



An exploratory study on the competence and service delivery of undergraduate Arab health science students towards people with observable disabilities during clinical placements in the UAE

دراسة استطلاعية حول كفاءة وتقديم الخدمات لطلاب العلوم الصحية في المرحلة الجامعية الأولى تجاه الأشخاص الذين يعانون من إعاقات يمكن ملاحظتها أثناء الفحص السريري في دولة الإمارات العربية المتحدة

by

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of the requirements for the degree of
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Abstract of the study in English

Disability as a phenomenon is complex as it involves not only people (with and without disability) but their relationships with each other, the environment, assistive technology and social reactions to a myriad of impairments within public and private programs and laws. In the United Arab Emirates (UAE), this becomes even more complex because of the diversity of nationalities involved in terms of ethnicity and racial differentiation.

This study has focused on the self-reported competence and service delivery of undergraduate Arab health science students towards people with observable disabilities during their clinical placements. The topic is particularly significant as these students are exposed to people with varying disabilities during their training. Taking pre-conceived notions, values and attitudes will impact their service delivery and hence an understanding of their competence is an essential starting point for preparing students who are entering health science related careers.

In this study a mixed methodology was utilised, following a sequential explanatory approach that included a researcher modified self-perceived competence survey on a convenience sample of 590 Arab health science students from a homogenous population of 4 institutions that are accredited by the Ministry of Education (MoE) in the UAE followed by purposeful sampling that involved semi structured interviews with eighteen clinical tutors and eight people with disabilities. With attitude and knowledge being products of human thought and interaction, the social model of disability was the main framework of this research. The

results that were collected were analysed using the SPSS 21 for descriptive and inferential statistics. The NVivo software programme and thematic analysis enabled the researcher to sort, code and analyse the results of the interviews. Analysis of documents like the public health modules of the institutions and clinical workbooks of students were explored as supporting evidence in this study.

Results from the competence scale have indicated moderately positive scores on competence with factors such as gender, mother's education, institution of the student, prior contact with people with disabilities and technology to be statistically significant influences on the competence and service delivery of undergraduate Arab health science students towards people with observable disabilities during clinical placements in the UAE. The interviews revealed the lived experiences of people with disabilities and the clinical preparedness of the health science students to handle people with disabilities during clinical placements. These findings are significant as this is the first study that has been conducted in the United Arab Emirates on this topic.

Abstract of the study in Arabic

الإعاقة كظاهرة هي معقدة لأنها لا تشمل فقط الناس (مع وبدون إعاقة) لكن علاقاتهم مع بعضهم البعض ، والبيئة ، والتكنولوجيا المساعدة وردود الفعل من المجتمع لأنواع مختلفة من الإعاقة ضمن البرامج الخاصة والعامه

في دولة الإمارات العربية المتحدة، أصبح هذا أكثر تعقيدا بسبب تنوع الجنسيات مما ساهم في التمييز العنصري.

وقد ركزت هذه الدراسة على المساهمة وتقديم الخدمات للطلاب الجامعيين في العلوم الصحية العربية نحو الأشخاص الذين يعانون من إعاقات يمكن ملاحظتها أثناء تدريبهم في المستشفيات.

الموضوع مهم بشكل خاص حيث يتعرض هؤلاء الطلاب لأشخاص ذوي إعاقات مختلفة أثناء تدريبهم.

سيؤثر استخدام الأفكار والقيم والمواقف السابقة على تقديم الخدمات ، ومن ثم فإن فهم المساهمة الخاصة بهم يعد نقطة انطلاق أساسية لإعداد الطلاب الذين يدخلون في مهنة تتعلق بالعلوم الصحية.

في هذه الدراسة تم استخدام منهجية مختلطة ، 590 طالبًا في العلوم الصحية العربية من 4 مؤسسات معتمدة من وزارة التربية والتعليم بأخذ عينات هادفة شملت مقابلات مع ثمانية عشر معلمًا وثمانية أشخاص من ذوي الإعاقات.

