of students with disabilities. Linear regression analysis was performed to test the relationships between these variables using data from a sample of 284 nursing students. The regression analysis revealed a significant and positive relationship between knowledge about disability-related laws and inclusion of nursing students with disabilities ($B=0.181$, $p<0.01$), indicating that when nursing students have good knowledge about laws and regulations, they tend to perceive inclusion of students with disabilities positively. However, when they lack this knowledge, then it can hinder their perceptions about accepting inclusion of students with disabilities. Similarly, accommodations-related practices were also found to have a significant and positive relationship with inclusion of nursing students with disabilities ($B=0.604$, $p<0.01$). This indicates that when nursing students perceive accommodations and related practices positively, such as using assistive technology, extending deadlines for disabled students, focusing on skills of disabled students, and other practices, then they tend to have a positive perception of including students with disability. In terms of attitudes, it was found that attitude toward inclusion also has a positive and significant impact on inclusion of students with

disabilities ($B=0.264$, $p<0.01$), indicating that students with disabilities are more likely to be included in educational environments when people have more favourable attitudes towards inclusion. However, when nursing students do not have a favourable attitude towards inclusion, then that can hinder the inclusion practices of students with disabilities. Barriers were also found to have an effect on inclusion of nursing students with disabilities. The results found indicated that barriers have a negative and significant impact on nursing students with disabilities ($B=-0.284$, $p<0.01$), which indicates that presence of barriers will have a negative impact on inclusion practices. These barriers may include physical accessibility challenges, discriminatory practices, or other impediments that impede the educational and professional advancement of individuals. It is essential to address and alleviate these barriers in order to provide an inclusive and supportive atmosphere for nursing students with disabilities, therefore fostering their achievements in both their academic pursuits and future professional undertakings. However, it is also important to note that when there are less barriers, the inclusion of nursing students with disabilities will be higher. The results of above regression analysis are represented in Table 14.

Table 14: Impact of Facilitators and Barriers on Inclusion of Nursing Students with Disabilities – Based on Students’ data

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Knowledge about laws	.181	.044	.160	4.116	.000
	Accommodations	.604	.045	.618	13.330	.000
	Attitudes	.264	.066	.170	3.987	.000
	Barriers	-.284	.035	-.431	-8.020	.000
b. Dependent Variable: Inclusion of students with disabilities						

Based on data collected from nursing students, it was observed that facilitators also have an impact on barriers. From the findings presented in the table below, it was observed that according to nursing students, when facilitators, such as effective accommodation standards ($B=-0.431$, $p<0.01$) and attitudes are present ($B=-0.894$, $p<0.01$), barriers to inclusion will be reduced, based on negative and significant values that were obtained. However, students perceive that knowledge about regulations to have a significant effect on barriers ($B=0.228$, $p<0.05$), indicating that even if students have knowledge about regulations and laws, it does not imply that barriers to inclusion will decrease. This is because barriers to inclusion can be multifaceted, and they may not be solely addressed by legal knowledge and other factors such as attitudes and accommodation practices also play a role in facilitating inclusion (Table 15).

Table 15: Impact of Facilitators on Barriers to Inclusion of Nursing Students – Based on Students’ data

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Knowledge about laws	.228	.099	.133	2.294	.023
	Accommodations	-.431	.102	-.291	-4.203	.000
	Attitudes	-.894	.150	-.378	-5.959	.000
b. Dependent Variable: Barriers						

5.7.2 Regression Analysis – Nursing Educators’ Data

Linear regression analysis was also performed to evaluate the impact of facilitators, such as knowledge about disability-related laws, accommodations, and attitudes and impact of

barriers on inclusion of students with disabilities based on data collected from 29 nursing educators.

The regression analysis uncovered some key findings. Firstly, a strong and positive connection emerged between educators' knowledge of disability-related laws and the inclusion of nursing students with disabilities ($B=0.434$, $p<0.05$). This suggests that when nursing instructors are well-versed in these laws, they tend to view the inclusion of students with disabilities in a positive light. Conversely, a lack of this knowledge can impede their acceptance of such inclusion. Likewise, a significant and positive relationship was found between accommodation-related practices and the inclusion of nursing students with disabilities ($B=0.444$, $p<0.01$). This implies that when nursing educators have a positive perception of practices like using assistive technology, extending deadlines for disabled students, and focusing on disabled students' skills, they are more inclined to support the inclusion of these students. Attitudes also play a crucial role. A positive attitude towards inclusion was associated with a greater likelihood of including students with disabilities ($B=0.701$, $p<0.01$). Conversely, a negative attitude among nursing educators can hinder inclusion efforts. Barriers were identified as another factor impacting the inclusion of nursing students with disabilities. The presence of barriers had a negative and significant effect ($B=-0.515$, $p<0.01$), meaning that these barriers impede inclusion practices. Addressing and mitigating these barriers is essential to create an inclusive and supportive environment for these students, promoting their success in academic and professional pursuits. Additionally, it's important to note that fewer barriers are associated with higher levels of inclusion for nursing students with disabilities. The results are presented in Table 16.

Table 16: Impact of Facilitators and Barriers on Inclusion of Nursing Students with Disabilities – Based on Educators’ Data

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Knowledge about laws	.437	.167	.238	2.620	.015
	Accommodations	.444	.127	.506	3.506	.002
	Attitudes	.701	.235	.438	2.980	.006
	Barriers	-.515	.078	-.786	-6.605	.000
b. Dependent Variable: Inclusion of students with disabilities						

The findings indicate a substantial association between inclusion facilitators and barriers as reported by nursing educators. These results specifically show that facilitators, which include accommodations and favourable attitudes, have a critical role in lowering barriers to inclusion. The negative and substantial impact found suggests that when these facilitators are in place and working well, they have the ability to attenuate or counteract the barriers that could otherwise inhibit inclusive practices in nursing education. This conclusion emphasizes the necessity of ensuring that accommodations are easily accessible and that there is a positive and inclusive attitude towards people with disabilities. When these facilitators are incorporated into the educational environment in a harmonic manner, they collectively contribute to a more inclusive and accessible learning experience for everyone, including those with disabilities. However, as per the findings of nursing educators, it was found that regulations do not have a significant effect on barriers. The absence of a substantial impact of disability-related regulations on barriers, as indicated by nursing educators, can be ascribed to various factors, encompassing barriers associated with execution, awareness about regulations, complexity,

limitations in resources, and the comparative influence of other facilitators in educational environment. The results for the same are represented in the following Table 17.

Table 17: Impact of Facilitators on Barriers on Inclusion of Nursing Students – Based on Educators’ Data

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Knowledge about laws	-.136	.323	-.048	-.419	.679
	Accommodations	-.546	.246	-.408	-2.220	.036
	Attitudes	-.190	.457	-.488	-2.605	.015
b. Dependent Variable: Barriers						

5.8 Chapter Summary

The chapter presented a thorough examination of statistical data in order to provide evidence that supports the objectives of the study. The main objective of this chapter was to provide a comprehensive summary of the statistical findings derived from the research. The chapter presented results of descriptive statistics of data of nursing students and educators, which indicated the number of participants that have responded to a particular option for any item. After presenting the findings of descriptive analysis, correlation analysis was done to measure the type of correlation between the five variables for nursing students and educators’ data. T-test and ANOVA were performed to measure if there any significant group differences between the groups of data for nursing students and educators. T-test for identifying difference in perceptions regarding inclusion of students with disabilities gave significant results. Lastly, regression analysis was performed to evaluate the impact of regulations, accommodations, attitudes, and barriers on inclusion of students with disabilities from a perspective of nursing

students and educators. Based on the empirical findings presented in this chapter and subjective findings in chapter 4, discussion of these findings in comparison to literature with underpinning models and theories is carried out in the next chapter.

Chapter 6 Discussion

6.1 Introduction

This study sought to explore nursing education stakeholders' perceptions about including students with disabilities in nursing education programs in the UAE and the barriers and facilitators to their inclusion. The study used a mixed-method approach and a three-part sequential exploratory design, using in-depth unstructured, open-ended interviews in the first phase, a cross-sectional survey in the second phase, and a supplemental qualitative study with semi-structured interviews in the third phase. The following sections provide a discussion of findings obtained through qualitative and quantitative data analysis. All the research questions and objectives were achieved, which are reflected in the study's findings.

6.2 Selection Process of Nursing Students with Disabilities

The selection of nursing students with disabilities is crucial in determining the inclusion and diversity of nursing education programs in the UAE. This section explores the research's findings and insights, which focus on identifying and comprehending the barriers and facilitators that affect the inclusion of nursing students with disabilities. In pursuing a more accessible educational environment, it is essential to examine objectively the processes by which individuals with disabilities obtain admission to nursing programs and the support they require during and after the program. As a profession, nursing is well-known for its dedication to caring for and encouraging various patient groups. However, this dedication to diversity and inclusion should extend beyond patient care to the basis for nursing education. Not only have researchers strongly indicated that students with disabilities should be included, but it is also essential to

discuss how inclusion can affect patient care and what support should be provided to these students to maintain the quality of patient care. In this section, we explore the barriers nursing students with disabilities encounter during the educational program (admission, during, and after program), as well as the mechanisms that facilitate the support provided to them throughout the program. This research considers a multifaceted approach, investigating the perspectives and experiences of nursing students without disabilities and nursing educators offering nursing programs. This research seeks to comprehensively understand the challenges and opportunities within the selection process by addressing these issues. This information is essential for developing strategies that promote a more accessible and equitable path into nursing education. These three sections, 6.3, 6.4, and 6.5, focus on barriers and facilitators for nursing students with disabilities before, during, and after their programs in regard to their inclusion. However, it's important to understand that these barriers and facilitators can affect the entire inclusion process. For instance, attitude of individuals can also impact the inclusion before, during, and after the program. Still, these barriers and facilitators have been distributed and organized based on the study findings, highlighting where these were most significant in each stage for clarity and relevance.

6.3 Prior Admission Process of the Program

In the intricate environment of nursing education, the prior admission process is crucial as it can impact the admission of a student, shaping the academic journey of individuals with disabilities who aspire to become nursing professionals. Examining the first phase of admission into nursing schools is of utmost importance, as it often serves as the initial point at which persons with disabilities may confront significant barriers. Furthermore, this section aims to

clarify the supportive structures and adaptive strategies that address these problems, promoting an inclusive atmosphere in nursing education.

6.3.1 Barriers related to prior admission to nursing programs

The UAE demonstrates its commitment to promoting and safeguarding the rights of individuals with disabilities by formulating policies, enacting laws, and establishing regulations. Additionally, the UAE has endeavored to transform societal perceptions of disability by reconceptualizing it as a social construct rather than an outcome of individual characteristics. Even though the UAE has put in significant efforts, the findings showcased barriers, such as admission and support policies and nursing program requirements, can impede admission, impacting their inclusion in the nursing education programs. The findings indicated a lack of clear institutional disability policies and other admission and support policies that impact the inclusion of nursing students with disabilities. The absence of well-defined admission and support policies is an important barrier in the admission process for nursing students with disabilities, which has a detrimental impact on nursing education programs. The existence of well-defined disability regulations and policies necessitates the provision of accommodations and adaptations, guaranteeing equitable opportunities for students with disabilities. This observation is consistent with the findings of research conducted by Ashcroft and Lutfiyya (2013), which emphasized the need to enhance policies to provide better assistance for students in clinical environments. Mack, Stephens, and Epstein (2021) and Morgan (2021) also indicated that the lack of implementing policies is a barrier to the success of the inclusion of nursing students with disabilities in nursing education programs, which leads to a lack of accessibility measures and supports in various academic institutions and workplace settings. Also, the lack of well-defined admission and support rules can substantially influence the pre-admission

process for students with disabilities in nursing school programs because it might result in a state of ambiguity among potential students, prompting them to raise doubts over the provision of essential accommodations and assistance. Furthermore, this disparity in access to the admission process may adversely discourage eligible students from submitting their applications. Moreover, a lack of comprehensive information on the range of accommodations and support services that are accessible may impede the ability to make well-informed decisions during the pre-admission stage.

Another barrier found to create challenges for students before the admission process was nursing program requirements. Most study participants believed that the admission requirements to nursing programs sometimes pose barriers for students with disabilities. This may be because nursing programs often have specific physical and cognitive requirements that students must meet to be accepted into the program. These requirements are intended to ensure that students can perform the essential functions of nursing safely and effectively. However, some of these requirements may be difficult for students with disabilities to meet, limiting their access to nursing education. For example, students with physical disabilities may have difficulty meeting physical stamina, mobility, and dexterity requirements. Students with cognitive disabilities may struggle with the academic demands of nursing programs, such as memorization, critical thinking, and problem-solving. This was confirmed by L'Ecuyer (2019) and Lindsay et al. (2022), who mentioned that disability is often treated as an afterthought in healthcare education, and students with disabilities often face challenges in accessing clinical placements. It was also shown that students with disabilities have reported a range of barriers to clinical placements, including inaccessible physical environments, lack of support from clinical supervisors, stigma and discrimination from peers and faculty, and working long hours without

breaks. Moreover, participants also indicated that physical and mental fitness is an essential requirement for clinical practice. Yet, it can limit the admission of students with various health conditions, as some people with disabilities can function effectively without many challenges. Some participants believed that medical fitness should be an essential criterion to be admitted to nursing education programs. Other participants mentioned that screening for chronic diseases is important before a nurse is given a job because there is a high chance of them missing work. There are two perspectives linked to this: One is that, sometimes, these requirements limit the inclusion of nursing students with disabilities, and the other is that a lack of proper requirements can allow individuals with chronic illnesses to become nursing students, which can negatively affect patient care. This is in line with the results of Mchunu and Moodley (2019), who found out that most nursing education institutions in Kwazulu- Nata- South Africa, requested a declaration of health and disability before selecting students for nursing education programs. Similarly, the study conducted by Sin and Fong (2007) showed that the regulatory fitness requirements in the UK and USA were considered discriminatory as they hinder students with disabilities from entering the nursing profession.

Apart from the formal factors, such as policies, admission requirements, and regulations, informal factors, such as type of disability, also affect the admission process of nursing students with disabilities. It was found to be an important determinant in deciding whether to include a student with a disability or not. The findings indicated that the type of disability, its severity, and the functional limitation of the individual due to the disability may limit the inclusion of students with disabilities in nursing education programs. This may be related to the fact that students with a certain disability category may lack the skills needed to work as nurses, including physical abilities, sensory abilities, and cognitive and emotional abilities. Hence, the lack of

these skills impedes how this group of students will practice in clinical settings. For example, a few participants showcased reluctance about the inclusion of people with mental health conditions in nursing roles, primarily due to the belief that they are responsible for the lives of others. The participants believed that students with mental and cognitive disabilities do not possess the emotional and intellectual capacity to independently care for themselves, which suggests that individuals with disabilities, specifically mental disabilities, may not be capable of functioning as nurses due to concerns about potential impacts on patient safety. This finding agrees with the results of different studies (Emong & Eron 2016; Ryan 2011), which reported that not all students with disabilities can be integrated in nurse training because nursing is a practice-based profession. However, this finding disagrees with the results of Ryan (2011), which confirmed that nurses with psychiatric disabilities were accepted into the nursing profession and could work successfully. In regard to physical abilities, such as vision, hearing, and sensory abilities, the participants believed that students with physical disabilities can be included in nursing programs and the assignment of tasks can be done in a way that aligns with their skill sets. This result agrees with the findings of Moodley and Mchunu (2022), which showed that students with certain categories of disabilities, such as those with hearing, vision, and mobility disability, can be integrated into nursing training with proper appropriate support from nurse educators and provision of disability friendly reasonable accommodations. It can be observed that there are mixed opinions regarding the inclusion of students based on the nature of their disabilities. The mixed perceptions can lead to hesitation or reluctance in admitting students with specific disabilities. The diverse range of perspectives about the appropriateness of accommodating students with various disabilities contributes to the complexity of decision-making, exacerbating the difficulties encountered by prospective students who can even manage

with disabilities. The informal aspect of categorizing disabilities has the potential to establish subjective biases throughout the pre-admission process, which may result in limited chances for students with disabilities due to views of their skills.

These varying viewpoints often align with different models of disability and cultural beliefs. Participants who believe that nursing students with disabilities cannot perform certain tasks due to the nature of their disability and functional limitations may align with the medical model of disability. They may view disability as a limitation or impairment that hinders the individual's ability to function in certain roles. Yet, this perspective emphasizes individual impairments, diagnosis, and medical management and focuses on diagnosing disabilities, which can help identify individual needs and challenges and can be useful for developing personalized support plans and accommodations for nursing students with disabilities. Participants who advocate for giving nursing students with disabilities different roles may hold an inclusive perspective. They recognize the value of diversity and the importance of providing equal opportunities for all individuals, irrespective of their abilities. They may see the potential for individuals with disabilities to contribute in various capacities, fostering a supportive and inclusive learning environment. Therefore, it is essential to critically examine these varied opinions and consider the implications they may have on nursing education and practice. While concerns about patient safety are valid, it is essential to avoid generalizations that exclude individuals with disabilities from nursing based solely on their condition.

6.3.2 Facilitators to overcome the barriers related to prior admission to nursing programs

It was observed that barriers can hinder the inclusion of nursing students with disabilities prior their admission in the nursing education programs. However, based on the findings of the study, a few facilitators were identified that can enhance the prior admission process of nursing students with disabilities and overcome the barriers that occur or can potentially occur in this stage. From the findings, a few facilitators, such as establishing clear disability laws and policies, increasing disability-related awareness, establishing early detection of nursing students with disabilities, and providing educational training programs to the relevant stakeholders can facilitate the prior admission process that can enhance the inclusion process.

The study's interviews consistently underscored the vital role of clear policies in facilitating the admission process for nursing students with disabilities. These policies act as a guiding framework, delineating procedures for accommodating specific needs. The absence of such policies could lead to unequal treatment and non-compliance with legal requirements, emphasizing the significance of well-defined policies in ensuring fairness and equity in the admission process. Clear policies create an inclusive culture within nursing programs, benefiting students with disabilities by ensuring they can access necessary accommodations without facing discrimination. This aligns with prior research by Ashcroft and Lutfiyya (2013), Evans (2014), and Lucas et al. (2022), all emphasizing the pivotal role of clear policies in promoting inclusivity. In addition to clear policies, the findings highlight the need for the development of law enforcement guidelines, a crucial aspect of protecting students with disabilities from potential misunderstandings and mistreatment. These guidelines serve to guarantee fair and respectful treatment, addressing any attitudinal barriers that may exist within educational institutions, as also emphasized by Mack, Stephens, and Epstein (2021). The research also points

out the importance of aligning these clear disability policies with the cross model of cultural competence. Such alignment creates an environment that respects diversity, empowers advocacy, reduces stigmatization, and enhances the educational experience for all, including those with disabilities. However, successful implementation may require addressing challenges related to cultural sensitivity, resource allocation, and attitudinal barriers. From another perspective that is social constructivist perspective, clear disability policies contribute to creating a shared understanding within an organization or society regarding the rights, needs, and accommodations required for individuals with disabilities. This shared understanding challenges and dismantles negative stereotypes and biases, fostering an inclusive and non-discriminatory culture. It also guides individuals and organizations in approaching disability-related matters in a manner that aligns with principles of inclusivity and accessibility.

Another facilitator is increasing disability-related awareness that can also enhance the inclusion of nursing students. The findings indicated that awareness should be increased among students with and without disabilities, faculty members, and other stakeholders that can facilitate the inclusion of students with disabilities. For instance, participants outlined that early counselling for nursing students with disabilities is crucial for them to understand their strengths and weaknesses in nursing courses and professions. It helps students anticipate what to expect from nursing programs and whether nursing aligns with their career aspirations. This counselling equips them with essential skills, knowledge, and support for a successful transition into nursing practice. Additionally, early career counselling aids in career exploration, identifying potential obstacles, and developing strategies to overcome them, echoing Fontenot and McMurray's (2020) recommendation of starting career discussions in middle school. Furthermore, it's essential to raise awareness about support systems available to nursing students

with disabilities, boosting their confidence and problem-solving abilities. Levey (2014) suggests promoting support services in recruitment materials and orientation programs. Increasing the representation of nurses with disabilities is crucial for promoting inclusivity in the profession. Polikandrioti et al. (2020) recommend showcasing videos of nursing students with disabilities in various settings and inviting expert speakers to discuss the topic. Similarly, Marks and McCulloh (2016) suggest portraying a diverse range of nurse role models to inspire students, including those with disabilities, thereby diversifying the nursing workforce. These efforts align with various models discussed in the literature. For instance, according to social constructivism theory, nursing programs can emphasize knowledge construction through interactions and recognize the importance of diverse experiences and perceptions, which can facilitate the inclusion of nursing students with disabilities. Also, applying the Cross Model of cultural competence underscores the importance of disability awareness within the broader cultural context. Disability awareness, akin to cultural awareness, acknowledges the diversity of abilities and disabilities in society. It involves gaining knowledge about the experiences and needs of individuals with disabilities, enabling healthcare professionals and educators to provide appropriate support and accommodations. Ultimately, disability awareness contributes to creating a positive and inclusive environment for all, aligning with the principles of cultural competence.