بما أن الموقف والمعرفة هما نتاجا للفكر والتفاعل البشري ، كان النموذج الاجتماعي للإعاقة هو الإطار الرئيسي لهذا البحث.

SPSS 21 تم تحليل النتائج التي تم جمعها باستخدام للإحصاءات الوصفية والاستقصائية

مكّن برنامج NVivo والتحليل الموضوعي الباحث من فرز وتسجيل وتحليل نتائج المقابلات

تم استكشاف تحليل وثائق مثل وحدات الصحة العامة للمؤسسات والكتيبات للطلاب كأدلة داعمة في هذه الدراسة.

أشارت النتائج من مقياس الكفاءة إلى نتائج متوسطة إلى عالية على مع عوامل مثل الجنس، وتعليم الأم ، ومؤسسة الطالب، والتواصل المسبق مع الأشخاص ذوي الإعاقة والتكنولوجيا ، لتكون مؤثرات ذات دلالة إحصائية على المساهمة وتقديم الخدمات للعلوم الصحية العربية للطلاب الجامعيين نحو الأشخاص الذين يعانون من إعاقات يمكن ملاحظتها أثناء زياره المستشفيات في الإمارات العربية المتحدة.

وكشفت المقابلات عن التجارب العملية للأشخاص ذوي الإعاقة ومعرفة طلاب العلوم الصحية للتعامل مع الأشخاص ذوي الإعاقات في مستشفيات التدريب العملية.

هذه النتائج مهمة حيث أن هذه هي أول دراسة أجريت في الإمارات العربية المتحدة حول هذا الموضوع.

Dedication

I dedicate this work to my 'Amma' whose genes I have fortunately inherited, to my amazing husband Rajiv and my beautiful daughters Fiza and Ananya.

This is also a dedication to my wonderful family –the Nairs, the Menons, the Varmas and the Jayaramans.

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CHAPTER -1

INTRODUCTION

1.0 This chapter intends to introduce the topic of study chosen by the researcher, the rationale behind choosing the topic along with a background of where the study is situated, the purpose and significance of the study leading to the research questions that the researcher proposes to answer through this study.

1.1 Reflection – the origin and rationale of this research

“The only true disability is a crushed spirit” – Aimee Mullins (2009)

The idea to conduct this research emerged from a casual conversation that the researcher had with a friend who has a physical disability that restricts her to a wheel chair. In the course of a discussion, she happened to mention her experiences in a physiotherapy session regarding the attitude of the therapist towards her which she found offensive because of the lack of knowledge that particular health care professional had regarding her disability. The researcher who has an academic background in the area of disabilities and is also a student counsellor of a reputed health science college in the UAE has the responsibility to handle diverse problem situations related to clinical placements as part of the job. The question raised by the friend with a physical disability ‘what do you teach your health science students in college about handling people with disabilities’ put the researcher on a reflective mode to ponder on the potential significance of her pertinent question that was inherent from her experience. This study is an attempt to find an answer to the question raised by her as well as to be aware of the existing attitudes, knowledge and skills that Arab health science students have towards people with disabilities in the UAE as it will be an insight for the researcher during the counselling sessions as well as help to plan and guide students to handle people with disabilities during clinical placements.