Additionally, one of the barriers that were identified and discussed were related to not being aware about the disability of nursing students, which can be facilitated by implementing early case detection of students with disabilities. These were mainly related to screening for disability cases since the admission and registration phase and to have this clearly written and organized in a policy document. This is believed to be important to ensure reasonable

accommodations, allow nursing faculty members to plan for accommodations in clinical settings and to ensure that nursing schools comply with legal requirements. Moreover, by disclosing their disability early, nursing students can educate their classmates and faculty about their disability, promote disability awareness, challenge negative stereotypes, and get access to support services that may be available to students with disabilities, such as academic advising, counseling, and disability services. This result agrees with the findings of Ridley (2011) who suggested having early diagnosis for students with disability is needed to provide early individualized support and to encourage students to disclose their disability to safeguard people whom they care for. On the other side, it was believed that the decision to disclose one's disability is a personal one, and individuals should only disclose their disability if they feel comfortable and safe doing so and as a result, nursing schools should create a welcoming and supportive environment where students feel comfortable disclosing their disability and accessing the necessary resources to succeed in the program which can be achieved through voluntary disability disclosure. Moreover, by taking control of their own narrative, students with disability can assert their own identity, advocate for their needs, and also inspire others with disabilities to feel more confident and comfortable disclosing their own disability. This coincides with Moodley and Mchunu (2018) and Mchunu and Moodley (2019) who proposed including a standardized procedure for recruitment and selection of all learners including nursing students with disability which should encourage voluntary disclosure within an enabling and supportive environment.

These findings can be explained under the tenets of the medical model of disability which views disability as an individual's impairment or medical condition that needs to be diagnosed, treated, and managed by medical professionals. While the medical model primarily

focuses on the individual and their impairments, it can play a role in early detection of cases of disabilities within education through emphasizing the importance of early screening and assessment of individuals for potential disabilities. In an educational setting similar to that of nursing education programs, this can involve conducting developmental screenings, cognitive assessments, and medical evaluations to identify students who may have disabilities. Moreover, the medical model encourages medical professionals to refer individuals with suspected disabilities to appropriate specialists for further evaluation and diagnosis. In nursing education, this can involve referring students to educational psychologists, speech therapists, occupational therapists, or other specialists to assess their specific needs. Additionally, the medical model places importance on accurately diagnosing disabilities to provide appropriate interventions. In the context of nursing education, a clear diagnosis of a disability can help educators and support teams tailor individualized education plans or accommodation strategies to meet the student's needs effectively. Finally, early detection through the medical model can lead to early intervention services and monitoring progress which can be critical in mitigating the impact of disabilities on student's learning and development. Early intervention programs and progress tracking can help provide necessary support to improve outcomes. While the medical model contributes to early detection and intervention, it is essential to complement it with other models that emphasizes the importance of addressing environmental and societal barriers that can hinder the participation of students with disabilities in nursing education.

6.4 Support During the Program

When nursing students with disabilities begin their educational journey, it becomes crucial to emphasize the significant role of support they get or should get during the program.

This phase represents a major aspect in their academic and professional growth. This section examines the complexities of the support networks and barriers experienced by these students as they advance in their nursing education. The admission process serves as the starting point of entrance, while the program itself reveals the significance of adequate support measures or the absence thereof. The interaction between communication, resources, and the attitudes of instructors and peers has a crucial role in determining the experiences and results of students with disabilities. The objective of this section is to thoroughly analyze these components, providing a full understanding of the diverse range of assistance available throughout the program. This analysis will eventually contribute to the current academic discussion around inclusive nursing education.

6.4.1 Barriers Experienced During the Program

Based on the findings of interviews, it was observed that nursing students face or can face a significant number of challenges after they are admitted to the nursing programs. Those challenges, include attitude of individuals towards the people with disability, knowledge of nursing faculty, communication among stakeholders, and resources provided to the students with disabilities.

The findings indicated that the attitude of families, peers, and faculty members pose a significant barrier for nursing students with disabilities during their time throughout the program. For instance, a few participants pointed out that parents' negative attitude towards the ability of their children to become nurses as well as their over-protection and fear of their failure and rejection by the society will negatively impact their children's motivation to pursue a career in nursing. These results were in line with findings of Levey (2014), who argued that attitudinal

impediments might have a detrimental influence on confidence and self-esteem, reinforced this idea. This result also aligns with Shakespeare (2006) who believed that negative attitudes towards individuals with disabilities are strengthened by societal norms and expectations, leading to further marginalization and exclusion. Moreover, the perspectives held by nurse educators are of utmost importance in influencing the educational encounters of students with disabilities. The research revealed that a subset of educators may have a deficiency in their knowledge and comprehension of matters pertaining to disabilities. The lack of understanding in this area may lead to the development of unfavorable attitudes and the implementation of discriminatory behaviors. Furthermore, apprehensions about the responsibility of students with disabilities in fulfilling clinical obligations might contribute to the development of more unfavorable views. The inadequate awareness and comprehension of disability among nursing faculty members, as highlighted by Levey (2004), is indicative of the presence of stereotypes and unfavorable attitudes. The perspectives held by nurse educators are of paramount importance in influencing the educational encounters of students with disabilities. The research revealed that a subset of educators may have a deficiency in their knowledge and comprehension of matters pertaining to disabilities. The absence of this information might lead to the development of unfavorable attitudes and the implementation of discriminatory behaviors. Moreover, apprehensions about the responsibility of students with disabilities in fulfilling clinical obligations might contribute to the development of more unfavorable views. The inadequate awareness and comprehension mentioned by the user is supported by Levey's (2004) findings, which highlight that nursing faculty members may possess restricted information about disability, leading to the formation of stereotypes and the development of unfavorable attitudes.

The findings also indicated that knowledge of nursing educators is a significant barrier that impacts the experience of nursing students with disabilities. Two findings evolved in these cases, one was that if the nursing educators had knowledge about disabilities, then there were more inclined towards inclusion of students with disabilities and other finding was if the nursing educators are not knowledgeable then they outlined more challenges to include students with disabilities. However, in some cases, educators with knowledge also were apprehensive about inclusion of nursing students with disabilities. For instance, some participants described disability as a kind of limitation, a lack of set of skills. People with disabilities were viewed as a category of people who are “not normal” and who have different limitations and we as “normal” people have to treat them as we treat normal people and that we have to provide them with the needed support. This result is reinforced by Moodley and Mchunu (2022) and Calloway and Copeland (2021), who reported that the understanding of interviewees regarding disability was based on inabilities or functional limitations. Healthcare professionals, particularly nursing educators, frequently adhere to the medical model of disability, which theorizes that impairment is a defect or an abnormality that requires mending and suppression, according to Marks (2000). Acceptance of this paradigm subsequently impacts the definitions of disability used in official papers, which in turn affects the policies of academic institutions. On the other side, some participants suggested that in some cases, nursing faculty appreciated the diversity model of disability which recognizes that disability is a natural part of human diversity that must be respected and supported in all its forms. The participant detested the term disability and considered disability as who you are as human variation and that people with disability are like everyone and that the incapability of society maximizes their challenges. This view was supported by Ashcroft et al. (2008) who viewed disability under the umbrella of diversity rather

than being seen as an illness. With the analysis of qualitative data, it was found that the limited knowledge of individuals is due to lack of professional development and training that must be given to them during their course of teaching or should be a part of their curriculum. Specifically, the lack of awareness about the presence of students with disabilities, insufficient knowledge about effective teaching methods for these students, and a lack of information about available resources on campus are obstacles to the inclusion of students with disabilities in nursing education. This is confirmed by Edwards and Hekel (2021) who reported that nursing faculty may lack the knowledge and skills to provide accommodations and support for students with disabilities and may be not sure about their roles and responsibilities in addressing disability-related issues. Similar results were showed by Majoko (2018) who explained that the lack of faculty education and training in disability awareness, legal obligations, and effective pedagogy can lead to exclusionary practices and negative outcomes for students with disabilities.

Another barrier that could hinder the learning process of nursing students with disabilities during the program is related to communication among stakeholders. Also, the barrier can limit the inclusion of nursing students with disabilities, due to various reasons. For instance, it was found that without effective communication between these stakeholders, it can be challenging to ensure that nursing students with disabilities receive the accommodations they need to succeed in their education and clinical experiences. Also, if they are not aware of the accommodations that are required for students with disabilities, they may unintentionally create barriers to success. Also, the faculty members do not communicate with students with disabilities effectively, which limits their understanding of the needs the students might have. Howlin, Halligan and O'Toole (2014) outlined a similar result, by indicating that poor communication between nursing faculty, clinical instructors, and disability services offices was

often due to inadequate accommodations and support. The findings indicated that lack of communication with government authorities, such as Ministry of Education, communication with practicing mental health professionals, and other such top-management stakeholders can hinder the inclusion of students with disabilities. Similar findings have been outlined by Ashcroft et al. (2008), who noted that collaboration with management is crucial to meet legal and ethical requirements in reducing obstacles for students with disability as well as to assure professional obligations in preserving academic integrity. Neal-Boylan and Smith (2016) also highlighted the importance of collaboration with disability counselors who can provide education and raise the needed awareness about issues related to discrimination as well as facilitate communication between students with disabilities and faculty staff to endorse reasonable accommodations and to provide resources to staff and students.

Additionally, from the findings, it was discovered that alongside communication, there are other resources that are not provided to the nursing students during the program, which acts as a significant barrier. Numerous study participants shared this concern, concentrating in particular on the lack of classroom and clinical accommodations that prevent students with disabilities from gaining access to clinical settings and advancing in nursing programs. In addition, the complexity of certain technological equipment and the lack of staff and student knowledge regarding its operation make clinical settings particularly difficult for these students. The finding was similar to Nash et al. (2022), whereby the authors also emphasized that many healthcare organizations lack the essential facilities to accommodate students with disabilities, including adjustable exam tables, accessible basins, and wheelchair-accessible restrooms. During clinical rotations, this lack of accommodations presents significant obstacles for students with mobility-related disabilities. In addition, students with sensory disabilities, such as hearing

or vision disabilities, encounter unique challenges in these complex clinical environments. The absence of accommodations tailored to their requirements exacerbates these issues. A further significant issue raised by the study participants is the dearth of personnel to assist nursing students with disabilities. Some accommodations, such as assistive technology, often lack specialized support. This lack of specialized personnel and resources is consistent with the findings of Zhang et al. (2018), who discovered that higher education institutions frequently struggle to provide adequate support for students with disabilities. Philion, St-Pierre, and Bourassa (2021) also corroborate this, emphasizing that nursing students with disabilities frequently experience isolation and a lack of access to vital resources due to the lack of specialized faculty and staff support. The Cross Model of Cultural Competence is proposed as a valuable framework for addressing these issues. This model can assist healthcare providers in better comprehending the unique requirements of nursing students with disabilities and catering to them. Recognizing these students' unique challenges, such as the lack of accessible clinical contexts, requires cultural awareness. Understanding the laws and regulations pertaining to disability accommodations in education constitutes cultural knowledge. Lastly, cultural competence emphasizes adapting to the unique requirements of students with disabilities, fostering interaction, minimizing prejudice, and seeking for equitable access and culturally sensitive care and education.

6.4.2 Facilitators to Support Students with Disabilities During the Program

During the nursing program, certain facilitators can provide support to students with disabilities. The findings indicated that facilitators, such as creative access, attitudes, and communication with students can provide support to students with disabilities.

In regard to the facilitator's creative access, the findings indicated that students should have creative access that can help them achieve their academic goals. The participants suggested various forms of accommodations that can facilitate the access for students with disabilities. For instance, it was found that nursing students with disabilities should have access to physical and structural accommodation, including more accessible and user-friendly campus such as introducing physical amendments to the parking, building, and bathrooms. This finding is in line with Neal-Boylan and Miller (2020) who recommended the provision of institutional accommodations such as having accessible classrooms, bathrooms, and ramps to respond to the diverse needs of students with disability. Participants also suggested provision of classroom accommodations for better access, which included tailoring the teaching techniques and using accessible learning materials well as offering flexible class schedules that accommodate the needs of students with disability. The participants also mentioned that students may require longer breaks between classes, or the ability to complete coursework at their own pace. Providing such accommodations can have benefits for students with disabilities, but other students can raise concerns about faculty members being unfair towards them. This discrepancy should be managed by faculty by providing them with information necessary for them to understand why they need this support. The findings of Gonzalez and Hsiao (2020) also indicated that accommodations should vary with the nature of disability. For example, some students might need physical accommodations as a support and some might need classroom support. Providing individual students with individual provision to necessary accommodations can also help them to overcome the discrepancy and it was can also create an environment of fairness. The study's participants also emphasized on enhancing accommodations related clinical placements, which suggested that equipment should be accessible and that assistive

technology tools should be used to help students with disabilities access course materials, participate in discussions, and complete assignments. This result is confirmed by different studies (Marks 2007; Ailey and Marks 2020; Marks and McCulloh 2016) which explained that technology is changing how nurses with and without disabilities conduct their job. However, interviewees mentioned that although these technologies can help in facilitating things, they are not sufficient alone to ensure the successful inclusion of nursing students with disability. This is in line with Breitzkreuz et al. (2021) who reported that faculty and nursing professionals found the use of virtual reality games helpful in enhancing learning and retention of psychomotor skills in nursing; however, the study participants raised concerns related to technical issues that affected learning in the virtual environment.

Many participants also advised developing nonclinical nursing care academic tracks during prelicensure programs to help nursing students with disabilities learn skills and information in non-physical, non-patient care areas. This may be because nursing students with disabilities may educate and guide other students without providing direct patient care. They can also work in nursing informatics to manage and analyze healthcare, or work in remote monitoring in general health units or in discharge planners and in call centers. These jobs involve minimal physical exercise or patient care and provide flexible scheduling. Thornton and Persaud (2018) stressed the need to expand students' experience beyond bedside care to other nursing care settings where they would do well, as acute bedside clinical experiences create a barrier for nursing students with disabilities and those who may not perform well in acute care. Neal-Boylan and Smith (2016) and Miller (2020) agreed that nurses can work in non-physically demanding settings. This finding of enhancing creative access by providing proper accommodation to nursing students with disabilities enhances their academic performance and

educational experience is a testament to the significance of the Disability as Human Variation model. By viewing disability as a natural aspect of human diversity and upholding the right to accommodation, educational institutions create inclusive environments that recognize and value the contributions of all students. Adopting this model challenges stereotypes, removes barriers to learning, and fosters self-determination and inclusive excellence in nursing education. Embracing this model not only benefits nursing students with disabilities but also promotes a more equitable and compassionate healthcare system. Also, providing nursing students with chances to work in different settings also aligns with the cross model of cultural competence. By offering diverse clinical experiences, students develop cultural awareness, adaptability, and culturally competent care skills. This approach promotes inclusivity, addresses health disparities, and prepares future nurses to deliver patient-centered care to diverse populations. However, addressing resource limitations, avoiding oversimplifying the complex and dynamic nature of cultural identities, and ensuring a balanced approach to education are essential to maximizing the benefits of this model.

During the program, nursing students with disabilities can also be significantly impacted by the attitudes of their peers and faculty members. The findings showcased that when students and faculties have a positive attitude and provide support to nursing students with disabilities then they can feel more included in the program. The interviewees suggested that creating a friendly and positive relationships with nursing students with disability can make the learning process smoother and easier for them and can be considered as useful in rapport building. Interviewees explained that nursing students with disability have constant fear of being rejected, stigmatized, or excluded. For that, interviewees highlighted that the people dealing with students with disability should be encouraging, accepting and supporting. Researchers, such as Goodall

et al. (2022) and Moríña and Orozco (2020) have also indicated a similar perspective on having a positive attitude towards students with disabilities, as they can see it as a support source, which can increase their confidence during their academic and professional time period. In line with the Jean Watson's Theory of Human Caring, which suggests that nursing education is created by a supportive and caring learning environment for students with disabilities. Watson's idea emphasizes holistic treatment that considers physical, emotional, and spiritual factors. Following Watson's theory, positive educators acknowledge and handle students with disabilities' specific needs and problems. This optimistic outlook also fosters caring awareness, where teachers care about their students and meet their needs. Positive attitudes foster strong interpersonal interactions in the classroom, producing a supportive and inclusive atmosphere where all students, including those with disabilities, feel valued and appreciated. Positive teachers are more likely to use transpersonal teaching to accommodate different learning styles. Overall, a positive attitude can facilitate the inclusion of nursing students with disabilities.

Another facilitator that can support the inclusion of students with disabilities during the program is effective communication. Participants indicated communication is a crucial component in supporting nursing students with disabilities, as it enables them to express their needs and concerns, and to receive the necessary accommodations and support. Effective communication entails using clear, open and direct communication which encourages nursing students with disabilities to communicate their needs and concerns without fear of stigma or discrimination. The findings were similar to those of Ashcroft and Lutfiyya (2013) and Neal-Boylan and Smith (2016), who also emphasized on communication being a key factor as it allows students with disabilities to communicate their needs and concerns without fear of stigma or discrimination. The researchers have explained that the collaboration with disability

counsellors can help in addressing discrimination issues, provide accommodations, resources and support to students and faculty members in nursing education programs. Moreover, one of the interviewees suggested collaborating with the government to provide financial incentives to nursing students with disability in efforts to encourage them to enroll in nursing education programs and to offset the additional costs that may be associated with accommodations and accessibility. The idea of providing financial incentives to improve recruitment of healthcare professionals was suggested by Gerolamo et al. (2014) who explained that the nurse faculty shortage hinders the nursing workforce's ability to react to the changing requirements of the health-care system. The medical model of disability may play a significant role in nursing education and the support of students with disabilities, particularly in terms of designing communication and assistance approaches. Because this approach prioritizes formally diagnosing and documenting disabilities, it calls for transparent dialogue about students' individual needs and the accommodations that may be provided. Individualized support plans, including modifications and assistance specifically designed for the student's health condition, are often the result. As a result, communication related to disabilities and the difficulties they present may often take on a more medical tone, with the use of phrases that is more familiar to medical practitioners and students of such fields as nursing. Nursing students are required to engage with patients and coworkers in clinical settings, and the medical model emphasizes the need of maintaining a professional demeanor in all such interactions. A more social and inclusive model of disability is gradually being adopted in healthcare and education, and this must be recognized after medical model of disability. This alternate model sees disability as a product of institutionalized exclusion and advocates for measures that broaden participation. Communication in this setting is largely focused on accommodating the individual needs and

preferences of all students, regardless of their physical or mental capacities, in order to foster an inclusive learning environment. Thus, successful nursing education communication should include features of both models while placing a premium on personalized, student-centered methods.

6.5 Post-Support to be Provided

Upon the completion of their nursing school, graduates who have disabilities face a unique and crucial stage that need careful scrutiny. This section focuses on the time after graduation, which serves as a transitional phase for nursing graduates with disabilities as they begin their professional careers. Although the presence of the academic institution may become less prominent, the lasting impact of faculty expertise, social views, and the current job market remains significant. The presence of accessible resources and the creation of inclusive work settings play significant roles in influencing the trajectory and experiences of these graduates when they enter the nursing profession. The aim of this part is to conduct a thorough examination of the many complex elements that constitute post-graduation support systems. By implementing these methods, the aim is to emphasize the essential role they play in promoting a smooth and fair transition from the realm of school to the nursing profession. This aligns with the broader objective of promoting inclusion within the nursing field.

6.5.1 Barriers that can Hinder Provision of Support after the Program

Most of the barriers discussed above that occur prior and during the program can hinder the provision of support after the program in a similar way as the other two stages. For example, barriers, such as nature of disability, negative attitude of people towards people of disability, poor communication, and lack of resources can hinder nursing students with disabilities practice

after they have finished the program. However, one of the barriers that can significantly occur at this stage is lack of disability outreach activities. Participants indicated that lack of disability outreach activities including the lack of disability visibility and disability promotion will impede the inclusion of nursing students with disabilities in the nursing field. Many participants noted that the absence of disability awareness perpetuates prejudices and misunderstandings about the capacities of nursing students with disabilities to graduate as nurses, therefore the problem is never addressed. Some participants said that disability diversity in nursing education is lacking and that the community is unaware of their abilities because success stories of nursing students and nurses with disabilities are not shared or promoted. This may be because people regard persons with disabilities as deficits who require aid, support, and therapy. O'Connor et al. (2019) and Polikandrioti et al. (2020) indicated that the lack of awareness of marginalization, discrimination, and inequities in nursing education hinders understanding of diversity, equity, and inclusive learning environments. Social constructivism theory implies that social and cultural variables impact our worldview rather than absolute reality. Social constructivism holds that disability is a social construct formed by society attitudes, expectations, and behaviors. Disability is caused by society's definition of “normal” and “abnormal.” The social and cultural surroundings in which disabled persons live affect their experiences as much as their physical condition. According to this idea, it is crucial to understand the social and cultural variables that form the lives of individuals with disabilities and acknowledge that these aspects affect their interactions with society. Thus, social constructivism emphasizes the need for a more inclusive and accessible society that understands the capacities of persons with disabilities and cherishes human uniqueness.