1.1.1 United Arab Emirates- a brief background

As the research is based in the United Arab Emirates (UAE), a brief description of the location will help in understanding the setting of the study. The UAE is a comparatively young nation formed in 1971 as a result of the unification of the seven Emirates of Dubai, Abu Dhabi, Sharjah, Ras- Al-Khaimah, Ajman, Fujairah and Umm Al-Quwain. There is a federal constitution that has been developed by the Council, which is represented by the rulers of each of the Emirates. The constitution provides for effective governance of the UAE by creating the powers for the federal establishments (Al- Jably, 2009) and also by defining and delegating residual powers to authorities within each Emirate (Hashem, 2014). The governance in the UAE reflects the teachings of Islam which is the predominant religion reinforcing the social fabric of the country (Kirk, 2010) while encouraging modernity for all its citizens. Traditionally known for fishing, trading and pearl diving, UAE in recent times has become an important part of the global consumer economy benefitting its citizens socially and economically due to the revenue from oil production which has raised the standard of living in the country particularly in the big cities like Abu Dhabi and Dubai (Morris, 2005). Along with this economic growth, the country has witnessed rapid social changes (Al-Abed, 2001) although not shared by all the Emirates equally as is obvious from the development of facilities, hospitals, universities and services in some states more than the others (Tanmai, 2005). The economic policy of the country has stability because of the economic freedom and age-old traditions that have helped develop the economic sector (Ministry of Planning, 2010). To keep pace with the rapid progress, the government had created a far sighted 'Health Care strategy 2011-2013' to develop and further improve the standard of living of its citizens by focusing on the quality of education and health services

in particular. Although UAE is relatively a newer country in the Arab world, it has caught up with contemporary society especially in educational attainment (Hashem, 2014).

Emiratization is a concept that has been introduced in the country to ensure that there is the presence of native labor workforce formally in the market as there is a genuine concern of the rising number of expatriates who form a majority of the workforce in the country, outnumbering even the indigenous population of the UAE. This phenomenon has placed pressure on the educational system, which has become pivotal to the country's social and political development (Weber, 2007) to create a unique national identity and warrant the preparation of national graduates to enter the labor force. This study will focus on all Arab students, Emirati students included to help gain an understanding of concepts such as competence, service delivery and disability that is currently being debated not only in the Arab countries but all over the world.

1.1.2 Higher Education in the UAE

All the tertiary educational institutions in the UAE are essentially dichotomous (Kirk, 2010) that can be slotted as either private or public (federal) with a few that are semi federal. United Arab Emirates University (UAEU) founded in 1977, the first federal university was a milestone launch in higher education by the government to address the issue of nation building followed by two more federal universities in 1988- Zayed University and Higher colleges of Technology (HCT). A federal agency called the Commission for Academic Accreditation (CAA) is responsible for issuing the licenses and accreditation of all the higher education institutions, national and foreign (Kirk, 2010) in the country.

Although historically Arab societies have always valued education and knowledge with emphasis given to the formal learning process (Herrera & Torres, 2006), aiming to become

knowledge based societies has been a more recent development (Greater Middle East partnership, 2004). The ideological challenge that the system has had to face has been in balancing modernity with existing traditional values (Griffin, 2006). The upsurge of the Middle Eastern countries as unique Sheikdoms in the 1950s and 60's witnessed a quick expansion of education in quantity (Fahim & Sami 2010) rather than quality. Arguably, higher education has witnessed a rapid growth contributing to global economy with a direct link between tertiary education and the country's development (UNESCO Institute of Statistics, 2010) creating the need for even more tertiary institutions to support the socio economic progression. There has been a tremendous increase of student enrollment in higher education in the UAE from 21,000 students recorded in 1999 (UNDP, 2003) to around 122,000 in 2012. An interesting statistic of male to female ratio of students in higher education in the Arab World is almost equal (UNESCO, Institute for Statistics, 2010) which is very significant given the region's reputation for patriarchy. Students have begun to view higher education for its intrinsic value (Frag, 2010) and that has prompted policy makers to create an academic culture that is knowledge based (Rhoades & Liu, 2009) which contributes to the nation's development and helps in globalizing students and academicians (Badry & Willoughby, 2016). According to Sheikh Mohammed bin Rashid Al Maktoum, ruler of Dubai, *'there is a wide knowledge gap between us and the developed world in the West and in Asia. Our only choice is to bridge this gap as quickly as possible because our age is defined by knowledge'* (Leyne, 2007).