6.5.2 Facilitators to Support to Nursing Students with Disabilities After the Program

It was indicated in the above section that some of the barriers will hinder the provision of support after the program. Similarly, in terms of facilitators, many of them, such as providing accommodations, professional development, positive attitude, and communication can facilitate the students with disabilities after the program. However, by collaborating with future employers, nursing students with disabilities can ensure that they have the necessary accommodations in place to perform their job duties. Moreover, it can help nursing students with disabilities to find job roles that align with their skills, abilities, and limitations which is critical in supporting their success in the workforce. In addition, by working with future employers, nursing students with disabilities can gain insights into the career paths available to them in the nursing field. This knowledge can help students plan their career paths and identify opportunities for growth and advancement. This aligns with the findings of Langørgen, Kermit, and Magnus (2020) and Jackson and Henderson (2017) that highlighted the importance of strong collaboration among the student, the office of disability services, the faculty, the medical professionals, and clinical instructors for a smooth transition of nursing students with disabilities to the workplace. Therefore, by facilitating communication, job matching, training, workplace support, and career advancement, collaboration can ensure that nursing students with disabilities have the necessary resources to succeed in the nursing field.

In the context of collaborating with potential employers to employ nursing graduates with disabilities, social constructivism can explain the importance in the following ways. Social Constructivism encourages collaboration and communication between different stakeholders, including potential employers, to foster a shared understanding of inclusion. By engaging in discussions about the value of diverse abilities in the workforce, employers can develop a more

inclusive mindset. Moreover, collaborating with potential employers allows for the opportunity to challenge stereotypes and biases about individuals with disabilities. Through open dialogue and engagement, employers can gain a more accurate and positive perspective on the capabilities and contributions of people with disabilities. The importance of collaborating with future employers to employ nursing students with disabilities can also be explained under the tents of the medical model of disability. While the medical model primarily focuses on the individual and their medical needs, it can still provide insights into the importance of collaborating with future employers which allows for a discussion of any medical accommodations or support required for employees with disabilities to perform their duties effectively. The medical model highlights the significance of prioritizing an individual's health and safety. By collaborating with employers, medical professionals can provide insights into any health-related considerations or precautions needed in the workplace to ensure the well-being of employees with disabilities and the people they are caring for.

Moreover, supporting them with disability outreach activities can help them manage their work irrespective of the disability they are facing. Disability outreach programs can play a crucial role in promoting nursing students with disabilities by providing resources, advocating for disability rights, increasing representation, providing education and training, and offering financial assistance. Some participants highlighted the importance of increasing representation of nurses with disabilities in the profession. This may involve raising awareness of the contributions that nurses with disabilities can make to healthcare and promoting disability inclusion in the profession. This was confirmed by Polikandrioti et al. (2020) who recommended the display of videos about nursing students with disability in different community settings and to invite expert speakers to talk about the topic of disability as well as listening to them talking

about themselves can help in promoting disability inclusion in nursing education programs. This is also in agreement with Marks and McCulloh (2016) who suggested adopting innovative approaches and best practices to eliminate barriers for students and nurses with disabilities such as portraying a range of nurse role models to potential students and undergraduate students, including nurses with disabilities, students with and without disabilities can see a variety of unique individuals contributing to the nursing profession which in demonstrating the wide variety of abilities in nursing practice can increase diverse talents and skills within the nursing workforce.

These results can be understood under the tenets of Social Constructivism Theory that suggests that knowledge and meaning are socially constructed through interactions between individuals and their environment. In the context of disability outreach activities, social constructivism can inform how these activities are designed and implemented through recognizing that people have different experiences and perceptions based on their social and cultural backgrounds and highlighting the importance of interactions between people and their environment in constructing knowledge and meaning. Disability outreach activities should provide opportunities for interactions between people with disabilities and healthcare professionals, educators, and community members to promote understanding and correct misconceptions about the abilities and potentials of nursing students with disability.

The central point of this discussion is in-line with Bronfenbrenner's work, that focused on how factors in the ecosystem of nursing students with disabilities affect their development in nursing education programs. The study participants believed that the ontosystem of nursing students with disabilities including their intrapersonal within themselves such as their fears, health conditions, willingness to disclose their disability can impede their success to graduate

and work as nurses. The participants also viewed different barriers in the microsystem of nursing students with disabilities which may affect their inclusion in nursing education programs which include how people working with them including family, faculty and friends understand the concept of disability and their negative attitudes towards this group student. Thus, poor interactions in the microsystem was seen to impede the creation of supportive, and welcoming learning environment for nursing students with disabilities. Furthermore, factors within the mesosystem of nursing students with disabilities which includes the interrelations of two or more settings in which a nursing student with a disability develops, affect their inclusion. It was viewed that the lack of communication and collaboration between nursing education faculty and accessibility professionals, training of nursing educators, and mental health professionals hinder the way nursing students are supported and accommodated. The participants also viewed that the factors in the exosystem of students impact the way they are included. This included the lack of clear of disability-related policies and institutional legislation and policies, inconsistent and discriminatory admission requirements to nursing education programs as well as the lack of inclusive practices of a given institution/ organization affect the experience of nursing students with disability negatively. In addition, the cultural beliefs about the abilities of nursing students with disabilities to graduate and work as nurses were considered to affect their successful inclusion.

6.6 Perceptions of Nursing Students and Educators

Perceptions of different groups vary based on their unique characteristics and nature. For instance, various demographic groups held distinct perceptions regarding the barriers to inclusion, the facilitators of inclusion, and the inclusion of nursing students. Regarding the two

research questions related to perceptions of nursing educators and students, one focused on exploring the inclusion of nursing education students with disabilities in nursing education programs in the UAE, and the other focused on analyzing any demographic differences in the perceptions of nursing education faculty members and nursing education students regarding the inclusion of nursing education students with disabilities. To answer these two research questions, a quantitative analysis was conducted. Quantitative analysis was conducted on data collected from students and educators differently, which allowed them to understand and discuss their results differently, considering the difference in their characteristics. Five main constructs were evaluated from the perspective of nursing students and educators, which were knowledge of disability-related laws and institutions policies, accommodations, attitudes, barriers, and inclusion of students with disabilities.

Analysis of perceptions of nursing students revealed that students had positive perceptions about their knowledge of disability, but a significant portion of students were also unaware of support policies that can help in the admission of nursing students with disabilities. It can be observed that the responses vary across different questions, underscoring the complexity of the issue, which suggests that individuals may have uneven or fragmented knowledge about disability-related laws and policies. However, there is a need for improvement in educating individuals about disability-related laws and policies, particularly within the context of nursing education (Ashcroft et al. 2008; Forlin, Sharma, & Loreman 2014; Chao, Forlin, & Ho 2016).

When students were asked about their perceptions of accommodations and their related practices, such as the use of effective technology, extending deadlines, skill assessment, accessible infrastructure, and others, the results showcased that the respondents agreed to

incorporate these practices, which can provide support to students with disabilities, while some showcased disagreement or were actually not sure. The divergent viewpoints about the efficacy of accommodations and inclusion strategies for nursing students with disabilities arise from a confluence of individual factors, institutional capabilities, and the intricate nature of addressing a wide range of requirements as also explained by Sowers and Smith (2004) and Betz, Smith, and Bui (2012). For example, some students would have perceived that one accommodation practice would work for a student with a particular disability, which might not work for other students that have another disability. It's possible that some participants won't have a clear understanding of these accommodations and how they are beneficial for students with disabilities.

When analyzing perceptions of students regarding attitudes towards students with disabilities, a high number of respondents perceived that positive attitudes should be showcased to students with disabilities as it will help them grow in their academic and professional environment. Shpigelman, Zlotnick, and Brand (2016) also stated that when students with disabilities receive positive attitudes from their peers and educators, they can benefit in terms of increased self-esteem, improved academic performance, increased participation, and enhanced confidence to grow in the profession. A very few participants still indicated disagreement or were unsure about showcasing positive attitudes towards students with disabilities, which might indicate that they are unaware of how these attitudes can facilitate the students with disabilities. Hence, it is important for universities to increase awareness among students regarding such facilitators, which can help nursing students to be empathetic to their peers who have disabilities and also in their professional practice while dealing with patients.

Students perceived accommodations and attitudes' facilitators with a higher level of agreement compared to the knowledge of policies as a facilitator, which indicates that awareness of these policies must be increased among students. In terms of barriers (lack of clear policies, lack of professional development, social stigma against people with disabilities, lack of communication and collaboration), students showcased a higher level of agreement. This indicates that these barriers highly hinder the inclusion of students with disabilities compared to other barriers (lack of resources, negative attitudes of educators, not disclosing the disability, and admission requirements), which received a relatively smaller level of agreement. This indicates that these barriers are relatively less hindering to the inclusion of students with disabilities. The complexity of perspectives around the barriers to the inclusion of students with disabilities arises from a dynamic interaction between individual experiences, levels of knowledge, individual beliefs, and social factors as outlined by Moodley and Mchunu (2022), Calloway and Copeland (2021), Ashcroft and Lutfiyya (2013), and Epstein et al. (2021). A comprehensive comprehension of these elements may enable educational institutions and educators to better identify, address, and alleviate these barriers.

Along with the perceptions of students regarding the constructs, differences among different demographic groups of students were also analyzed and discussed. Group differences statistics indicated that there were no significant differences in students' perceptions regarding knowledge of disability-related laws and institutions policies, accommodations, attitudes, barriers, and inclusion of students with disabilities based on their age groups. This indicated that students' perceptions were no different, even if they belonged to different age groups. There is a possibility that because the students receive uniform education about disabilities and there is a prevalence of stigma against people with disabilities, no significant differences were observed

between the age groups. This result is aligned with the findings of Papadakaki et al. (2022) which showed that age was not linked to the attitudes of faculty members towards people with disability. However, Perez- Jorge et al. (2021) indicated that younger instructors placed a higher priority on learning how to support people with disability than older instructors. Hence, the impact of age on the perception towards the knowledge of disability laws and institutions policies related to inclusion of nursing students with disability needs further research.

A similar finding was also observed for the demographic Emirates, which indicated that there were no significant differences in students' perceptions regarding knowledge of disability-related laws and institutions policies, accommodations, attitudes, barriers, and inclusion of students with disabilities based on the Emirates they belonged to. This represented that they did not perceive these variables differently even though they belonged to different Emirates. An explanation for that may be related to the fact that the UAE has in recent years made intensive efforts to address disability issues at both national and local levels through its laws, regulations, and policies to ensure the rights of people with disability in employment and education. As a result, supporting people with disability is well addressed in the UAE at both national and local levels through its laws, regulations, and policies. Henceforth nursing faculty member and student participants living in different emirates must have developed common perceptions towards the inclusion of students with disability in nursing education programs.

Also, no significant differences were observed among students who knew someone with a disability and who did not know someone with a disability in regard to the five constructs, which indicated that irrespective of the connections they have with people with disabilities, they do not perceive these variables any differently. For instance, whether or not students have personal connections with people with disabilities, their awareness of legal aspects,

understanding of accommodations, showcasing attitudes, perceiving barriers, and level of support towards inclusion are similar. The findings are different from Leyser and Greenberger (2008), who indicated that the intensity of personal contact with people with disability had a significant influence on both the readiness to give accommodations and the actual provision. Similarly, Rosenbaum, Armstrong, and King (1986) reported that the attitudes of students towards people with disability are determined by knowing a peer with a disability and that extended contact is associated with more positive attitudes. Similar findings were obtained by Sahin and Akyol (2010) who reported that nursing students who prior knowledge of someone with a disability had believed that people with disability were valuable in social life and never approach them with feelings of pity and rejection.

The present study also stated that there were no significant differences among the perceptions of students who took a course related to disability and who did not relate to the five constructs. This indicated that the professional courses would be commonly taught, indicating consistency. However, having to know someone with a disability or taking a course and interacting with someone with a disability is quite different. For example, a person may know someone who has a disability, like a peer, but if that person has interacted with someone with a disability, they are likely to have more information about their challenges. Similar to this, this study also indicated that students perceived disability related policies and inclusion of students with disabilities differently based on their interaction with people with disability. This is potentially because students who engage in encounters with those with disabilities may develop a more inclusive and empathic perspective, resulting in more favorable attitudes toward disability-related legislation and initiatives toward inclusion. On the other hand, persons who have limited or unfavorable encounters may hold fewer positive impressions as a result of their

limited knowledge or exposure to the difficulties encountered by individuals with disabilities. This is also highlighted by Pérez-Jorge et al. (2021) who explained that despite the contact with classmates with disabilities, this interaction does not necessarily help in being aware of the right strategies and to have the needed skills to support students with disability. Therefore, students must be informed about key elements of disability and about ways to enhance relationships and interactions since unfavorable treatment of students with disability may have an impact on their personal, academic, and social development. Additional variables, such as individual beliefs and past experiences, may also play a role in shaping these variations in perceptions. However, the present study also found that irrespective of taking a course about disability, the difference in perceptions regarding the variables, such as accommodations, attitudes, and barriers, was not significant. This indicated that the students who took a course about disability and those who did not similarly perceived the two facilitators and barriers as these constructs are more related to the information provided by the institutions and existing social norms. The result is also validated by the findings of Polikandrioti et al. (2020) which showed that there was no significant difference between the attitudes of students who had attended a course about nursing rehabilitation and those who did not take a course. Polikandrioti et al. (2020) argued that although it is essential to incorporate a lesson about disability in nursing curricula yet combining it with more chances for interaction with a disability, providing videos about people with disability, inviting speakers to talk about disability, and listening to people with disability would promote behavior change and encourage more positive behaviors. However, the findings of this study are different from O'Connor et al. (2019) which emphasized the importance of the course content to increase awareness, understand the consequences of prejudice, and to have an

improved learning about evidence-based strategies on how to increase diversity, equity, and inclusion in nursing education programs.

In line with the perceptions of nursing educators, the analysis revealed that educators were aware of disability and its related requirements and rights, but they showcased a lack of awareness regarding the support policies for students with disabilities. This statistic can be considered as a concern for the universities because if the educators are unaware of policies related to disabilities, then it can significantly affect the students with disabilities. The absence of adequate assistance may have a negative impact on the overall well-being and psychological state of students with disabilities. Individuals may experience feelings of exclusion or lack of support, which may result in heightened levels of stress and reduced academic achievement. This finding aligns with the conclusions drawn by Moodley and Mchunu (2022), who elucidated that a discrepancy exists between policies advocating for equal education and the practical implementation of such policies. This implementation gap poses challenges in providing adequate support for nursing students with disabilities. Similar research outcomes have been reiterated in various studies (Ashcroft & Lutfiyya 2013; Epstein et al. 2021), underscoring the existence of unclear and inaccessible policies, along with inconsistent and poorly enforced admission and retention guidelines for nursing students with disabilities.

In terms of providing the necessary accommodations to students with disabilities, nursing educators were found to be in a high level of agreement for implementing the accommodations, such as directly asking students for support preferences, modifying clinical practice and diversifying teaching strategies, and focusing on necessary skills, and accessible infrastructure compared to accommodations like the use of assistive technology, alternative devices, and extension of assignment deadlines. This was confirmed by L'Ecuyer (2019) who

found that nursing faculty and preceptors had some concerns around the ability of these students to meet program requirements and clinical competencies when accommodations are provided. This is also in line with a study conducted Luckowski (2016) examined the attitudes of nursing faculty towards students with disabilities in a specific nursing program. The study found that faculty members had limited knowledge and understanding of disability issues and lacked confidence in their ability to accommodate these students. However, it can also be perceived that although the extension of deadlines might provide benefits, it is important to consider the potential implications for upholding academic rigor. It is essential for faculty members to achieve an equilibrium between addressing the needs of students and upholding the attainment of fundamental educational goals, and this will also allow them to be fair to all students. Nevertheless, the effective execution of these tactics requires meticulous preparation, enough resources, and continuous assessment to guarantee their true efficacy in enhancing the educational experience of students with disabilities, all while upholding the norms of academia. It is important to additionally take into account any obstacles and limitations that may arise throughout the implementation process within a practical educational environment.

Nursing educators' perceptions regarding having a positive attitude indicated a high level of agreement, which showcases that they support the fact that a positive attitude can help students with disabilities to overcome challenges in their academic and professional environment. Educators have the highest perception regarding peer attitude and interaction, which can facilitate the inclusion of students with disabilities. This result agrees with the findings of Moríña and Orozco (2020) who showed that nursing faculty members showed positive attitudes towards teaching nursing students with disability. Also, educators have the ability to foster a more inclusive and supportive environment for all students by recognizing and

mitigating negative peer attitudes while actively encouraging good relationships. The aforementioned view has significant value in the continuous endeavor to guarantee equitable participation of all students, irrespective of their ability, in the educational process, so enabling them to get maximum benefits from a learning environment that embraces diversity and inclusivity.

Educators were found to showcase agreement regarding the barriers that hinder the inclusion of students with disabilities. These barriers involve several issues such as social stigma, admission restrictions, unfavorable attitudes, policy support, resource availability, professional growth, and non-disclosure of disability. This result agrees also with the studies conducted by Shpigelman et al. (2021), Luckowski (2016), and Morris and Turnbull (2006) which showed that fear of ridicule and social stigma is a barrier for the inclusion of nursing students with disability. This result validates the findings of different studies (Sowers & Smith 2004; O'Connor et al. 2019; Gaad & Almotairi 2013) which showed nursing educator participants believed that they would benefit from training about disability issues and how to accommodate students with disability in clinical settings and that training related to diversity, equity and inclusion issues in nursing education will increase their awareness and self-efficacy on how to make the classroom more inclusive. Furthermore, the presence of restricted cooperation and collaboration among educators is an additional factor that contributes to barriers in the integration of nursing students with impairments. The aforementioned common misconceptions among educators underscore the need of acknowledging and surmounting these obstacles in order to cultivate a more inclusive environment within the nursing education programs.

Nursing educators were also found to have a high level of agreement towards inclusion of students with disabilities, which also represent that they support their inclusion in terms of providing them with opportunities and resources that can facilitate their growth in academic and professional environment. Nursing educators indeed have a crucial role to play in creating an inclusive learning environment for students with disabilities (Sowers & Smith 2004). It is essential for them to ensure that all students, regardless of their disabilities, have equal opportunities to learn and succeed in their nursing education. By fostering inclusivity, nursing educators can help these students feel supported and empowered to overcome any challenges they may face. When it comes to achieving educational goals, educators often rely on a range of strategies and resources. These can include innovative teaching methods, technology integration, collaborative learning environments, and access to diverse educational materials (L'Ecuyer 2019). By utilizing these approaches, educators aim to create engaging and effective learning experiences for their students. It's worth mentioning that educators often work closely with disability services to ensure that appropriate accommodations are put in place for students with disabilities. These accommodations are specifically tailored to meet the unique needs of each individual student. For example, some students may require extended deadlines for submissions, while others may benefit from use of technologies. By collaborating with relevant authorities, educators can ensure that these accommodations are effectively implemented to support the success of students with disabilities. Even though they are this supportive, there is a significant issue of concern that is the intricate balance between upholding program standards and making necessary accommodations for students with disabilities. Nursing education programs adhere to stringent criteria in order to guarantee that graduates possess the necessary skills and expertise to function effectively as healthcare practitioners. Educators are faced with

the task of effectively addressing this difficulty in order to guarantee that students with disabilities are provided with a high-quality education that appropriately equips them for their future professional endeavors. Patient safety is another significant topic that warrants attention. It is the duty of nursing educators to guarantee that every student, regardless of disability, is capable of fulfilling the safety prerequisites of clinical practice (Emong & Eron 2016; Ryan 2011). There exists a legitimate concern about the welfare of both pupils and patients. In order to successfully address these problems, it becomes imperative to engage in the exploration of innovative solutions and to advocate for the allocation of supplementary resources.

Nursing educators' demographics may also play a role in inclusion of students with disabilities. Group differences in relation to demographic groups of nursing educators revealed some non-significant and significant results. For instance, male and female educators have similar perceptions regarding the knowledge of disability-related laws and institutions policies, accommodations, attitudes, barriers, and inclusion of students with disabilities. This is because the educators irrespective of their gender undergo similar educational programs and there is also a presence of institutional pressures and curriculum-related aspects. This contradicts the findings of a study conducted by Papadakaki et al. (2022), who found that women had higher perceived knowledge about the legal framework that applies to students with disability than men, which was thought to be related to the higher levels of empathy found in females as compared to males or to the nurturing and caring roles that are traditionally assigned to them, whereas Perez- Jorge et al. (2021) found that men had a lower degree of perceived knowledge. However, other studies (Girli et al. 2016; Polikandrioti et al. 2020) reported that males had more positive attitudes toward people with disability. It can be assumed that understanding the role of gender is fundamental to the development of appropriate educational interventions that

challenge negative attitudes. Hence, gender factors that may influence attitudes need further research as no gender differences were reported in this study.

Group differences based on age of nursing educators and Emirates they belonged to indicated that age and location do not have an effect on their perceptions. This is possibly because the age groups and Emirates-based groups included in the research had a rather similar composition with respect to the factors under investigation. Put differently, it is possible that there was little diversity in the understanding of legislation, accommodations, attitudes, hurdles, and inclusion pertaining to nursing students with disabilities among the individuals within each respective category, considering that the study is conducted in one context (UAE), which has similar laws in all Emirates. For instance, it is conceivable that irrespective of age, the participants exhibited comparable levels of knowledge pertaining to regulations, attitudes towards inclusion, and encounters with accommodations and barriers. This result is aligned with the findings of Papadakaki et al. (2022) which showed that age was not linked to the attitudes of faculty members towards people with disability. Likewise, individuals from different Emirates may have encountered similar circumstances within the realm of nursing education for students with disabilities.

Detecting substantial differences becomes hard when groups are largely homogenous due to the little variance within the groupings. In terms of nursing educators' familiarity with people with disabilities, intimate interactions with people with disabilities, and enrolment in disability-related courses. Nursing educators who know someone with disability and do not, their perceptions do not differ significantly regarding the five constructs. The feasibility of this outcome is attributable to the implementation of educational initiatives, awareness-raising campaigns, and inclusive policies, which have effectively facilitated the dissemination of

knowledge pertaining to disability-related legislation, accommodations, and societal perspectives on disabilities. These efforts may have been well received by nursing educators. The formation of views of disabilities is shaped by a multifaceted interaction of several elements, including personal encounters, social forces, and professional development. Educators in the field of nursing who have interacted with people with disabilities are likely to have a more realistic understanding of the specific accommodations required for disabled nursing students. Direct interactions with individuals with disabilities can increase empathy and foster a more positive attitude toward accommodating nursing students with disabilities. Educators who have interacted with individuals with disabilities may have a greater understanding of the barriers disabled pupils face in educational settings in the real world. Interacting with individuals with disabilities may emphasize the significance of inclusive practices, as educators witness firsthand the advantages of inclusion and the disadvantages of exclusion. Only a non-significant difference was observed in terms of policy-related knowledge. This means that educators may receive similar instruction regarding legal requirements and regulations in their academic or professional programs, regardless of whether they have direct contact with individuals with disabilities. This foundational knowledge is typically standardized and thoroughly covered in nursing education.

There were significant distinctions between educators who had taken professional courses and those who had not. It indicated that educators who took disability-related courses may have received formal training on accommodating students with disabilities, which could have provided them with specific strategies and knowledge of best practices. a course on disability-related topics. In addition to emphasizing the identification and mitigation of barriers in educational settings, training programs could raise awareness of these obstacles. This aligns

with the findings of Papadakaki et al. (2022), in which faculty members who had prior training on disability had a greater perceived grasp of the legal framework than those who had no such experience. This result reinforces the findings of other studies that educators with more training about students with disability have more positive attitudes toward inclusion (Hodge et al. 2009; Male 2011; Finlay, Kinsella, & Prendeville 2022; Petersson Bloom, & Bölte 2022). However, a non-significant difference was observed in attitudes, suggesting that professional courses are more aligned with professional development and that attitudes are more personal. It indicates that social norms and societal attitudes can affect the incorporation of students regardless of whether they have completed a professional course.

The most significant finding is the statistically significant difference between nursing students' and educators' perceptions. This indicates that these two groups have distinct perspectives regarding the inclusion of students with disabilities in nursing education. According to the study, these differences in perceptions can be attributed to a number of factors. A significant factor is the difference in exposure, experience, and comprehension between educators and students. Due to their professional expertise, educators may have a more nuanced and expansive understanding of disability inclusion. It appears that the perspective of nursing educators is significantly influenced by their professional experience, highlighting the importance of having educators who can effectively guide and mentor students. The substantial disparity between educators' and students' perceptions highlights the need for enhanced communication and collaboration between educators and students. Effective communication can bridge perception gaps to create a more inclusive and conducive learning environment. The study concentrates on nursing education, but its findings have implications for inclusive

education in general. It emphasizes the significance of recognizing and addressing divergent perspectives among various stakeholders in the educational process.

From the findings of regression analysis, it was found that there was a significant and positive relationship between knowledge of disability-related laws and the inclusion of students with disabilities, according to data collected from both nursing students and nursing educators. When individuals had a solid grasp of these laws, they tended to have more favorable views of inclusion. Similarly, accommodation-related practices, such as the use of assistive technology and the extension of deadlines for students with disabilities, had a significant and positive association with the inclusion of nursing students with disabilities. Positive perceptions of these practices were related to an environment that was more inclusive. It was discovered that attitudes toward inclusion are crucial. Positive attitudes were associated with the inclusion of students with disabilities, whereas negative attitudes impeded inclusion efforts. An increase in knowledge of disability related laws and institutions policies for inclusive practice is the major predictor of improved efficacy and confidence in dealing with people with disability and is a critical component in shifting perspectives and improving the general knowledge of how they can be supported (Ashcroft et al. 2008; Forlin, Sharma, & Loreman 2014; Chao, Forlin, & Ho 2016). This result is also in line with Moodley and Mchunu (2022) who explained that there is a gap between a policy that promotes equal education and implementing those policies which create challenges to support nursing students with disabilities. Similar results were echoed by different studies (Ashcroft & Lutfiyya 2013; Epstein et al. 2021) which showed that the lack of clear and accessible policies and the inconsistent and unenforced guidelines for admission and retention of nursing students with disabilities create an obstacle in including this group of students successfully.

Significant barriers, including physical accessibility issues and discriminatory practices, were identified as having a negative impact on the inclusion of nursing students with disabilities. It was deemed essential to address and mitigate these barriers in order to create an inclusive and supportive environment. This was supported by different studies (Sowers & Smith 2004; Moodley & Mchunu 2022; Calloway & Copeland 2021; Ashcroft & Lutfiyya 2013; Epstein et al. 2021) which showed that negative attitudes of faculty and students are barriers to inclusion. This result agrees also with the studies conducted by Shpigelman et al. (2021), Luckowski (2016), and Morris and Turnbull (2006) which showed that fear of ridicule and social stigma is a barrier for the inclusion of nursing students with disability. The admission requirements to nursing education programs were seen by many studies as impediments to the participation of nursing students with disability (Gonzalez & Hsiao 2020; Neal-Boylan & Smith 2016; Neal-Boylan & Miller 2020).

Facilitators, such as effective accommodation standards and positive attitudes, played a crucial role in reducing barriers to inclusion, indicating that when there is a presence of these facilitators, barriers to inclusion will be reduced. This is aligned with some suggestions provided by Neal-Boylan and Miller (2020) and L'Ecuyer (2019) who listed different teaching ways that educators can use to respond to the needs of nursing students with disability including the use of assistive technology, adaptive devices, virtual reality programs and simulation scenarios, and teamwork which facilitated inclusion. This result also agrees with the findings of Moríña and Orozco (2020) who showed that nursing faculty members showed positive attitudes towards teaching nursing students with disability. Faculty members viewed impairment as one characteristic of an individual with disability and that their interaction with students with

disability had helped in realizing that they are like any other student in the class and had helped them in designing an inclusive syllabus to support all students with disability.

According to nursing educators, knowledge of disability-related regulations did not have a significant impact on reducing barriers. This may be due to a number of factors, such as execution difficulties, lack of awareness, complexity, resource constraints, and the relative influence of other facilitators. Moreover, it can be due to concerns related to misinterpretation and misapplication of law leading to unintended barriers and excessive bureaucracy in managing disability issues like accommodation and complex documentation, lengthy approval time, disability disclosure which may discourage students from reaching out for help and fear of stigmatization.

As a result, the study highlighted some qualities that are beneficial to inclusive education in nursing education programs. These findings are valuable because they emphasize the importance of increasing faculty preparedness in implementing inclusion, which could inform future policy by identifying the factors and context with the greatest potential for bringing about changes in terms of inclusion education in nursing education programs. These findings are also important because they could lead to targeted interventions such as professional development, research activities, continuous education, and in-service courses on how to effectively deliver inclusive education, as well as the development of a curriculum that couples the medical perspective with the social model of disability which can offer several advantages, as it takes into account both the individual's medical condition and the broader social and environmental factors that influence their experience, which will eventually improve the general perceptions towards the inclusion of nursing students with disability.

6.7 Triangulation of Findings

This study's qualitative and quantitative findings on the inclusion of nursing students with disabilities converge on several key aspects while disclosing some differences in their perspectives. The significance of nurturing positive attitudes among faculty, peers, and healthcare personnel toward students with disabilities is one of the central themes shared by both qualitative and quantitative findings. Both lines of inquiry demonstrate that these attitudes play a crucial role in fostering an inclusive educational environment. The qualitative data delve thoroughly into the experiences of nursing students with disabilities, revealing that negative attitudes from family, colleagues, and faculty pose substantial obstacles to their educational journey. These negative attitudes may result in a lack of motivation, diminished confidence, and a feeling of exclusion among these students. The quantitative analysis highlights the importance of attitudes as an inclusion facilitator. Positive attitudes are significantly related to the inclusion of nursing students with disabilities, whereas negative attitudes can impede inclusion efforts. This alignment highlights the critical need to promote positive attitudes and disability awareness throughout nursing education.

In addition, both qualitative and quantitative findings identify barriers to the inclusion of nursing students with disabilities. Negative attitudes, a lack of awareness regarding laws and accommodations pertaining to disability, and communication difficulties are recurring themes in both sets of data. Insights gleaned from qualitative interviews with students and educators reveal that these barriers can manifest at various phases of nursing education, from program admission to practice after graduation. During the admissions process, for instance, negative attitudes from family members who doubt the abilities of students with disabilities may discourage them from pursuing a career in nursing. Inclusion efforts can be hindered by a dearth

of knowledge about disability-related laws and accommodations, as indicated by the quantitative analysis. In both qualitative and quantitative findings, effective communication is identified as a key facilitator. The importance of clear, open, and direct communication in enabling nursing students with disabilities to express their needs and receive the necessary accommodations and support is emphasized.

In addition, the quantitative and qualitative analysis, both place a strong emphasis on the role of legal knowledge in promoting inclusion, as they suggest that a comprehensive understanding of laws pertaining to disability is positively associated with inclusive practices. This finding emphasizes the importance of legal frameworks in determining the inclusion of nursing students with disabilities and identifies a potential area where educational interventions may be required to raise students' and educators' awareness.

In conclusion, the combined qualitative and quantitative findings provide a comprehensive understanding of the barriers and facilitators associated with the inclusion of nursing students with disabilities in education. In promoting inclusion, they emphasize the importance of positive attitudes, effective communication, and legal knowledge, while acknowledging common barriers such as negative attitudes and communication difficulties. The quantitative analysis revealed a disparity in perspectives between nursing students and educators, highlighting the significance of bridging this divide to create a more inclusive learning environment. Also, the findings indicated that the educators and students, both participants had concerns regarding inclusion of students with disabilities, considering the barriers that occur during all three stages. However, implementing facilitators and overcoming barriers can allow the universities to implement programs that can help students with disabilities to accommodate better in the nursing education programs. Overall, these findings provide

valuable insights for nursing education programs seeking to improve the inclusion of students with disabilities and promote a more diverse and equitable nursing workforce.

Chapter 7 Conclusion and Recommendations

7.1 Introduction

The conclusion chapter helps recapitulate the study's purpose and its main findings. The chapter is useful in consolidating the study's achievement and its contribution to further development of knowledge in relation to disability inclusion in nursing education and the factors that hinder and aid the integration of nursing students with disabilities into nursing education programs. The first section summarizes the study. The second section reviews the main research findings. These are followed by the main implications of the study, the study contributions, the study limitations, and finally the recommendations.

7.2 Summary of the Research

Questions about the abilities of students with disabilities to become nurses evolved into an exploration of the perceptions of nursing education stakeholders regarding the inclusion of nursing student with disabilities in nursing education programs and of the challenges and the facilitators to their inclusion, in a health sciences academic institution that now operates four campuses across the UAE: Abu Dhabi, Al Ain, Al Gharbia, and Ajman which offers Bachelor of Science (B.Sc.) degrees in a nursing education program.

The theoretical framework used to underpin this research reflects the multidisciplinary and the interconnectedness of the fields in which disability inclusion in nursing education is relevant. Social constructivism is a theoretical perspective that emphasizes the role of social and cultural factors in shaping our understanding and experience of the world around us. This perspective posits that many of our beliefs, values, and attitudes are not simply objective truths

but rather are socially constructed through our interactions with others and our cultural contexts. When applied to the realm of disability, social constructionism highlights the ways in which our understanding of disability is shaped by societal attitudes and norms. The medical model of disability views disability as an individual problem that is caused by a physical or mental impairment, yet it emphasizes the role of medical interventions in treating and managing disability. The human variation model of disability is an approach to understanding disability that focuses on the diversity of human experience and the ways in which disability is a natural part of that diversity. This model explains that disability is a part of the natural variation in human experience and that people with disabilities have the same rights and opportunities as others. According to this model, disability is not just an individual attribute but is also shaped by social, cultural, and environmental factors. The Cross Model of Cultural Competence is widely used in healthcare settings to promote cultural competence among healthcare professionals and improve the quality of care for patients from diverse backgrounds. By understanding and applying this model, healthcare professionals can work towards creating a more inclusive and equitable healthcare system that meets the needs of all patients. Jean Watson's Theory of Caring is widely used in nursing education and practice and has been applied in a variety of healthcare settings. According to Watson, caring is the essence of nursing and is essential for promoting healing and growth in patients. The theory also emphasizes the importance of the humanistic and personal aspects of nursing and highlights the role of the nurse in attending to the patient's physical, emotional, and spiritual needs, and should seek to promote the patient's overall well-being. By focusing on caring, nurses can help to create a more compassionate and supportive healthcare system that meets the needs of patients in a more holistic way.

The Bioecological Model of Human Development presents the supportive role of the various layers that surround the individual/student and the interactions that happen between and within these layers. These interactions can culminate in protective or risk factors for the individual which consequently affect his/ her development.

The literature on the inclusion of nursing students with disabilities highlights the different challenges that students with disabilities face in nursing education programs especially in clinical settings, and nursing schools should work with clinical partners to ensure that accommodations can be provided in these settings as well in order to provide them with a quality education and prepare them for successful careers in nursing. The literature suggests different strategies that can be employed to facilitate the participation of nursing students with disability in nursing education programs and to foster an inclusive and accessible learning environment to ensure that students with disabilities are able to succeed in their studies and in their future careers as nurses. There is a scarcity in research that addresses the concept of disability within nursing education in the UAE. To date, the inclusion of nursing students with disabilities in nursing education programs has rarely been explored in the Middle East and North Africa (MENA).

A three-part sequential mixed methods design was applied. First, data was collected from unstructured interviews (2 nurse officers, 1 head of nursing program, 1 head of health sciences institution, 1 administrator, 1 nursing faculty member, and 1 nursing student). Then, a survey questionnaire was conducted (248 nursing education students and 29 nursing education faculty members). This was followed by semi-structured interviews (5 nursing education faculty members, 2 administrators, and 7 nursing education students).

7.3 Key Findings of the Study

Qualitative findings indicated various barriers to the inclusion of nursing students with disability in nursing education programs in the UAE. These factors were examined through an ecosystemic theoretical lens which offered insight into the contextual factors that influence the inclusion of nursing students with disabilities. For instance, disability disclosure and fear of rejection were found to be barriers to the participation of nursing students with disability as it limits their accessibility to proper support and reasonable accommodations hindering their inclusion and representation in the program. The disability category and the severity and functional limitations of the disability were found to influence the inclination of nursing education faculty members to admit and accept nursing students with disability.

Moreover, factors at the micro-mesosystem level were found to be influential in the inclusion of nursing students with disability. It was found that how nursing stakeholders conceptualize the concept of disability that impedes the inclusion of students with disabilities. This provides evidence that some nursing education stakeholders in the selected health sciences academic institutions view nursing students with disability through a medical model lens indicating that they often generate ideas about people with disability that they cannot be successful nurses due to their impairment which disqualifies them from the nursing profession. The adoption of a medical model by nursing faculty can have an effect on the inclusion of nursing students with disabilities. This is because the medical model focuses on diagnosing and treating diseases, rather than taking a holistic approach that considers the patient's physical, psychological, and social needs which could impact their academic success and future career as a nurse. On the other hand, nursing faculty who adopted a human variation model are more likely to recognize and accommodate the unique needs of students with disabilities. For

example, nursing faculty who adopt a human variation model may work to create a more inclusive learning environment that accommodates a range of learning styles and abilities.

Negative attitudes towards nursing students with disabilities was found to have a significant impact on their inclusion in the nursing program. These attitudes can come from family members, faculty, staff, and other students, and can take many forms, including discrimination, exclusion, and stigmatization leading to the perpetuation of negative stereotypes. For example, nursing students with disabilities may be excluded from clinical placements or other learning opportunities because of assumptions about their abilities. They may also face challenges in accessing accommodations and support services, which can impact their academic success and ability to become successful nurses. Negative attitudes can also have a psychological impact on nursing students with disabilities. They may feel isolated, stigmatized, and unsupported, which can lead to feelings of stress, anxiety, and depression. This can negatively impact their mental health and well-being, as well as their academic and professional success.

The study also showed that the relationships and interactions between the various microsystems that are involved in the nursing education process, such as the interactions between the nursing school, clinical placement sites, support services, and the larger community can have a significant impact on the inclusion of students with disabilities in the nursing education process, and the mesosystem can influence the attitudes, beliefs, and behaviors of the individuals involved in these interactions. The lack of communication between stakeholders and with mental health professionals was believed to have a negative impact on the inclusion of nursing students with disabilities in nursing education programs. It was assumed that the lack of communication can lead to misunderstandings and misinterpretations of the specific needs

and accommodations required for students with disabilities. which can create barriers to access and participation in the educational program, which can impede the learning experience and academic success of these students and decrease job opportunities.

Moreover, several factors at the exo- macro level, such as the larger cultural and societal context in which nursing education takes place and the social and environmental settings that indirectly influence the individual's development, were found to affect the inclusion of nursing students with disability. Barriers to accessibility, such as the presence of stairs or narrow doorways, can make it difficult or impossible for some students with disabilities to access classrooms, labs, or other learning environments. Moreover, the absence of accommodations in theory and clinical setting and the shortage in specialized manpower and the lack of assistive technology can impact the ability of nursing students with disabilities to succeed in the program.

The study also showed that the program graduation requirements and the lack of nonclinical nursing care options, can hinder the inclusion of nursing students with disabilities as this can limit their employment opportunities. Additionally, the lack of disability awareness regarding the abilities of nursing students with disabilities can limit their ability to contribute fully to the nursing profession. When educators and healthcare providers lack awareness about the abilities of individuals with disabilities, they may underestimate or overlook the unique skills and perspectives that these students bring to the field. This can result in missed opportunities for these students to contribute to the nursing profession and to patient care and can contribute to the perpetuation of negative stereotypes and misconceptions about individuals with disabilities, which can further marginalize and stigmatize them.

Furthermore, policies and regulations that are not clear and that do not adequately address the needs of students with disabilities can create barriers to inclusion. For example,

policies that require students to be physically fit in order to be admitted to the program can make it difficult for some students with disabilities to participate fully in the program. Additionally, the absence of law enforcement guidelines on the inclusion of nursing students with disabilities can lead to a lack of clarity and consistency in how nursing programs accommodate these students. This can result in nursing students with disabilities being excluded from the program or being provided with inadequate accommodations that do not meet their needs.