This aggressive strive for the modernization of education in the UAE is in alignment with its Vision 2021 that aims to make the UAE a leading provider of education that is world class

(UAE Government Strategy, 2013) and is currently going through a reflective mode (Kirk, 2010) so that improvements can be made in alignment with the dynamic global conditions.

1.1.3 Disability status in the UAE

The UAE is a rich country that intensely supports the Islamic values of equality regardless of ethnicity, religion and abilities. Islam encourages tolerance among its people and considers “disability as a bliss not a hindrance” (Abdullahi, 2011). The constitution of the UAE supports and encourages the rights of people with disabilities that include proper care and rehabilitation which is directly derived from the teachings of Islam, the religion of the UAE (Hashem, 2014). UAE has a population of around 8 million people, of which only 20-22 percent are Emirati citizens and the rest are called expatriates. According to WHO around 11% of the population in the UAE is considered to have a disability (Yousef, 2015).

Disability as a phenomenon is complex as it involves not only people (with and without disability) but their relationship with each other, the environment, assistive technology and social reactions to a myriad of impairments within public and private programs and laws. In the UAE, this becomes even more complex because of the diversity of nationalities involved in terms of ethnicity and racial differentiation. The United Arab Emirates introduced its first federal law, 29/2006 concerning the Rights of People with Disabilities, (PWD) combining international as well as national standards. A western theory was personalized in accordance to the Islamic law that emphasizes the care for people with disabilities as a human right which is also part of a person’s duty towards another according to Islam (Shaikh, 2009). Federal Law No. (116) in 2009 emphasized the need to substitute the phrase ‘special needs’ with terms like disabled and disability wherever it appeared in the text of Law No. 29/2006. The accepted term used in the UAE is ‘person with disability’ because it implies that the

individual is essentially a person first (Shreve, 2011). In 2017 under the National Policy for Empowering People with Special Needs/Disabilities, they have been renamed as ‘People of determination’ which in itself is an empowering terminology. This reflects a positive paradigm shift in the attitude of policy makers who believe in making the society an inclusive one not only by including people with disabilities in mainstream activities but even in the way people address them. Internationally, policies and services for PWDs are being implemented to assert equity and handle barriers to being included exemplified by directives such as the Montreal Declaration on Intellectual Disabilities (Lecompt & Mercier, 2007), or the European declaration ‘Better Health, Better Lives’ (World Health Organisation, 2011). Call to Action to Improve the Health and Wellness of Persons with Disabilities is the initiative of United States Department of Health and Human Services aligning itself with ‘Healthy People 2010’ (Lyon, 2014) which reveals the gaps in the wellness of people with disabilities. The United Nations (UN) Convention on the rights of Persons with Disabilities was signed by the United Arab Emirates (UAE) in 2010. The agreement was to develop and align national laws towards integrating people with disabilities (PWDs) by improving their living conditions and providing equal opportunities for their education, health and rehabilitation services so that they are no longer viewed as objects of charity but rather as full and equal members of society, with human rights. This is in accordance with the vision of the late Hh Sheikh Zayed bin Sultan Al Nahyan, founder of UAE who believed in investing in the education and training of skilled people (Embassy of the UAE in Washington DC 2009). The vision of His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum of making Dubai a fully inclusive, disability-friendly place by 2020 through an initiative called ‘My Community, a city for All’ is in accordance with the Law No. (2) of 2014 which

is a rights based law protecting people with disabilities (PWDs). Healthcare Strategy 2011/2013 was another initiative that aimed to improve the governance of the health care system to provide services that are world class with emphasis on upgrading the standards of health care professionals in the UAE (UAE Government Strategy, 2013).