Qualitative findings regarding how to improve the participation of nursing students with disability showed multiple facilitators to their inclusion. According to the study participants, before accepting and admitting students with disabilities it is important to evaluate the current existing structures, policies, resources, and attitudes to ensure a successful and equitable inclusion. This can be achieved through different ways such as through establishing early detection of disability cases that give students the freedom to choose to share information about their disability with university. Educational institutions have a responsibility to respect students' privacy and only collect and use information related to a student's disability to provide accommodations and support and not to affect their admission and enrollment in the program. Therefore, to ensure diversity at the entry point to the profession it is important to have clear written policies and law enforcement procedures to prevent inconsistent and discriminatory admission practices to nursing schools and to ensure the rights of students with disabilities to access nursing program and to receive reasonable accommodations as mandated by the country laws and policies so they can fulfill their dreams of becoming nurses.

Moreover, it was suggested that raising awareness towards the potentials of people with disabilities to become successful nurses who can bring a unique perspective and set of skills to the profession through early career counseling and disability outreach activities is important so

people will be more open to the idea of enrolling in nursing programs and having nurses with disability in nursing profession and more receptive to the care provided by nurses with disabilities.

Additionally, improving the knowledge of people working with nursing students with disability of different disability related issues including the way they can be educated and supported through professional development of the nursing academic community as well as the recruitment of specialized preceptors who are knowledgeable about educating and precepting students with disability is needed to correct misconceptions and to gain new knowledge on how these students can contribute meaningfully to the nursing profession.

Additionally, the participants highlighted the importance of adopting creative access to nursing students with disability through the provision of reasonable physical accommodations to the infrastructure of campus building, academic accommodations as well as clinical accommodations where students face the most challenges. Moreover, it was suggested to open nonclinical nursing paths that can assimilate the different abilities and potentials of students with disability without restricting them to technical standards that put emphasis on sets of skills that may not have due to their disability.

Showing favorable beliefs about oneself and the encouraging attitudes of those around students with disabilities play a critical part in decreasing discrimination and prejudgment while promoting acceptance and honor. Additionally, the study participants suggest that creating an inclusive environment for students with disabilities in nursing education programs requires meaningful communication and empathetic conversations between students, stakeholders, and future employers. The study emphasizes the need for an increased level of collaborative thinking, creativity, and planning to meet the changing needs of diverse students. Hence, from

the qualitative findings, it was observed that participants had mixed perceptions regarding inclusion of nursing students with disabilities, considering that they expressed their concerns regarding their inclusion and also provided strategies to accommodate them.

A similar finding was observed with quantitative analysis. Some important results and interpretations were observed with quantitative findings. For instance, most students and nursing educators knew someone with disability, while most of them indicated that they had no interaction with someone with disability and did not take a course in disability. This suggests that those involved in the education system, including both students and educators, who have minimal exposure to people with disabilities, may have a reduced ability to comprehend and empathize with the needs of these individuals while giving care. Untrained individuals have the potential to introduce their own attitudes and perspectives into the workplace, therefore potentially fostering a non-inclusive atmosphere. This may have implications for several aspects of the organization, including policy development, admission standards, and accommodation practices.

Participants were also asked to indicate their understanding of five main constructs of the study, such as knowledge regarding disability laws, accommodations, attitudes, barriers, and inclusion of nursing students with disabilities. It was observed that the students were in moderate to high level of agreement regarding the facilitators, such as knowledge about the laws, attitude, and accommodation practices about them facilitating inclusion of nursing students with disabilities. In regards to the barriers, the findings of nursing students' data indicated barriers related to social stigma against people with disabilities, admission requirements to nursing programs, negative attitudes of educators towards students with disabilities, lack of clear policy to support students with disabilities, lack of resources and professional development, and others

do impede the inclusion of students with disabilities. Similarly, from the findings of nursing educators, a considerable proportion of educators possess awareness about disability and possess a certain level of familiarity with pertinent legislation and the needs of different learners. However, there exist notable deficiencies in comprehension, especially with regards to admission procedures and the provision of targeted institutional assistance. The results also demonstrated a strong consensus among students and educators about the need for inclusivity in nursing education and practice. There is a widespread belief in the capabilities of students with disabilities and a commitment to providing them with diverse pathways to succeed in nursing careers. However, students and educators not being aware and trained about the policies and requirements related to disability inclusion can be a significant concern, because they can have a negative impact on a student with disability. It can impact their motivation, patient care, and other individual and professional aspects. Not only that, when educators are trained properly, not only they can provide the necessary support to the students with disabilities, but at the same time, they can also manage to create equality in the classroom. Trained educators can reduce the perceptions of bias that students without disabilities can have about the treatment students with disabilities receive.

Group comparisons were also done to analyze how the perceptions of nursing students and educators differ about the main variables based on their demographic characteristics. From the findings regarding group comparisons of nursing students, it was revealed that there were no differences in perceptions regarding the facilitators, barriers, and inclusion based on their age, Emirates they belonged to, knowledge about someone with disability, and taking disability related courses. However, a significant difference in perceptions regarding knowledge about laws was found between individuals who had interacted with individuals with disability and

those who had not. Furthermore, a notable difference in perceptions among nursing students was identified concerning the inclusion of students with disabilities.

From the findings of nursing educators, a few results were different. For instance, the findings indicated that perceptions of nursing educators who has interacted with someone with disability and who did not, differed for all variables, such as accommodations, attitudes, barriers, and inclusion, except knowledge of disability-related laws. Also, a notable difference was observed between nursing educators who had completed a disability-related course and those who had not, with respect to all variables, except attitudes. Considering other demographics, no significant differences were observed regarding their perceptions of variables, based on their gender, age, Emirate they belonged to, and their knowledge about someone with disability. A notable finding emerged from group comparison, which was that there exists a significant difference among students and educators about inclusion of students with disabilities. Accordingly, educators possess a more expansive outlook derived from their professional expertise, and these variances underscore the need of fostering communication and cooperation between educators and students in order to establish an inclusive and effective nursing education milieu. In addition, the findings from nursing students and educators indicated that facilitators have a positive effect and barriers have a negative effect on inclusion of nursing students with disabilities. These results indicate that by implementing appropriate legislations, accommodations, and having a positive attitude can facilitate inclusion of students with disabilities. The results also indicated that barriers can hinder the inclusion of nursing students with disabilities. Hence, it is important to address the barriers for effective inclusion. The findings of regression analysis also indicated that facilitators also have a positive impact on

barriers, which indicated that with implementing facilitators in an effective way, the barriers to inclusion can be reduced.

7.4 Implications of the Study

The present research focused on exploring the perceptions of nursing education stakeholders towards the inclusion of nursing students with disability in nursing education programs, has implications for nursing education, the nursing profession and clinical practice, disability services, and policy making in the UAE.

7.4.1 Nursing Education

The results of this study showed that exposure to different perspectives, experiences, and challenges can enrich the overall learning environment. This diversity can better prepare nursing students to work in healthcare settings that serve a diverse patient population. Nursing students who interact with peers with disabilities may develop greater empathy, understanding, and sensitivity toward patients with disabilities. This can enhance the quality of care they provide in their future nursing practice. Moreover, nursing education institutions often need to innovate and adapt to accommodate students with disabilities. These adaptations can lead to improved teaching methods, technology integration, and facility accessibility, benefiting all students. Additionally, Nursing students with disabilities can develop strong advocacy skills, advocating for their own needs and rights. This self-advocacy can be a valuable skill in their future nursing careers when advocating for patients with disabilities. Additionally, the study may promise implications for accreditation. Through accreditation-imposed requirements relating to student diversity and advancement toward fulfilling national nursing workforce diversity targets, accrediting agencies should create clear measurable standards related to the implementation of

admission requirements that promote diversity in nursing education, and consequently, nurse educators must make sure that such standards are implemented. Moreover, with a good percentage of nursing jobs being filled outside of patient care, nursing faculty need to revise clinical requirements and determine if they are meeting workforce demands. Being able to decrease the dependence on bedside patient care and increasing the opportunity for possible educational pathways within nursing education in the UAE would increase inclusivity for many students with disabilities.

However, the inclusion of nursing students with disabilities also presents challenges related to resource allocation, accessibility, and ensuring that nursing students with disabilities meet the same educational standards while providing reasonable accommodations can be a delicate balance. Addressing these challenges through proactive policies, training, and support can lead to a more inclusive and equitable nursing education system.

7.4.2 Nursing Profession and Clinical Practice

The results of this research may guide diversifying and strengthening the nursing profession in the UAE. Nursing students and nurses with disabilities have encountered situations that make their life challenging. They could become more sympathetic toward patients as a result. Such empathy and comprehension, when combined with nursing expertise, may significantly improve patient care and eliminate unfavorable perceptions of people with disability. Including nursing students with disabilities can help to increase diversity in the nursing profession which can help the nursing workforce to reflect the diversity of the patients they serve and can promote cultural competence and patient-centered care. By including nursing students with disabilities, the nursing profession in the UAE can benefit from their experiences

and knowledge and can better understand the needs of patients with disabilities and improve their access to healthcare by identifying barriers to healthcare access, and work to develop solutions to overcome these barriers.

7.4.3 Disability Services

The study's findings may hold ramifications for both disability services and nursing instructors. The two professions should work together to create acceptable modifications that will benefit nursing students with disabilities in clinical settings. Many of the study participants made their own unanticipated modifications without consulting disability services, which were frequently not shared with the following instructor or the preceptor. Faculty and administrators should develop and provide accommodations through official channels and in collaboration with disability support services to avoid unintentional discrimination against students with and without disability.

Collaboration with disability services ensures that nursing programs are in compliance with legal requirements, in the UAE. Failure to comply with these laws can have legal and financial consequences for educational institutions. Moreover, disability services are experts in assessing the specific needs of students with disabilities and providing appropriate accommodations. Collaboration allows nursing programs to access these resources and ensure that students receive the accommodations they require for equal access to education. Disability services can also work closely with individual students to create personalized support plans that can enhance the academic success of nursing students with disabilities. This can lead to improved retention rates and graduation rates among these students. Additionally, the collaboration with disability services helps prepare nursing students with disabilities for the

workforce. By accessing accommodations and support during their education, they are better equipped to navigate the challenges they may encounter in healthcare settings.

7.4.4 Policy Making

Findings in this study may shed new insights on how health sciences higher education institutions and health organizations can improve structural and organization policies to assist both disabled and non-disabled nursing students and patients. Policies that promote the inclusion of disability in nursing education and that prioritize accessibility can lead to a more accessible and equitable educational experience for all nursing students and to a more accessible, equitable, and inclusive healthcare system for people with disabilities. In terms of the policymaking in the UAE, the research indicated a significant need to provide appropriate arrangements to ensure that students with specific needs are accommodated and supported, so facilitating their full engagement in the educational process. Furthermore, the implementation of anti-discrimination policies is crucial in order to prevent any manifestation of partiality or preconceived notions towards students with disabilities throughout the admission procedures, development of educational programs, and practical training opportunities, hence fostering an equitable and all-encompassing educational setting. In addition, it is essential to implement nursing faculty training policies that aim to educate educators with the requisite skills and knowledge to successfully serve students with disabilities. Policies need to include the issue of accessibility pertaining to the needful resources and technological infrastructure within nursing schools, ensuring that facilities are intentionally built and adequately maintained to accommodate the varying requirements of students with disabilities. Financial assistance programs, such as scholarships or grants, may also have a significant impact on supporting the pursuit of nursing education for those with impairments.

7.5 Study Contributions

7.5.1 Theoretical Contributions

The topic of the inclusion of nursing students with disability in nursing education programs in the UAE is significant considering a heightened consciousness and change of attitudes towards people with disability and calls for enhancing diversity in nursing education. The study brings attention to the topic of disability inclusion in nursing education programs in the UAE and offers the following contributions:

➤ The findings of the study suggested different strategies that can facilitate the inclusion of nursing students with disability that are centered on the principles of the Bioecological Model of Human Development as seen by nursing education stakeholders of the UAE which can be used as a roadmap for effective inclusion of nursing students with disability in nursing education and nursing profession.

➤ The study presents a theoretical framework that combines theories from the disciplines of education and sociology linked to the nursing core values of caring and cultural competence which were put together to help in explaining the research problem, and to limit the scope of the data by focusing on concepts related to inclusion, people with disabilities and nursing education which are central to this study and to assist in discussing the relationship between them. These theories are relevant to the literature review and are in alignment with the adopted conceptual framework.

➤ The conceptual framework presented in Chapter 2 to guide the conduction of this research was effective to reach the desired findings. After the completion of the study, the conceptual framework has been adjusted and modified in Figure 7 which is proposed by the

researcher to illustrate the relationship between the selected theories underpinning the inclusion of nursing students with disability along with the proximal and distal environmental factors which were identified from unstructured interviews, semi structured interviews, and responses to questionnaire items, that can challenge and facilitate the inclusion of nursing students with disability in nursing education programs.

➤ The study generated a psychometrically valid and reliable tool to support the health sciences academic institutions in the UAE in measuring the perceptions of two groups of nursing stakeholders towards their perceptions of the inclusion of nursing students with disability.

➤ The study identified categories of inclusive education that are significant to nursing education as well as determined nursing educators and students' demographic variables that may help in improving the perceptions towards inclusion.

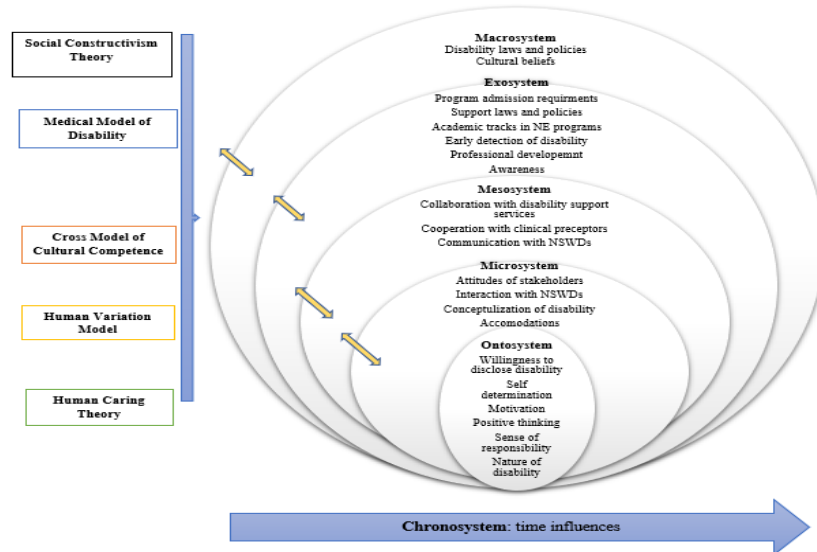


Figure 7: Final Conceptual Framework for Inclusion

➤ The study enriches the UAE research projects through presenting a mixed methods study. The three -parts sequential mixed methods design showed effectiveness in capturing the voices of the nursing education faculty members, nursing education students, health sciences institutions administrators, and nurse officers in identifying various barriers and facilitators to the inclusion of nursing students with disability in one study in which the existing literature is deficient. The topic is not yet explored in the UAE and in the MENA region, as a result, the study contributes to the UAE and international research activities and to the growing literature in disability inclusion in local and global literature. In addition, the research focused on how students and educators with differing demographic characteristics have different perceptions related to facilitators and barriers to inclusion. The qualitative and quantitative findings of the study offered insights into the intersection of disability studies and nursing education, contributing to a deeper understanding of disability within the healthcare field.

➤ The research also contributes to the literature on inclusion of nursing students with disabilities that have primarily focused on collecting subjective opinions of nursing stakeholders. The current research also considered the subjective opinions of stakeholders but validated those with quantitative findings by evaluating the impact of facilitators and barriers on inclusion of nursing students with disabilities, which was a novel theoretical contribution of this research. Additionally, the research also empirically proved that facilitators have a significant impact on barriers, which indicated that nursing programs can implement facilitators not just for inclusion, but for also addressing the barriers to inclusion.

7.5.2 Practical Contributions

Along with theoretical contributions, the research had some significant political contributions. The research provided guidance for nursing programs in the UAE that can enhance with valuable data and insights to make informed decisions about how to enhance the inclusion of students with disabilities. The research also presented some specific strategies, such as implementing effective accommodations, having positive attitudes, and addressing barriers. Also, the research findings and its respective discussion were indicated in three stages, which can also be a contribution to practice. For instance, the nursing programs can implement facilitators, such as having and implementing proper policies, increase disability awareness with early counselling, establish early detection of students that have any kind of disability, and implement professional development programs for the nursing educators, during the pre-admission process. Implementing these strategies prior programs like during the admission phase can allow the universities to prepare educators prior rather than come up with spontaneous strategies, which is considered as a challenge for the educators. Additionally, offering counseling services to prospective nursing students may facilitate the early detection of limitations or difficulties. This practice not only facilitates the identification of necessary assistance, but also enhances students' comprehension of their entitlements and the resources at their disposal. The provision of training and professional development opportunities to nursing educators is of utmost importance. The proposed curriculum should include disability sensitivity training, pedagogical approaches for addressing the needs of different learners, and a comprehensive comprehension of the legal and ethical considerations associated with accommodating students with disabilities. Educators that are well educated has enhanced capabilities to successfully provide help to the students with or without disabilities. Through the

use of these tactics throughout the pre-admission process, nursing programs have the ability to establish an atmosphere that is both inclusive and supportive for students with disabilities. The use of this proactive method not only yields advantages for the pupils, but also facilitates educators in delivering suitable assistance and adjustments right from the commencement of their educational trajectory.

Moreover, some of the strategies can be implemented during the nursing programs in the UAE based on the research findings. For instance, the nursing programs should enhance the creative access like implementing structural, classroom, and clinical accommodations along with establishing non-clinical nursing paths for students with disabilities to have all the necessary support needed. During the program, positive attitudes must be showcased towards students with disabilities but not in a way that it creates bias for other students and also implement effective communication among all nursing stakeholders. Lastly, the nursing programs in the UAE must be such that can provide the necessary support to the students with disabilities even after the program like connecting them potential employers.

7.6 Study Limitations

There are some limitations to this study. The study nursing education students were females. Hence, the effect of gender on their knowledge, beliefs, and attitudes toward the inclusion of nursing students with disability was not evaluated. Moreover, the study included a small number of nursing education faculty members (n=29) suggesting that the findings cannot be applied to the entire academic population. Participants were also from a single public health sciences academic institution. Therefore, the study cannot represent the total population of nursing students with disability and nursing education faculty members in private academic

institutions and for those reasons, it should be interpreted with caution and not be generalized to all health sciences academic institutions in the UAE or to other nursing programs outside the UAE as well as limiting regional comparisons. Furthermore, interviewees' remarks may have been impacted by social desirability reactions, which may have limited their openness. Nevertheless, despite these limitations, we consider that this study is novel and fills a gap in the research line about inclusive education in nursing education.

7.7 Recommendations

7.7.1 Future Research Recommendations

As the focus on diversity and disability inclusion becomes increasingly critical, more studies are required to understand how nursing students with disability perceive their nursing education, including how helpful the learning environment is, the hurdles and facilitators to their participation. Moreover, more research on nursing faculty perceptions of certain disabilities might be useful in planning future faculty development on how to provide accommodation depending on individual requirements. Furthermore, the same methodology can be conducted to gather a country wide portrait of how the inclusion of nursing students with disability are perceived by nursing education stakeholders including challenges, accommodations and support measures. Additionally, future studies could include observations in theory and clinical settings in order to analyze these inclusive practices and explore in more detail the action carried out by nursing faculty members and students. It would also have been interesting to hear the voices of staff working at the disability offices regarding the issue under study which would have enriched the data. Moreover, it is important to examine the enablers and barriers to the inclusion of nursing students with disability in different geographic areas to bring different realities together

to empower them and to meet their needs. Therefore, future studies may therefore wish to consider cross-cultural perspectives regarding the inclusion of nursing students with disabilities in nursing education programs which can help in comparing different cultures, worldviews, and practices regarding the inclusion of nursing students with disability and in understanding how different cultural groups' beliefs about disability influence their behaviors and attitudes towards disability inclusion in nursing education. This approach can help nursing education stakeholders to become more aware of their own cultural biases and to develop greater empathy and appreciation for students from diverse cultures.

7.7.2 Recommendations for Nursing Stakeholders

Based on the results of this study, there are some recommendations to support the inclusion of nursing students with disabilities in nursing education programs in the UAE:

Establish equitable access to the program: It is critical to use an equity-based lens to admit students with disabilities to nursing programs. Hence, it is necessary to conduct college-level screening and adopt “early-alert” strategies that can help nursing education professionals as well as the disability support staff to accurately identify students with disability so their needs can be clarified to provide them with proper accommodations. Establishing a panel of professionals working in nursing, inclusive education and mental health domains can help in conducting face to face interviews as well as encouraging voluntary disability disclosure to develop a support plan without obliging students to disclose their disability as confidentiality should be respected and disability disclosure may not be appropriate for many applicants with disability, and many may not feel comfortable with such practices. Furthermore, to improve assimilating students with disability into the program, it is equally important to open nonclinical

nursing care academic tracks during prelicensure program to allow nursing students with disability to develop skills and knowledge in areas of nursing that do not require physical activity or direct patient care which can give them the opportunity to work in nursing education, research, informatics, policy making, and management domains that will help them contribute to improving healthcare outcomes.

Establish clear disability policy and enforcement mechanisms: It is crucial to formulate clear disability policies to ensure that nursing students with disabilities have equal access to educational opportunities. By providing clear disability guidelines, accommodations can be provided through formal channels and can help in ensuring that institutions are meeting their legal obligations and avoiding potential legal issues and that all students are treated fairly. Hence, there is a necessity for nurse educators to uphold federal laws in order to guarantee that students with disabilities have equal access to the nursing profession. As a result, enforceable standards for student admission and retention should be used by nurse educators when making admission decisions. By establishing a proper legal and regulatory climate towards the inclusion of nursing students with disabilities, potential barriers can be eliminated, and nursing schools can create a more diverse and inclusive learning environment that supports the success of all students.

Create an inclusive curriculum: The nursing curriculum should be inclusive of students with disabilities which can be achieved by integrating universal design principles into the curriculum to ensure that course materials are accessible to all students, including those with disabilities. This can be done by providing resources in alternative formats, incorporating assistive technology in theory and clinical setting to help students with disabilities to access course materials and participate in different activities. Moreover, the universal design of

learning can provide flexible assessment methods to help students with disabilities show their knowledge and skills. Additionally, an inclusive curriculum ensures that physical spaces used in the curriculum, such as classrooms, labs, and simulation centers, are accessible to all students. This can include providing accessible seating, ramps, and elevators and devices.

Train and educate: Education is recommended to ensure that they are equipped with the knowledge and skills necessary to support nursing students with disabilities which can be achieved through disability awareness training for faculty to help them better understand the needs and experiences of students with various disabilities. Additionally, it is important that faculty and staff get trained on how to use assistive technology and on accommodation provisions. This can include information on the process for requesting accommodations, how to work with disability services offices, and how to implement reasonable accommodations in the classroom and clinical setting. Moreover, training is needed on how to create an inclusive nursing curriculum that supports the needs of students with disabilities. This can include information on the use of universal design principles, the development of accessible course materials, and the implementation of diverse teaching methods.

Although the medical model of disability has been criticized for its narrow focus on individual deficits and medical interventions, it remains an important aspect of nursing education for students with disabilities as it provides a framework for understanding the specific health needs and medical conditions that individuals with disabilities may experience. This knowledge is crucial for nursing students with disabilities to effectively manage their own health conditions and provide high-quality care to patients with disabilities. However, it is important to note that the medical model should not be the sole focus when educating and supporting nursing education for students and it should be viewed within the broader context of social and

cultural factors that shape the experiences of individuals with disabilities. By adopting a human variation model of disability, society can move towards a more inclusive and equitable approach to disability that recognizes the full range of human diversity. This can help to promote social justice and ensure that all individuals.

Provide reasonable accommodations and support: It is needed that nursing students with disabilities are provided with reasonable accommodations in classroom and clinical settings that should take into consideration individual needs and the nature of their disability. Therefore, it is critical to work with the student to determine the accommodations that will best meet their needs and to ensure that these accommodations are provided in a timely and effective manner. Moreover, it is equally important that reasonable accommodations be selected and designed to enable nursing students with disabilities to participate fully in programs and services yet without fundamentally altering the nature of the program or imposing an undue burden on the provider. This can be achieved through open and effective ongoing between nursing faculty and disability services personnel to identify the accommodations that will best meet students' needs and to ensure that accommodations are provided in a timely manner for exams, clinical experiences, and other important activities and that they are effective in meeting these goals and do not undermine the academic integrity of the course. By working closely with disability services, nursing faculty can ensure that accommodations are provided consistently across different courses and instructors and that students with disabilities are treated fairly and equitably.

Additionally, it is critical to provide orientation and training prior to the beginning of clinical rotations on how to use the accommodations and support available to them in clinics and on the measures and policies that guide this provision. Ensuring the accessibility of clinical

sites and assigning the right preceptors is crucial to ensure that proper support is provided and that nursing students with disability are continuously monitored and supervised in order to identify any challenges that can jeopardize their safety and the safety of patients.

Invest in technology: Investing in assistive technology can be a valuable way to support nursing students with disabilities and to help them access course materials, participate in classroom discussions, and complete clinical requirements. For instance, screen reading software, electric magnifiers and Braille displays can be used by students with visual impairments. Speech recognition software and digital note takers can be used by students with mobility impairments to write notes. Voice amplification systems can be used by students with hearing impairments to amplify sounds in a classroom or clinical setting. Moreover, electronic wheelchairs can be used by students with mobility impairments to navigate through clinical settings, such as hospitals and clinics. This can be achieved through the collaboration with disability services offices and technology specialists to identify the most appropriate and effective assistive technology for students with disability.

Foster continuous improvement: It is important to continuously assess and evaluate the performance of all students with and without disability in order to identify any barriers to learning that students may be experiencing so it can be addressed in a timely manner to ensure that the student can learn and progress. This will also help adjust accommodations as needed to ensure that they are effective and appropriate for the student's needs. As the student progresses through their program, their needs may change, and accommodations may need to be adjusted accordingly. It is equally important to monitor the progress of nursing students with disabilities and to provide them with constructive feedback to identify their strengths and weaknesses so they can work towards improving their skills and knowledge and to ensure that they are meeting

the same standards as their peers while promoting equity and ensuring that students with disabilities are not being held to lower standards or expectations.

Foster an inclusive and empowering culture: It is important that a culture of inclusivity is encouraged within the nursing program through creating a welcoming and supportive learning environment where all students are valued, supported and respected. By promoting open communication, respect, and empathy among students, faculty, and staff an inclusive and accepting learning environment can be created. Moreover, the positive attitude of people dealing with nursing students with disabilities including peers, faculty, and family is a source of support for them. Consequently, people's encouragement, acceptance, and support are essential in helping nursing students with disabilities achieve their academic and professional goals. Moreover, disability inclusion awareness activities can help, not only to inform and educate people but also to challenge misconceptions and biases around people with disability who want to be nurses. Enhanced awareness about disability, discrimination, and disparity can usefully help in taking actions that can lead to a better involvement of people with disability in nursing education programs and increased opportunities for their employment in the nursing workforce. Increasing the awareness of nursing students with disabilities about their own abilities related to the nursing profession and improving their awareness of the program's expectations and requirements help students identify potential barriers in order to plan to overcome it. Providing financial incentives to nursing students with disability in efforts to further support them may improve their recruitment in the nursing profession and increase their interest in joining nursing education programs. Moreover, increasing the early awareness of children since school days about the abilities of nursing students with disability and normalizing their presence among others is needed to increase the acceptability of nursing students with disability by society.

Cooperate and Collaborate: Nursing faculty members should coordinate with disability advisors on how to locate and use the campus resources and collaborate with nursing students with disability who have specialized knowledge of their own impairments and requirements, allowing them to hasten the development and finding of appropriate accommodations without relying on guessing. Moreover, the coordination and collaboration between nursing schools and potential employers are early stages of the nursing programs to ensure proper and suitable job opportunities for nursing students with disabilities who will eventually graduate from nursing schools. Collaboration with disability organizations is needed to provide resources and support to students with disabilities as they can offer guidance and expertise on disability accommodations, assistive technology, and disability advocacy.

By implementing these recommendations, nursing programs can create an inclusive learning environment that supports the success of students with disabilities.

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Appendices

Appendix A: Nursing Student and Nursing Faculty Members Copy of the Questionnaire

Demographic Information What is your gender? What is your age group? In which emirate are you located? Do you know anyone with a disability " People of Determination"? Have you interacted with a student with a disability? Did you take any course specific to people with disabilities " People of Determination"?					
Perceived Disability Laws and Institutions Policies	Strongly Disagree	Disagree	Not sure	Agree	Strongly agree
L1: I know the meaning of the term "disability".					
L2: I know the UAE laws related to the rights of people with disabilities "People of Determination" in education.					
L3: I know that the UAE nursing and midwifery education standards clearly describes how the needs of diverse learners should be met.					
L4: I know that the admission policy to nursing programs in my institution supports the inclusion of nursing students with disabilities "Students of Determination".					
L5: I know that passing a medical physical fitness test is an important admission requirement to nursing education programs in my institution.					
L6: I know the disability policy in my institution on how to support nursing					

students with disabilities "Students of Determination".					
Perceived Accommodations and Inclusive Practices	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
A1: I believe that assistive technology can help in meeting the needs of nursing with disabilities " Students of Determination".					
A2: I believe that extending the submission deadlines for tasks can be a reasonable way to support nursing students with disabilities " Students of Determination".					
A3: I believe that using alternative devices in clinical practice to perform a task can be a reasonable way to support nursing students with disabilities " Students of Determination".					
A4: I believe that nursing students with disabilities should be assessed on what skills they can do and not how they are doing the skills.					
A5: I believe that using diversified teaching strategies can help in the inclusion of nursing students with disabilities "Students of Determination".					
A6: I believe that asking nursing students with disabilities "Students of Determination" directly about how they like to be supported will help in their inclusion.					
A7: I believe that having an accessible infrastructure can facilitate the inclusion of nursing students with disabilities "Students of Determination".					
P1: I believe that students from any disability category are able to provide safe care to patients upon graduation.					

P2: I believe that providing nonclinical tracks in nursing can facilitate the inclusion of nursing students with disabilities "Students of Determination".					
P3: I believe that providing options for clinical and nonclinical tracks in nursing will maximize the strengths of students with disabilities " Students of Determination".					
P4: I believe that nursing students must be prepared to a variety of clinical settings and should not be limited to bedside work.					
P5: I believe that opening more sub-specialties in nursing can facilitate the inclusion of nursing students with disabilities " Students of Determination".					
P6: I believe that modifying the clinical practice to be inclusive of all areas of nursing will increase opportunity of including nursing students with disabilities.					
P7: I believe that using alternative experiences such as simulation can allow nursing students of determination to have a greater opportunity to fulfill clinical obligations.					
Perceived Barriers	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
B1: I believe that social stigma against people with disabilities" is a barrier for including nursing students with disabilities "Students of Determination".					
B2: I believe that the admission requirements to nursing programs are barriers to the inclusion of nursing students with disabilities "Students of Determination".					

B3: I believe that negative attitudes of educators towards students with disabilities "Students of Determination" are barriers to their inclusion.					
B4: I believe that the lack of clear policy to support students with disabilities "Students of Determination" is a barrier to their inclusion.					
B5: I believe that the lack of resources in the nursing laboratories is a barrier to the inclusion of nursing students with disabilities "Students of Determination".					
B6: I believe that the lack of professional development on how to meet the needs of nursing students with disabilities "Students of Determination" is a barrier to their inclusion.					
B7: I believe that not disclosing the disability is barrier for including nursing students of determination					
B8: I believe that lack of communication between educators and administration is a barrier for the inclusion of nursing students with disabilities.					
B9: I believe that the lack of collaboration between educators and nurses in clinical sites is a barrier for the inclusion of nursing students with disabilities.					
Perceived Attitudes	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
T1: Empathetic educators and students help in the success of inclusion of nursing students with disabilities					
T2: Peer interaction between nursing students with and without disabilities will help both groups to learn new skills.					

T3: Accepting nursing students of determination will help in creating an inclusive welcoming environment.					
T4: People in the nursing school can create compassion and sense of inclusion.					

Appendix B: Unstructured Interview Protocol

(Nurse officers /Nursing faculty / Nursing Education Students/ Administrators)

Research Question Two: What are the nursing education stakeholders' views on the factors affecting the inclusion of nursing education students with disabilities in nursing education programmes in the UAE?

Introduction:

Overview of the research: aim, significance, role of the researcher, ensure anonymity of the organization and the participants

Remind about the consent to record interview

Interviewee information:

Emirates of living _____

Knows someone with a disability: Yes/ No

Interacted with a student with a disability: Yes/ No

Having taken a course about disability: Yes/ No

Q1: What do you think are the factors that affect the inclusion of nursing students with disabilities in nursing education programmes in the UAE? At (student/ school/ institution/ community/ Country) levels

Closing:

Thanking the participants

Summarizing main points

Verbalizing the main message that should be captured in this study

Explaining the steps that will follow data transcription and analysis

Giving the opportunity to receive more input if available about the topic.

Suggesting sharing transcript

Appendix C: Semi Structured Interview Protocol

(Nursing faculty / Nursing Students/ Administrators)

Research Question Four: What are the facilitators of the inclusion of nursing education students with disabilities in the nursing education programmes in UAE as viewed by nursing education stakeholders?

Introduction:

Overview of the research: aim, significance, role of the researcher, ensure anonymity of the organization and the participants

Remind about the consent to record interview

Interviewee information:

Emirates of living _____

Knows someone with a disability: Yes/ No

Interacted with a student with a disability: Yes/ No

Having taken a course about disability: Yes/ No

Q1. How do you think the attitude of people around the student affect the success of their inclusion? What do you think can be done to improve attitudes towards the inclusion of nursing students with disabilities? Can you give me examples?

—

Q2. How do you think the assessments should be to facilitate the inclusion of NSWsDs? Can you give me examples?

—

Q3. How do you think disclosing disability affect the inclusion of nursing students with disabilities?

—

Q4. What do you think is the role of technology in the inclusion of NSWsDs? Can you give me examples?

—

Q5. What do you think is the impact of having subspecialties in nursing on the inclusion of NSWDs?

—

Q6. In your opinion, how do you think teaching methods should be to facilitate the inclusion of NSWDs?

—

Q7. In your opinion, how should be the nature of communication between nursing educators and clinical people to facilitate the inclusion of NSWDs?

—

Q8. How do think students of various disability categories can be included in the NE programmes Can you give examples?

—

Q9. How do you think the admission institutional policy should be in order to facilitate the inclusion of NSWDs?

—

Q10. How can the institution infrastructure be made more accessible to NSWDs? Can you give examples?

—

Closing:

Thanking the participants

Summarizing main points

Verbalizing the main message that should be captured in this study

Explaining the steps that will follow data transcription and analysis

Giving the opportunity to receive more input if available about the topic.

Suggesting sharing transcript

Appendix D: Participation in Research Study- Consent Form

My name is Amani Darwish. I am a doctoral student at British University in Dubai. My research study aims to examine the perceptions of nursing education stakeholders towards the inclusion of nursing students with disabilities in nursing education programs in the UAE. I kindly invite you to take part in the study.

Activities:

The study will include interviewing a small sample of nursing education leaders, faculty, and students. The interview duration will be around 30 minutes and will be conducted through ZOOM in a private room.

Risks:

There are no risks in this study. However, you can discontinue the interview at any time. You can choose not to give answers to questions that you do not feel comfortable answering.

Benefits:

If you decide to participate, the potential benefits will include having a better understanding of the perceptions of nursing education stakeholders toward the inclusion of nursing education students with disabilities in nursing education programs in UAE and will help in identifying the factors that affect their inclusion. It may also help in creating framework to support disability diversity in nursing education in UAE.

Confidentiality:

The information you provide will be kept confidential. You will be identified by numbers and not by names. Documents with personal information will be stored in a secured place that later will be deleted or destroyed when the study is over.

Contact Information:

If you have any questions, you can contact me at amanidarwish@hotmail.com
or (971) 50- 6727084

Voluntary Participation:

Your participation is voluntary. You can stop whenever you do not feel comfortable. There will be no penalty.

Interview Recording:

Your responses will be recorder by a voice recorder on Zoom. However, you can still participate if you choose the interview not to be recorded.

Please sign here to indicate your approval for interview recording.

Participant Name

Signature

Date

A signature indicates your approval for participating in this study.

Participant Name

Signature

Date

Appendix E: Sources for Questionnaire Development

Exploring the perceptions of nursing education stakeholders towards			
Domain	Literature Source	Extracted from in depth interviews	Document analysis
Perceptions of legal requirements and policies related to inclusion of nursing students with disabilities	Knowledge of laws and policies Ashcroft, T. J., Chernomas, W. M., Davis, P. L., Dean, R. A., Seguire, M., Shapiro, C. R., & Swiderski, L. M. (2008). Nursing students with disabilities: One faculty's journey. <i>International Journal of Nursing Education Scholarship</i>, 5(1). Based on our understanding of the literature and discussion, we identified several knowledge domains necessary for nursing educators working with students with disabilities: (a) legal requirements, professional obligations, and university policies that impact the issue and establish the parameters for admitting, accommodating, and evaluating students with disabilities In the knowledge of disability issues section, faculty, members were asked to rate their level of knowledge in the following area: Legal obligations of programs and faculty related to students with disabilities Sowers, J. A., & Smith, M. R. (2004). Nursing faculty members' perceptions, knowledge, and concerns about students with disabilities. <i>Journal of Nursing Education</i>, 43(5), 213-218.	Theme emerged from In depth interviews with nursing education leaders regarding their perceptions related to factors affecting inclusion “Knowledge of the law and policy” was one of the themes	

	Calloway, K. L. (2019). Acute Care Nurses' Attitudes Toward Nursing Students with Disabilities. University of Northern Colorado.		
I know the meaning of the term "disability".	Moodley, S., & Mchunu, G. (2022). Integrating students with disabilities into nursing education: a South African perspective of nurse educators' experiences. <i>International Journal of Africa Nursing Sciences</i> , 100414.	Participant 1: "the first question that comes to my head is what are we defining disabilities as because you know people with disabilities are not visibly obvious" Participant 2: "First you need to start by defining what do you mean by disability. Are they physical disabilities, cognitive disabilities? If you are focusing on physical disability than it is totally different. right"	
I know the UAE laws related to the rights of people with disabilities "People of Determination" in education.	Ashcroft, T. J., Chernomas, W. M., Davis, P. L., Dean, R. A., Seguire, M., Shapiro, C. R., & Swiderski, L. M. (2008). Nursing students with disabilities: One faculty's journey. <i>International Journal of Nursing Education Scholarship</i> , 5(1).		Document analysis of: Federal 29 (2006) Local Law number 2 of 2014 Dubai of Emirate <u>Ministerial Resolution No. 647 for the year 2020 on the policy of inclusive education</u> 'National Policy for Empowering People of Determination' Dubai Inclusive Education Policy Framework

The UAE nursing and midwifery education standards clearly describes how the needs of diverse learners should be met			The UAE nursing and midwifery education standards
The admission policy to nursing programs in my institution supports the inclusion of nursing students with disabilities "Students of Determination".	Matt, S. B., Maheady, D., & Fleming, S. E. (2015). Educating Nursing Students with Disabilities: Replacing Essential Functions with Technical Standards for Program Entry Criteria. <i>Journal of Postsecondary Education and Disability</i> , 28(4), 461-468.	Participant 1: "I wonder what criteria the college is using when they reported that they have no students with disabilities" Participant 2: "In the admin we have disability people and really good number and they mandated each facility in government entity to have a % of people with disabilities But unfortunately Physicians nurses, allied health are not included under this" Participant 3: "It is not a disability that you are hired accommodations we can provide accommodations. But to hire someone with a disability. I am not sure if the college will take them or not." Participant 4: "What I understood from admission that its purely numbers, they pass Emsat and they choose the college and they get in the nursing program. The only time we get to know about who has a disability once	College Policy and procedure handbook

		they are in clinical sites”	
Passing a physical fitness test is an important admission requirement to nursing education programs in my institution.	Matt, S. B., Maheady, D., & Fleming, S. E. (2015). Educating Nursing Students with Disabilities: Replacing Essential Functions with Technical Standards for Program Entry Criteria. <i>Journal of Postsecondary Education and Disability</i>, 28(4), 461-468.	Participant 1: “Physical fitness is an element that needs to be considered. Thinking of nursing skills, you need to have an element of fitness” Participant 2: “Yes they have to pass clinical fitness in clinical Well technically in the program but no one will look at it until you go to the technical stage” Participant 3: “To have a working visa, you have to have a fit for duty certificate. We screen for chronic diseases because there is a high chance of them missing work more than someone who is perfectly fit. DHCC gives them conditional fit. It is up to the employer to clear them” Participant 4: “I am thinking because first of all the criteria put by college itself, we have to have medical fitness before going to this. Medical fitness is one of the acceptance criteria similar to high school transcripts not less important.”	Students’ handbook Policy and procedure handbook