With these inclusive laws being implemented in this society (UAE), the focus naturally moves to the people who form society. People with disabilities (PWDs) have historically been isolated from the mainstream society not because of their disability or the lack of policies concerning them but primarily because of the stigma and negative attitudes towards them making it a ‘pathology of society’ (Pillay, 2010). The failure of societies to be tolerant towards personal differences focusing on the ‘wrongness’ (Pillay, 2010) of the person and the impairment being seen as a deficiency has been as difficult a challenge as the disability itself that a PWD has had to confront. The layperson’s beliefs regarding the causation of intellectual disabilities ranging from being possessed by spirits (Hatton, Akram et al., 2003) to being punished for sins of the past (Hubert, 2006) have led to stigma even within own families encouraging family members to keep the disability hidden from the society (McGrother, Bhaumik et al., 2002) sometimes resulting in social isolation of the whole family (Fulton & Richardson, 2010). Attitudes towards a member in the family with disability in the UAE is still a cultural stigma (Alghazo & Gaad, 2004) as the society is small and people are familiar with each other leading to problems in marriage if there is a member in the family with a disability. This is evident from accounts of parents who prefer to keep them hidden within the home (Alghazo & Gaad, 2004) away from the community because of the disability. This collective negativity has led to major impediments in the type of facilities they have been receiving, healthcare included leading to segregation and

discrimination (Pfeiffer, Sam et al., 2004). Within the UAE community, the cultural beliefs towards PWDs is largely stereotypical and stigmatized (Gaad, 2010) hence disability issues from the society's perspective is still considered charity based rather than social or rights based.

Attitudes towards disability in the UAE are influenced by the culture of the country which has a strong domination of the Islamic faith influencing all aspects of social life whether legal, economic or political (Heard-Bey, 2005, p 135). However, gender inequality and relations towards people with disabilities in the Middle East are influenced more by political and socio-economic impacts than religious impressions (Arif & Gaad, 2008). Cultural perspectives that are local influence how attitudes towards people with disabilities are shaped which directly influences the manner in which the needs of PWDs are met (Hashem, 2014). In the UAE, the services and provisions that are designed for PWDs are emerging hence there is confused transition between keeping a PWD hidden from society due to social stigma on a familial level and inclusive laws that are being designed and advocated on a national level.

1.2 Defining disability

The term disability has been in usage only in the past century (Boorse, 2010) to describe a distinct group of people. Defining disability is very contentious because a variety of characteristics are considered as disabilities. A person with sensory and physical impairments, life style diseases such as diabetes and HIV, congenital conditions like Autism and Down syndrome have all been termed as having a disability. The term also includes the loss of a limb or a progressive neurological condition, the inability to remember faces or sums and psychiatric disorders like schizophrenia and bipolar disorder. However, defining

disability is crucial as it impacts not only the individual's self-concept, but also the way a person with disability is treated and how public resources and benefits are allocated (Smart, 2001). The fact that search engines in Arabic pertaining to disability are still in their infancy stage also reflects the erraticism in defining disability across the Arab countries (Gharaibeh, 2009).

There is a negative referencing and meaning to the word in the English Thesaurus dictionary with synonyms for the word 'disabled' mentioned as differently abled, paralyzed, lame, incapacitated, maimed, handicapped, weakened, challenged, crippled just to name a few. Antonyms for "disabled", lists words like strong, able bodied, fit, hale, sound, sturdy, healthy, robust, hearty to mention a few implying that a "disabled" individual does not qualify with any of these adjectives (Benedictis, 2014). As Aimee Mullins, an important thinker of prosthetic innovation, an athlete, model and actress of American origin who had a congenital medical condition that led to the amputation of both her lower legs eloquently put it 'It's not about the words, it's what we believe about people when we name them with these words and how we construct those values. Our language affects our thinking and how we view other people. By casually doing something as simple as naming a person we might be putting lids and casting shadows on their power" (Mullins, 2009).

While there is yet to be an agreement on the definition of disability, adopting a broad definition in which both medical and social viewpoints are accommodated in which there will be appreciation for not only the social and attitudinal aspects but for physical environments and personal attributes (Iezzoni & Freedman, 2008) will enable PWDs to effectively participate in society with dignity. This will help in focusing on ethical issues rather than having a sterile disagreement (Beaudry, 2016) on the definite meaning of the term

‘disability’ ensuring that ‘ethical concerns’ is not politicized for any personal gains. With so many viewpoints, it becomes challenging to define ‘disability’. Not only are there perceptual differences between theories defining disability and ‘lay peoples’ perceptions (Bajekal et al., 2004), but among PWDs themselves regarding their perception of their disability (Deal, 2006).

For the purpose of this research, the definition of WHO (2001) that defines *disabilities as an umbrella term, that includes impairments, limitations of activities and restrictions on participation in society* will be considered. To define a person with disability, this study will also consider the definition that has been mentioned in Article 1 of the United Nations Convention of 2010 that states:

‘Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others’ (United Nations Human Rights, 2010)’

Article 3 of the United Nations Convention of 2010 further mentions that PWDs need to be given certain human rights which include inherent dignity that implies showing respect by valuing the experiences and opinions of PWDs. This could be done by giving them the freedom to make their own choices and be in charge of their own lives with minimum interference assisting them with adequate support only when required that too with mutual informed consent even for health care decisions. Nondiscrimination is another core value that the UN Convention recommends, for the PWDs to be given unconditional rights as everyone without distinction or any restriction irrespective of gender, religion, race, origin or any other status so that they can enjoy the same freedom that all humanity does and

participate fully and effectively in society without feeling excluded. For this society needs to be organised in such a manner that the needs of PWDs are recognised as integral to the progress of a society and not identified as being ‘special’. This will be a reality only when society accepts disability as part of human diversity (UN, 2010).

According to the Convention on the rights of persons with disabilities, “*persons with disabilities have the right to the highest attainable standard of health without discrimination on the basis of disability. They are to receive the same range, quality and standard of free or affordable health services as provided other persons, receive those health services needed because of their disabilities and not to be discriminated against in the provision of health insurance* (Article 25)” (UN, 2006).

1.2.1 Concept of disability in Islam

Islam, the main religion that is followed in the UAE influences public attitudes and practices related to people with disabilities by recommending that society has the obligation to take care of people with disabilities and integrate them into the community by providing them with opportunities for health, education, employment and recreation (Hashem, 2014). Although the term disability is nonexistent in the Qur’an or Hadiths which are the holy texts of Islam, there are instances that mention Muslims with special needs within these holy texts (Al Thani, 2006). Islamic belief propagates that people could be created with different abilities and disabilities and the focus should be only on the abilities with the intent of improving the situation through spiritual, medical, educational and legal resources (Al Thani, 2006) as the body is considered a gift from God and hence needs to be looked after. Islam considers disability as ‘morally neutral’, neither a blessing nor a curse, a fact of life that has to be addressed by the society of the day (Waldman & Perlman, 2010) and the ideal therapy

that is recommended in Islam is a holistic approach that enhances the body, psyche and spirit. Islamic interpretations of disability thus could be viewed as a predecessor of the social model of disability (Hashem, 2014) as it maintains that the primary responsibility lies with society to improve the social conditions of PWDs (Ahmed, 2007) by removing the social obstacles (Shakespeare, 2006).

1.2.2 Disability in the Arab world

A high rate of disability in the Arab world can be attributed to the number of consanguineous marriages with rates as high as 30% in the UAE and 56% in Saudi Arabia (El-Mozan et al., 2007). Family sizes that are large, rising ages in maternity and paternity, terrorism, poverty, armed clashes, frequent accidents due to speeding motorists (Hakim-Jaganjac, 2005) and communicable diseases also contribute to the causation of disabilities in this region.