There is a clear disability policy in my institution on how to support nursing students of determination	Matt, S. B., Maheady, D., & Fleming, S. E. (2015). Educating Nursing Students with Disabilities: Replacing Essential Functions with Technical Standards for Program Entry Criteria. <i>Journal of Postsecondary Education and Disability</i>, 28(4), 461-468.	Participant 1: “Support has to come from senior level. It should involve everybody and should be embedded with policies and procedures within our culture.” Participant 2: “Arguably, there is no support for them. There is no extra exemptions or reading time we don’t allow braille we don’t allow taking you exam in a private room. None of that is here”. Participant 3: “If it is khda or any regulatory body. For universities to give permission for bending the curriculum without losing the message and content. Say we need to change X, y and Z in the curriculum, or you need to move courses around or may be have different clinical site definitely or do their clinical hour differently. This you need to get approval” Participant 4: “One nurse she had a car accident, we wanted her to have a desk work but we don’t have a job description to support her or help we have to take permission from senior governors approval. We have to explain and convince	Students’ handbook Policy and procedure handbook
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		them. It is an isolated case. They will not provide exclusion to nay case.”	
Perceptions of Accommodations related to the inclusion of nursing students with disabilities	Knowledge of accommodations in the clinical setting Ashcroft, T. J., Chernomas, W. M., Davis, P. L., Dean, R. A., Seguire, M., Shapiro, C. R., & Swiderski, L. M. (2008). Nursing students with disabilities: One faculty's journey. <i>International Journal of Nursing Education Scholarship</i> , 5(1).		
Assistive technology can help in meeting the needs of nursing with disabilities " Students of Determination".	Role of Technology Betz, C. L., Smith, K. A., & Bui, K. (2012). A survey of California nursing programs: Admission and accommodation policies for students with disabilities. <i>Journal of Nursing Education</i> , 51(12), 676-684. Maheady, D. C. (1999). Jumping through hoops, walking on egg shells: The experiences of nursing students with disabilities. <i>Journal of Nursing Education</i> , 38(4), 162-170	Participant 1: “We can invest in technology. I don’t know if zoom does it. Does all transcripts for you. That is not too hard. There are many sort of things that does not take a lot of money” Participant 2: “We don’t have equipment that are digital. All are manual and require visual. Handling by your hand and cognitive abilities. One machine we brough newly is digital but you need to touch and see people with disabilities cannot really do.”	
Extending the submission deadlines for tasks can be a reasonable way to support nursing students with disabilities " Students of Determination".	Betz, C. L., Smith, K. A., & Bui, K. (2012). A survey of California nursing programs: Admission and accommodation policies for students with disabilities. <i>Journal of Nursing Education</i> , 51(12), 676-684.	Participant 1: “Arguably, there is no support for them. There is no extra exemptions or reading time we don’t allow braille we don’t allow taking you exam in a	

		private room. None of that is here” Participant 2: “Say we need to change X, Y and Z in the curriculum, or you need to move courses around or may have different clinical site differently or do their clinical hour differently” Participant 3: “These people they have to have special plan or special curriculum to fit with their condition Because they may go to physiotherapy sessions. they are not normal people where they can utilize their full time to study or train to go to practical area, so we have to have different thing”	
Using alternative devices in clinical practice to perform a task can be a reasonable way to support nursing students with disabilities " Students of Determination".	Betz, C. L., Smith, K. A., & Bui, K. (2012). A survey of California nursing programs: Admission and accommodation policies for students with disabilities. <i>Journal of Nursing Education</i> , 51(12), 676-684.		
Nursing students with disabilities should be assessed on what skills they can do and not how they are doing the skills.	Moodley, S., & Mchunu, G. (2022). Integrating students with disabilities into nursing education: a South African perspective of nurse educators’ experiences. <i>International Journal of Africa Nursing Sciences</i> , 100414.	Participant 1: “The curriculum should focus on the attributes and skills that you need to do the job and not how to do it. There are should not be one way to do a skill. There are lots of different ways”	

Using diversified teaching strategies can help in the inclusion of nursing students with disabilities "Students of Determination".	Effective learning strategies Ashcroft, T. J., Chernomas, W. M., Davis, P. L., Dean, R. A., Seguire, M., Shapiro, C. R., & Swiderski, L. M. (2008). Nursing students with disabilities: One faculty's journey. <i>International Journal of Nursing Education Scholarship</i> , 5(1).		
Asking nursing students with disabilities "Students of Determination" directly about how they like to be supported will help in their inclusion.	Betz, C. L., Smith, K. A., & Bui, K. (2012). A survey of California nursing programs: Admission and accommodation policies for students with disabilities. <i>Journal of Nursing Education</i> , 51(12), 676-684.	Participant 1: “They have to do one on one or follow up tutoring or anything like that again depending on the type of disability. If it is cognitive disabilities, it would be very different” Participant 2: “It is student centered learning, it is not one size fits all. Students centered we say it a lot do we do student centered learning?” Participant 3: “We handle that at one-to-one faculty student bases. So if she has a migraine “socially acceptable” we put a students with a faculty member in a break out room to remove her from a certain situation”	
Having an accessible infrastructure can facilitate the inclusion of nursing students with disabilities "Students of Determination".	Moodley, S., & Mchunu, G. (2022). Integrating students with disabilities into nursing education: a South African perspective of nurse educators' experiences. <i>International Journal of Africa Nursing Sciences</i> , 100414.		

Knowledge of practice of nursing students with disability	Area of practice of nursing students with disability Neal-Boylan, L., Marks, B., & McCulloh, K. J. (2015). Supporting nurses and nursing students with disabilities. <i>AJN The American Journal of Nursing</i> , 115(10), 11.		
Students from any disability category are able to provide safe care to patients upon graduation.	Source 1: Safety Calloway, K., & Copeland, D. (2021). Acute care nurses' attitudes toward nursing students with disabilities: A focused ethnography. <i>Nurse education in practice</i>, 51, 102960. Overall, safety was a primary concern for participants and patient safety was not given more focus than staff or student safety Source 2: Maheady, D. C. (1999). Jumping through hoops, walking on egg shells: The experiences of nursing students with disabilities. <i>Journal of Nursing Education</i>, 38(4), 162-170. Source 3: Sowers, J. A., & Smith, M. R. (2004). Nursing faculty members' perceptions, knowledge, and concerns about students with disabilities. <i>Journal of Nursing Education</i>, 43(5), 213-218.	Participant 1: "But I think if they are in bedside it will be really a great challenge for those category of people unfortunately. People who have cognitive issues, they are not going to be interested to study nursing. They need someone to give them care so I don't think to go and look after somebody to give care because they are lacking these things, they need somebody to give them care. Maybe ms. Amani people who are on the wheel chair are dependent on their family for daily living activities such as dressing up, cleaning feeding them, they don't have confidence in themselves to study nursing to help others. Participant 2: "We are training students to take care of vulnerable people in clinical practice we need to make sure that we care for them because nursing students with mental disabilities cannot take care of vulnerable people if they don't	

		have this help and support” Participants 3: “We screen for chronic diseases because there is a high chance of them missing work more than someone who is perfectly fit” Participant 4: All categories can be included and they can all add diversity to the classroom that we don’t have. They will make other nurses better nurses.	
Providing nonclinical tracks in nursing can facilitate the inclusion of nursing students with disabilities "Students of Determination".	Rankin, E. R., Nayda, R., Cocks, S., & Smith, M. (2010). Students with disabilities and clinical placement: understanding the perspective of healthcare organisations. <i>International Journal of Inclusive Education</i>, 14(5), 533-542.	Participant 1: “We know that in nursing there are lots of avenues you can take when you become qualified. You can become nursing educator or work in outpatient clinic however to get to these routes you still have to have clinical experience” Participant 2: “For example in the college instead of going as general nursing , they can be in informatics, because all our record now it is not anymore handwriting so they can be specialized in this. They can be supportive team. We have discharge team during Covid This is like a new position coming up with in Covid. It created	

		opportunities for many people.” Participant 3: “There are different type of nursing. We are lucky to have different types. If you have physical disabilities. It does not have to be something that you always need to stand on your feet. There are nursing jobs that are very much needed like discharge planning, care management, nurse educator, patient advocate, patient education. These are roles that can assimilate nurses with physical disabilities “	
Providing options for clinical and nonclinical tracks in nursing will maximize the strengths of students with disabilities " Students of Determination".	Ramluggun, P., Jackson, D., & Usher, K. (2021). Supporting students with disabilities in preregistration nursing programmes. <i>International journal of mental health nursing</i> , 30(2), 353-356.		
Nursing students must be prepared to a variety of clinical settings and should not be limited to bedside work.	Ramluggun, P., Jackson, D., & Usher, K. (2021). Supporting students with disabilities in preregistration nursing programmes. <i>International journal of mental health nursing</i>, 30(2), 353-356. Neal-Boylan, L., Fennie, K., & Baldauf-Wagner, S. (2011). Nurses with sensory disabilities: Their perceptions and characteristics. <i>Rehabilitation Nursing</i>, 36(1), 25-31.	Participant 1: “We know that in nursing there are lots of avenues you can take when you become qualified. You can become nursing educator or work in outpatient clinic however to get to these routes you still have to have clinical experience”	
Opening more sub-specialties in nursing	Ramluggun, P., Jackson, D., & Usher, K. (2021). Supporting		

can facilitate the inclusion of nursing students with disabilities " Students of Determination".	students with disabilities in preregistration nursing programmes. <i>International journal of mental health nursing</i>, 30(2), 353-356. Neal-Boylan, L., Fennie, K., & Baldauf-Wagner, S. (2011). Nurses with sensory disabilities: Their perceptions and characteristics. <i>Rehabilitation</i>		
Modifying the clinical practice to be inclusive of all areas of nursing will increase opportunity of including nursing students with disabilities.	Calloway, K. L. (2019). Acute Care Nurses' Attitudes Toward Nursing Students with Disabilities. University of Northern Colorado.		
Using alternative experiences such as simulation can allow nursing students of determination to have a greater opportunity to fulfill clinical obligations.	Azzopardi, T., Johnson, A., Phillips, K., Dickson, C., Hengstberger-Sims, C., Goldsmith, M., & Allan, T. (2014). Simulation as a learning strategy: Supporting undergraduate nursing students with disabilities. <i>Journal of clinical nursing</i> , 23(3-4), 402-409.		
Knowledge of the barriers to the inclusion of nursing students with disabilities		All items were created based on all the themes extracted from the unstructured interviews “What do you think are the factors that affect the inclusion of nursing students with disabilities” Main Themes: Nursing students practice Attitudes of stakeholders Disability policies	

		Education and professional development Disability awareness Opening subspecialties in nursing Nature of disability Communication and partnership	
Social stigma against people with disabilities" is a barrier for including nursing students with disabilities "Students of Determination".	Ashcroft, T. J., Chernomas, W. M., Davis, P. L., Dean, R. A., Seguire, M., Shapiro, C. R., & Swiderski, L. M. (2008). Nursing students with disabilities: One faculty's journey. <i>International Journal of Nursing Education Scholarship</i> , 5(1).		
Admission requirements to nursing programs are barriers to the inclusion of nursing students with disabilities "Students of Determination".	Ramluggun, P., Jackson, D., & Usher, K. (2021). Supporting students with disabilities in preregistration nursing programmes. <i>International journal of mental health nursing</i> , 30(2), 353-356.		
Negative attitudes of educators towards students with disabilities "Students of Determination" are barriers to their inclusion.	Source 1: Code Negative attitudes of teachers and students Maheady, D. C. (1999). Jumping through hoops, walking on egg shells: The experiences of nursing students with disabilities. <i>Journal of Nursing Education</i>, 38(4), 162-170		
Lack of clear policy to support students with disabilities "Students of Determination" is a	Source 1: Maheady, D. C. (1999). Jumping through hoops, walking on egg shells: The experiences of nursing		

barrier to their inclusion.	students with disabilities. <i>Journal of Nursing Education</i> , 38(4), 162-170		
Lack of resources in the nursing laboratories is a barrier to the inclusion of nursing students with disabilities "Students of Determination".	Source Moodley, S., & Mchunu, G. (2019). Current access and recruitment practices in nursing education institutions in KwaZulu-Natal: A case study of student nurses with disabilities. <i>African journal of disability</i> , 8, 429. https://doi.org/10.4102/ajod.v8i0.429		
Lack of professional development on how to meet the needs of nursing students with disabilities "Students of Determination" is a barrier to their inclusion.	Moodley, S., & Mchunu, G. (2019). Current access and recruitment practices in nursing education institutions in KwaZulu-Natal: A case study of student nurses with disabilities. <i>African journal of disability</i> , 8, 429. https://doi.org/10.4102/ajod.v8i0.429		
Not disclosing the disability is barrier for including nursing students of determination	Source 1: Code lack of disclosure Maheady, D. C. (1999). Jumping through hoops, walking on egg shells: The experiences of nursing students with disabilities. <i>Journal of Nursing Education</i> , 38(4), 162-170 Morris, D. K., & Turnbull, P. A. (2007). The disclosure of dyslexia in clinical practice: Experiences of student nurses in the United Kingdom. <i>Nurse education today</i> , 27(1), 35-42.		
Lack of communication between educators and administration is a barrier for the inclusion of nursing students with disabilities.	Source 1: Need for communication to meet the needs Calloway, K., & Copeland, D. (2021). Acute care nurses' attitudes toward nursing students with disabilities: A focused ethnography. <i>Nurse education in practice</i> , 51, 102960.	Participant 1: "It is important to have inclusion disability committee to look at what is happening and to see what the college is doing what the college can do better and in this committee to have a student with a	

		disability as a member” Participant 2: “We don’t get to see admission report we have to interview everyone who come in but we don’t interview them. So it is very concerning., we have students who need support yet we have none of that.. We handle that at one to one faculty student bases. And we hide it from student services” Participant 3: “If more cases are such will alert senior team. They will relook these categories. But we have to communicate with the community that nursing can accept POD but with certain disability” Participants 4: “Say we need to change X, y and Z in the curriculum or you need to move courses around or may be have different clinical site differently or do their clinical hour differently. This you need to get approval from admin and management”	
Lack of collaboration between educators and nurses in clinical sites is a barrier for the inclusion of nursing students with disabilities.	Moodley, S., & Mchunu, G. (2022). Integrating students with disabilities into nursing education: a South African perspective of nurse educators’ experiences. <i>International Journal of Africa Nursing Sciences</i> , 100414.	Participant 1: “There are many unknowns in the clinical practice. Some people are supportive, and others are less supportive. What if I cannot do this. What	

		if everyone think that I am stupid , what patients will think all these questions can prevent somebody from continuing. Academic staff should go to clinical practice and they can keep an eye on how things are if students have any issues. Participant 2: I think the college can contract with certain hospitals and say that we have these students that we nurture. I have done this in the west. Universities use to come to us and say 5% of our students have disabilities and these are the jibs that the they are looking for . So they start early on and they become part of the system and this is how the system gets created around them. The college should reach formally to the service sector and ask formally what to do to include these students. Participant 3: We have a huge center of disability in the area, do we do clinical there ?do we spend any days there?. Do we market over there?	
Perceptions of attitudes of stakeholders	Attitudes of stakeholders Neal-Boylan, L., Marks, B., & McCulloh, K. J. (2015). Supporting nurses and nursing students with		

	disabilities. <i>AJN The American Journal of Nursing</i> , 115(10), 11.		
Empathetic educators and students help in the success of inclusion of nursing students with disabilities	Neal-Boylan, L., Marks, B., & McCulloh, K. J. (2015). Supporting nurses and nursing students with disabilities. <i>AJN The American Journal of Nursing</i> , 115(10), 11.	Participant 1: I think having understanding and inclusive teachers. Is very important They are role models. Participant 2: You can take little steps that don't cost money for example allowing exceptions to students from student services without producing tons of documents, more empathy.	
Peer interaction between nursing students with and without disabilities will help both groups to learn new skills		Participant 1: For example in the college instead of going as general nursing , they can be in informatics, because all our record now it is not anymore handwriting so they can be specialized in this. So it is not required from them to be in the clinical area. They can be in the back desk. And they will expert and resources for nurses who will be in the clinical area. Participant 2: But I think this is how they learn best when they have their friends with disability around them so they can see its not them and us. If I do deep breathing exercises, I do box breathing, I do fidgets, I do rubber band	

		snapping students will learn so much better than me standing up there and put a slide here and say here are five things you can do when you have panic attacks.	
Accepting nursing students of determination will help in creating an inclusive welcoming environment		Participant 1: “Students should be accepted as part of the community. They should not feel that they have a disability that prevent them from doing a good job or become a good nurse”. Participant 2: So when someone has a disability they should feel that they are welcome here and that they are part of here and that they are part of the community. This sort of issue is not solved by policy. It is solved by creating communities where people are not just in but accepted and engaged. Participant 3: That person has to be pushed and has not be labeled from a young age but we see this labelling and exclusion instead of inclusion and accepting disability and working with it is very important. It starts at home and there is still a little bit of hiding long way to accept disability.	

		There is hiding of kids when they have disability. It is very rare to i see people disability around in campuses. They are not mainstreamed they go to special schools. We need to start with home accepting disability. Pushing their loved one to be in the mainstream	
People in the nursing school can create compassion and sense of inclusion.		Participant 1: I believe that people in the nursing school create some kind of compassion and inclusion. Participant 2: “There are disagreement between teachers complaining about students. “ they are unprofessional, they are not following the rules. Maybe but there maybe other stuff going on”.	

Appendix F: Participation in Questionnaire - Participation Information Sheet

Introduction

My name is Amani Darwish. I am a doctoral student at British University in Dubai. My research study aims to explore the perceptions of nursing education stakeholders towards the inclusion of nursing students with disabilities in nursing education programs in the UAE.

A. Participation in the study

The study will include sending a survey through an electronic link to all nursing education leaders, nursing education faculty members and nursing education students in nursing education programs in the institution. The survey can be completed in 5 minutes.

B. Risks

There are no risks in this study. However, you can discontinue your participation at any time.

C. Benefits:

If you decide to participate, the potential benefits will include having a better understanding of the perceptions of nursing education stakeholders toward the inclusion of nursing education students with disabilities in nursing education programs in UAE and will help in identifying the factors that affect their inclusion. It may also help in creating framework to support disability diversity in nursing education in UAE.

D. Confidentiality:

The information you provide will be kept confidential. You will be identified by numbers and not by names. Documents with personal information will be stored in a secured place that later will be deleted or destroyed when the study is over.

E. Voluntary Participation:

Your participation is voluntary. You can stop whenever you do not feel comfortable. There will be no penalty.

Contact Information:

If you have any questions, you can contact me at amanidarwish@hotmail.com

or (971) 50- 6727084

Appendix G: Interview Transcripts Samples

Interviewee 1 (Unstructured)

Interviewer: Thank you so much for accepting to take part of this study and to give me from your precious time. I know how it is when you are working in the hospital. Thank you so much. The focus of our interview will be on the factors that may impact the inclusion of NSW in NE programs in UAE.

Interviewee: No worries Amani it is my pleasure and good luck on your thesis. I think it is a very interesting topic and I am so excited to read the results.

Interviewer: (laughter). Sure, I will when it is published. Fingers crossed (laughter)

Interviewee: All the best dear.

Interviewer: Thank You

Interviewer: From your own perspective as nurse leader, what do you think are the factors that may affect the inclusion of nursing students with disabilities in nursing education?

Interviewee: You need to start by defining what do you mean by disabilities. Are they physical disabilities, cognitive disabilities? What type of disabilities you are focusing on? If we are focusing on physical disabilities than it will totally different. Right! Including them in nursing program (paused), Well if they get through nursing program, getting them to work as a nurse should not be an issue. There shouldn't be any issue to incorporate them in the workforce. There are different types of nursing. We are lucky to have different types. If you have physical disabilities. It does not have to be something that you always need to stand on your feet. There are nursing jobs that are very much needed like discharge plans, care, management, nurse educators, patient advocate, patient educators. There are roles that can assimilate nurses with physical disabilities for example.

Interviewer: So, I understand from you that factors within nursing profession can impact inclusion of NSWs.

Interviewee: Yes

Interviewer: Thank you. It is clear. **Probing Q 1. Now if we want to look at the immediate environment of NSW, what do you think are the factors that may impact their inclusion?**

Interviewee: I think having understanding and inclusive teachers is very important. They are role models. For their students whether disabled or not. But students rely on their teachers and as a system we need to look at a way to make it more flexible. It also starts at home and there is still a little bit of hiding long way to accept disability. There is hiding of kids when they have disability. It is very rare to see people disability around in campuses. They are not mainstreamed they go to special schools. We need to start with home accepting disability. Pushing their loved one to be in the mainstream. I don't see any university saying no to accepting. The law is very clear but it has to start from within. That person has to be pushed and has not be labeled from a young age but we see this labelling and exclusion instead of inclusion. Do we follow up? (paused). Accepting disability and working with it is very important.

Interviewer: Probing Q2: Are there any factors at the school level that can impact their inclusion?

Interviewee: I think councilor and social workers have to be very close to the person who have or who developed a disability. So, I start with a counselor and something as simple as group around him and show compassion. You need a psychologist at the campus that can you to facilitate their acceptance. I believe that people in the nursing school create some kind of compassion and inclusion.

Interviewer: Probing Q3: Do you think factors at the college level have any impact?

Interviewee: The college would have to start by assessing. You know doing an assessment according to ADA guidelines and group these nurses. They have to do one on one or follow up tutoring or anything like that again depending on the type of disability. If it is cognitive disabilities, it would be very different. But if you graduate from school regardless of what disability you have at the job level. We at the service level have to incorporate them to find them something they can contribute. Whether nursing academia, nursing certification, nursing administration. So, I think we just need to define disability.

Interviewer: Probing Q4: Are there any special requirements in nursing curricula?

Interviewee: The nursing curricula are fairly rigid and because we are new programs. I think nursing curriculum is more rigid and we are still new added. We want to deliver a curriculum that is approved. Teachers should have some flexibility, but they have to get it not from them directly, but it should be built in the system. If it is KHDA or any regulatory body. For universities you give permission for bending the curriculum without losing the message and content. This is something we need to work on with the ministry of education. But I don't think it will be a big issue. Because here there is a lot of work going on around people of determination., So I think it is the matter of the university to take them or not. Say we need to change X, y and Z in the curriculum, or you need to move courses around or may have different clinical site differently or do their clinical hour differently. This you need to get approval (paused) but I don't think it will be an issue. Compared to the west, you don't have a lot of local nurses. A lot of nurses are expats. They get admitted to nursing school programs in UAE. We graduate few.

Interviewer: Thank you. It is clear. **Probing Q4: Do you have nurses with disabilities in your organization?**

Interviewee: Now we don't have any one right now with disability working. If we consider pregnancy a disability. It is not a disability that you are hired accommodations we can provide accommodations. But to hire someone with a disability (paused) I don't know if the college take them or not (paused).

Interviewer: Probing Q5: Are there any conditions or requirements for their employment?

Interviewee: To have a working visa, you have to have a fit for duty certificate. We screen for chronic diseases because there is a high chance of them missing work more than someone who is perfectly fit. DHCC gives them conditional fit. It is up to the employer to clear them. I usually get them engaged with occupational therapist if not cleared we provide accommodation.

Interviewee: Probing Q6: You know that nurses with disabilities have to deal with patients and provide them with safe care so what are the factors at the community level that can affect their inclusion?

Interviewee: I don't see that they are risk on patients since they passed through a rigorous program. So, I don't think they will pose any harm. But some patients don't accept someone with disability. So we at hospital level we work around it. I think we need to start by accepting from school and make them graduate and then get them employment, but it should be always in a system that is supportive. I think that college can almost contract with certain hospitals and say look we have these students who are nurture, we have Unis in the west a lot who would come to us and say we have 5% of students with disabilities. These are the jobs they are looking for. So, you start early on and at last year in nursing I get would to know to see them meet them and expose them to the hospital. So, they sort out become part of the system and they come to me can you fix this and that and this is how the system is created around the students. So, we can ask uni to reach out for the service sector and formally say these are students we need to place into two years what can you do to this happen.

Interviewer: Probing Q7: Do you think accepting the idea of inclusion of nursing students with disabilities will take time?

Interviewee: Time is a factor. You don't need to do things last minute. It takes time for people to get used to the idea to get exposed to it and more you are expose to it and it becomes a second nature.

Interviewer: This is very clear. Thank you so much for meeting with me today. I have gained valuable insights regarding the factors that may impact the inclusion of NSWsDs. The transcripts will be shared with you for validation.

Interviewee: My Pleasure. Sure. Good luck Amani

Interviewee 1 (Semi- Structured)

Interviewer: Thank you so much for accepting to take part of this study. The focus of our interview will be on how we can effectively include NSWDs in NE programs in UAE.

Interviewee: Sure, no problem

Interviewer: Thank you.

Interviewer: The results of a survey I conducted to explore the perceived knowledge, beliefs and attitudes of nursing educators and students towards the inclusion of NSWDs showed that attitudes of people around NSWDs affect their inclusion. Q1. Can you elaborate more on this result?

Interviewee: Family should always support the student especially those with disabilities. They should give her mental support. So encouragement should start from home. There should be a friendly relationship from both instructors and students with disability. So the student will feel more she is part of nursing course. She is not different from other students. She is also normal. She can get information as normal students. The attitude of teacher should be equal and fair for all. Encourage students and make her feel she is part of class. She will be more supported and encouraged. Also, the preceptors should respect students because it will affect emotionally and mentally.

Interviewer: The results of the survey also showed that educators and students had some concerns regarding the clarity of the admission policy of NSWDs? Q2. How do you think the admission policy should be?

Interviewee: For admission to nursing programs they should launch a policy regarding students with disability what they are allowed to do and what they are not allowed to do. So, with the policy, things will be clear for instructors and for students. It will be much clearer for both of them. People may not be aware of the law and policies. I am not seeing students with disabilities in the college. Maybe some. It is important to issue and implement the policy and the law. They should establish different policies when considering students with disabilities like when entering to the campus or dropping students in the parking. If we start career counselling early, they may be ambitious to become a nurse and the college will create a different policy with different instructions.

Interviewer: The results of the survey also showed that educators believed that physical fitness is an important admission requirement to the NE program. Q3. Why do you think physical fitness is important?

Interviewee: Physical fitness is important because you will be taking care of patients. You may need to help the patients to walk, or to eat or to feed the patients, or give bath to the patients. So maybe from this side, they will not be able to meet the goal.

Interviewer: It was also showed that assistive technology can help in their inclusion? Q4. Can you give me examples on how assistive technology can be used in clinical settings?

Interviewee: There is a newest device to measure height and weight. It is automatic no need even to raise anything. This is new technology. I saw it in SSMC. It is automatic. Once patient stand on it. But bedside it will be much difficult for some category. If they were given different

tasks, it will be easy on them. If she wants to measure the height of patients, she can easily raise the measurement. It can be easily go up and down no need to stand.

Interviewer: Q5: How do you think peer interaction will facilitate inclusion?

Interviewee: We can always seek help from anyone. We always work as teamwork. A student with disability can ask help no worries. There is no restriction from asking help. If she cannot do or perform it alone than she can do it with a partner or colleagues.

Interviewer: Q6: How do you think disclosing disability upon admission affect their inclusion?

Interviewee: She can disclose her disability because there is no shame to disclose it. Also, others can be inspired if she discloses her disability. It will not be ashamed between her friends and colleagues, so it is not shame to disclose it.

Interviewer: Q7: How do you think talking directly to students about their needs will help in their inclusion?

Interviewee: It is important to talk to her and then assess her. She can do nursing assessment, but bedside assessment is not allowed for them when taking care of bedside patient. It is hard. Maybe not all assessment and not all labs. So they are able to do it. They can initiate. So testing their abilities what they are able to do and what they are not able to do, to include them in this assessment or not to include them. In the clinical site. You are dealing with real patients. They should test them also what they are able to do and what they are not able to do in the clinical. From this point, it will be easy to understand what they can do and patient will be much comfortable. So it will not put them in embarrassing situation.

Interviewer: Q8: How do you think collaboration of educators with nurses at clinical site will help in inclusion?

Interviewee: With good preceptor, the preceptor will guide her what are the assessments, bedside assessments. They should get guidance from the preceptor. The collaboration between students, teachers and preceptor is important. As a normal student, preceptors are sometimes very busy. And she does not listen to what I am asking her about any clarification. So, if we think of a disability student (paused) it will also be difficult.

Interviewer: Q9. How do you think having accessible infrastructure will help in their inclusion?

Interviewee: Firstly, they should provide special elevator for them. They can go to level 1, level 2 to the labs to attend their classes. Also, they should consider students with disabilities and make the classes down on the ground floor.

Interviewee: Q10. What do you think is the impact of having subspecialties in nursing on inclusion of NSWsDs?

Interviewee: Other than bedside work, they can work in raising awareness or lecture patients. It will be easy for her but not bedside she can also use the computer and document something.

Interviewer: This is very clear. Thank you so much for meeting with me today. I have gained valuable insights regarding the factors that may impact the inclusion of NSWsDs. The transcripts will be shared with you for validation.

Appendix H: BUiD's Permission Letter



Monday, 18 October 2021

To whom it may concern

This is to certify that Ms. Amani Darwish with Student ID number **20197324** is a registered in the Doctor of Education offered by The British University in Dubai since September 2019.

Ms. Amani has successfully completed her taught modules and is currently working on her thesis titled **“Exploring Nursing Education Stakeholders’ Perceptions of Students with Disabilities Inclusion in Nursing Education Programmes in the UAE”**

She needs your support in conducting surveys, interviews and observation to complete her research.

This letter is issued on Ms. Amani's request.

Yours sincerely,



Dr. Amer Alaya
Head of Student Administration

Appendix I: Health Sciences Academic Institution Ethical Approval Form



Date: 7/02/2021

Main Researcher name and address details:

Exploring Nursing Education Stakeholders' Perceptions of Students with Disabilities Inclusion in Nursing Education Programmes in the UAE

Dears Ms. Amani Darwish

Re: Ethics approval for research – Research Ethics application:
(Reference No: FCEC-2-21-22-PSY-1-SF)

The Ethics Committee is pleased to inform you that your application has been approved. The members agreed that the research depicts a low-risk which should not raise any reasonable concerns for objection.

We wish you success in your research project and future endeavors.

Yours sincerely,

Signature

Dr. Ibrahim Bashayreh

Chair, FCHS Research Ethics Committee

Appendix J: Group Differences Tables of Data of Nursing Students

Appendix J (i)

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
REGULATIONS	Equal variances assumed	1.65	.19	.566	282	.572	0.279	0.493	-0.691	1.250
	Equal variances not assumed			.580	264.10	.562	0.279	0.481	-0.668	1.227
ACCOMMODATIONS	Equal variances assumed	.259	.61	1.852	282	.065	1.047	0.565	-0.066	2.159
	Equal variances not assumed			1.80	220.24	.073	1.047	0.581	-0.099	2.192
ATTITUDE	Equal variances assumed	.100	.75	.918	282	.359	0.327	0.356	-0.373	1.026
	Equal variances not assumed			.928	253.73	.354	0.327	0.352	-0.366	1.019
BARRIERS	Equal variances assumed	2.54	.11	-.830	282	.407	-0.697	0.840	-2.351	0.956
	Equal variances not assumed			-.852	265.61	.395	-0.697	0.818	-2.308	0.913
INCLUSION	Equal variances assumed	.066	.79	1.528	282	.128	0.845	0.553	-0.243	1.934
	Equal variances not assumed			1.50	229.40	.135	0.845	0.563	-0.264	1.954

Appendix J (ii)

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
REGULATIONS	Equal variances assumed	2.594	.108	2.477	282	.014	1.212	0.489	0.249	2.176
	Equal variances not assumed			2.382	207.636	.018	1.212	0.509	0.209	2.216
ACCOMMODATIONS	Equal variances assumed	4.727	.031	1.423	282	.156	0.808	0.568	-0.310	1.926
	Equal variances not assumed			1.342	192.405	.181	0.808	0.602	-0.380	1.996
ATTITUDE	Equal variances assumed	.872	.351	.541	282	.589	0.193	0.357	-0.509	0.896
	Equal variances not assumed			.522	210.106	.602	0.193	0.370	-0.536	0.923
BARRIERS	Equal variances assumed	2.82	.09	-1.50	282	.134	-1.262	0.840	-2.916	0.392
	Equal variances not assumed			-1.47	222.09	.143	-1.262	0.859	-2.954	0.430
INCLUSION	Equal variances assumed	4.66	.03	2.37	282	.018	1.309	0.551	0.224	2.395
	Equal variances not assumed			2.24	194.47	.026	1.309	0.583	0.159	2.459

Appendix J (iii)

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
REGULATIONS	Equal variances assumed	14.506	.000	-.714	282	.476	-0.502	0.703	-1.885	0.881
	Equal variances not assumed			-.522	43.103	.605	-0.502	0.963	-2.443	1.439
ACCOMMODATIONS	Equal variances assumed	2.585	.109	.731	282	.466	0.592	0.810	-1.002	2.186
	Equal variances not assumed			.593	45.026	.556	0.592	0.997	-1.417	2.601
ATTITUDE	Equal variances assumed	3.546	.061	-.270	282	.787	-0.137	0.508	-1.137	0.862
	Equal variances not assumed			-.208	44.001	.836	-0.137	0.659	-1.466	1.192
BARRIERS	Equal variances assumed	1.785	.183	-.807	282	.420	-0.968	1.198	-3.326	1.391
	Equal variances not assumed			-.701	46.535	.487	-0.968	1.381	-3.746	1.811
INCLUSION	Equal variances assumed	.927	.336	.617	282	.538	0.488	0.791	-1.070	2.046
	Equal variances not assumed			.543	46.882	.590	0.488	0.899	-1.321	2.298

Appendix J (iv)

ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
REGULATIONS	Between Groups	19.783	1	19.783	1.193	.276
	Within Groups	4676.960	282	16.585		
	Total	4696.743	283			
ACCOMDATIONS	Between Groups	3.116	1	3.116	.141	.708
	Within Groups	6233.616	282	22.105		
	Total	6236.732	283			
ATTITUDE	Between Groups	1.188	1	1.188	.137	.712
	Within Groups	2445.558	282	8.672		
	Total	2446.746	283			
BARRIERS	Between Groups	18.633	1	18.633	.385	.535
	Within Groups	13637.716	282	48.361		
	Total	13656.349	283			
INCLUSION	Between Groups	.128	1	.128	.006	.938
	Within Groups	5950.182	282	21.100		
	Total	5950.310	283			

Appendix J (v)

ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
REGULATIONS	Between Groups	200.630	6	33.438	2.060	.058
	Within Groups	4496.113	277	16.231		
	Total	4696.743	283			
ACCOMMODATIONS	Between Groups	134.630	6	22.438	1.019	.413
	Within Groups	6102.103	277	22.029		
	Total	6236.732	283			
ATTITUDE	Between Groups	100.802	6	16.800	1.984	.068
	Within Groups	2345.945	277	8.469		
	Total	2446.746	283			
BARRIERS	Between Groups	259.279	6	43.213	.893	.500
	Within Groups	13397.070	277	48.365		
	Total	13656.349	283			
INCLUSION	Between Groups	145.096	6	24.183	1.154	.331
	Within Groups	5805.214	277	20.957		
	Total	5950.310	283			

Appendix K - Group Differences Tables of Data of Nursing Educators

Appendix K (i)

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
REGULATIONS	Equal variances assumed	1.426	.243	-.408	27	.686	-0.467	1.144	-2.813	1.880
	Equal variances not assumed			-.415	23.429	.682	-0.467	1.125	-2.792	1.859
ACCOMMODATIONS	Equal variances assumed	.784	.384	.278	27	.783	0.667	2.395	-4.247	5.580
	Equal variances not assumed			.281	25.632	.781	0.667	2.369	-4.207	5.540
ATTITUDE	Equal variances assumed	1.012	.323	1.286	27	.209	1.643	1.278	-0.979	4.265
	Equal variances not assumed			1.305	24.131	.204	1.643	1.259	-0.955	4.241
BARRIERS	Equal variances assumed	.941	.341	-.053	27	.958	-0.171	3.212	-6.762	6.419
	Equal variances not assumed			-.054	25.298	.957	-0.171	3.175	-6.706	6.363
INCLUSION	Equal variances assumed	5.651	.025	.518	27	.609	1.086	2.096	-3.216	5.387
	Equal variances not assumed			.528	22.155	.603	1.086	2.057	-3.179	5.350

Appendix K (ii)

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
REGULATIONS	Equal variances assumed	.367	.550	-.467	27	.644	-0.623	1.334	-3.361	2.114
	Equal variances not assumed			-.526	12.568	.608	-0.623	1.186	-3.194	1.947
ACCOMMODATIONS	Equal variances assumed	3.230	.083	.174	27	.863	0.487	2.799	-5.256	6.230
	Equal variances not assumed			.233	19.185	.818	0.487	2.090	-3.884	4.858
ATTITUDE	Equal variances assumed	.095	.760	-.055	27	.957	-0.084	1.537	-3.238	3.069
	Equal variances not assumed			-.060	11.934	.953	-0.084	1.401	-3.140	2.971
BARRIERS	Equal variances assumed	2.362	.136	-.885	27	.384	-3.273	3.698	-10.860	4.314
	Equal variances not assumed			-.753	8.182	.472	-3.273	4.345	-13.253	6.707
INCLUSION	Equal variances assumed	.927	.344	-.148	27	.884	-0.364	2.459	-5.409	4.682
	Equal variances not assumed			-.166	12.564	.871	-0.364	2.186	-5.102	4.375

Appendix K (iii)

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
REGULATIONS	Equal variances assumed	.006	.938	1.319	27	.198	1.467	1.112	-0.815	3.748
	Equal variances not assumed			1.314	26.122	.200	1.467	1.116	-0.828	3.761
ACCOMMODATIONS	Equal variances assumed	.058	.812	3.862	27	.001	7.433	1.925	3.484	11.383
	Equal variances not assumed			3.879	26.919	.001	7.433	1.916	3.501	11.366
ATTITUDE	Equal variances assumed	3.547	.070	2.561	27	.016	3.024	1.181	0.601	5.446
	Equal variances not assumed			2.608	22.513	.016	3.024	1.159	0.623	5.425
BARRIERS	Equal variances assumed	5.030	.033	-3.405	27	.002	-9.148	2.687	-14.660	-3.635
	Equal variances not assumed			-3.469	22.230	.002	-9.148	2.637	-14.613	-3.683
INCLUSION	Equal variances assumed	.541	.469	3.023	27	.005	5.505	1.821	1.768	9.241
	Equal variances not assumed			3.056	25.528	.005	5.505	1.801	1.799	9.210

Appendix K (iv)

Independent Samples Test ^a										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
REGULATIONS	Equal variances assumed	.001	.976	2.365	27	.025	2.883	1.219	0.381	5.385
	Equal variances not assumed			2.262	9.478	.049	2.883	1.274	0.022	5.744
ACCOMMODATIONS	Equal variances assumed	1.283	.267	2.977	27	.006	7.234	2.430	2.248	12.220
	Equal variances not assumed			3.649	15.258	.002	7.234	1.982	3.015	11.453
ATTITUDE	Equal variances assumed	2.377	.135	1.737	27	.094	2.532	1.458	-0.459	5.524
	Equal variances not assumed			2.389	20.590	.027	2.532	1.060	0.326	4.739
BARRIERS	Equal variances assumed	6.915	.014	-2.090	27	.046	-7.273	3.480	-14.413	-0.132
	Equal variances not assumed			-3.022	23.360	.006	-7.273	2.407	-12.247	-2.298
INCLUSION	Equal variances assumed	.249	.622	2.148	27	.041	4.883	2.274	0.218	9.548
	Equal variances not assumed			2.218	10.690	.049	4.883	2.201	0.021	9.745

Appendix K (v)

ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
REGULATIONS	Between Groups	4.544	2	2.272	.234	.793
	Within Groups	252.767	26	9.722		
	Total	257.310	28			
ACCOMMODATIONS	Between Groups	13.785	2	6.893	.161	.852
	Within Groups	1110.767	26	42.722		
	Total	1124.552	28			
ATTITUDE	Between Groups	27.154	2	13.577	1.133	.337
	Within Groups	311.604	26	11.985		
	Total	338.759	28			
BARRIERS	Between Groups	8.975	2	4.487	.058	.944
	Within Groups	2008.267	26	77.241		
	Total	2017.241	28			
INCLUSION	Between Groups	.393	2	.197	.006	.994
	Within Groups	867.400	26	33.362		
	Total	867.793	28			

Appendix K (vi)

ANOVA ^a						
		Sum of Squares	df	Mean Square	F	Sig.
REGULATIONS	Between Groups	17.332	3	5.777	.602	.620
	Within Groups	239.979	25	9.599		
	Total	257.310	28			
ACCOMDATIONS	Between Groups	64.002	3	21.334	.503	.684
	Within Groups	1060.550	25	42.422		
	Total	1124.552	28			
ATTITUDE	Between Groups	24.151	3	8.050	.640	.597
	Within Groups	314.607	25	12.584		
	Total	338.759	28			
BARRIERS	Between Groups	142.184	3	47.395	.632	.601
	Within Groups	1875.057	25	75.002		
	Total	2017.241	28			
INCLUSION	Between Groups	11.279	3	3.760	.110	.954
	Within Groups	856.514	25	34.261		
	Total	867.793	28			

Appendix K (vii)

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
INCLUSION	Equal variances assumed	4.480	.035	4.083	311	.000	3.727	0.913	1.931	5.523
	Equal variances not assumed			3.486	31.999	.001	3.727	1.069	1.549	5.904