The prevalence of disability in Arab societies is a considerably challenging topic due to a lack of indexed publications regarding the subject giving rise to the question of the reliability of the limited statistics available. However, the estimated population of the residents of the UAE is around 8 million with only 21% who are UAE citizens (National Bureau of Statistics in 2010). An official estimate in Jordan in the year 2001 showed a 10 times increase in the estimate of people with disabilities in the country in 2001 as compared to 1994 (Nour, 2005), a likely reflection of improved collection of data than actual increased incidence. Saudi Arabia which is the largest country in the Middle East with a population of an estimated 28 million people (CDSI, 2011) has projected to have 0.8% of the Saudi population with a disability (Al- Jadid, 2013). Countries of Western Asia have shown very low disability rates when compared to other regions (ESCWA, 2010) with only 0.6% disability in Egypt, 1.9% in Yemen and 4.8% in Sudan raising doubts regarding the authenticity of the statistics. A

logical reasoning could be because disability is considered a source of shame and disgrace in these countries so disclosure may have been compromised (Al – Balushi et al., 2011). Realizing a need in the Arab region for improved statistical quality, there was a meeting that was conducted in Cairo in 2002 by the United Nations’ Economic and Social Commission for Western Asia (UN-ESCWA) with the intention of improving data collection as Arab countries showed a lower rate of disability for many years when compared to international rates. However, no confirmed consistent data collection has been conducted to get the accurate number of people with disabilities in the UAE (Hashem, 2014), but a rough estimate would be around 11% of the total population which is lower than the international average (Dukmak, 2010).

Taking the relevance of integration, scientific information on disability issues are lacking not only in the UAE but worldwide (WHO, 2011) and unless there is a baseline understanding of the number of people with disabilities in the world, removing disabling barriers that ensure integration into society will remain a challenge for PWDs. It is important for each community to have its own data because there is a distinct variation in terms of attitudes and knowledge towards PWDs depending on cultural values, personal beliefs, educational contexts, religion and working experiences (Abdulwahab & Gain 2003). Although exact estimates have not been recorded because of the disparity in the definition of the term ‘disability’ worldwide, it is estimated that more than a billion people or 15% of the world population live with some kind of disability (WHO, 2011) with the numbers set to rise. Chronic health conditions like diabetes, cardiovascular diseases and mental disorders which influence the prevalence of disability as well as old age related disabilities contribute to the growing numbers.

Since its conception on the 2nd of December 1971, the UAE has been committed to the issue of disability because of its firm belief that PWDs are an integral part of the community with equitable rights (Hammad, 2014). This basic human rights principle that is cherished in the charter of the United Nations and the Universal Declaration of Human Rights are an intricate part of the UAE's constitution and laws. The Ministry of Social Affairs is responsible for the care of people with disabilities in the UAE, It has mandated to all private companies that have more than 100 employees to reserve 2% of their jobs for PWDs (Hashem, 2014). Community care and necessary assistance towards people with disabilities has been stipulated in Article 16 of Federal Law, 2006 of the UAE (See appendix 1) for the "betterment of society" (UAE Federal Law, 2006, p.9). Article 17 of the same law propagates sustained assistance to those with physical challenges so that rehabilitation and training can enable them to function in society effectively and be able to support not only themselves but their families as well (UAE Ministry of Labour & Social Affairs, 2006). With this intention, the UAE has been encouraging institutions and companies to have projects that would assist people with disabilities so that they are able to live an equitable life (Sharjah City for Humanitarian Service, 2011) in this country following their commitment of their ratification of the UN convention of rights of PWDs which was signed in 2008 and formalised in 2010 (Gulf News, 2008). This signatory commitment was the beginning of the rights' based approach towards PWDs as global participants (appendix 2, pp 3) took a pledge to move from caring for PWDs based on ethical and humanitarian reasons to a more inclusive participatory role which would ensure them dignity, equality and responsibility.

1.3 Competence—an emerging concept in health care

Competence is an emerging field that strategizes to handle disparities in the quality of health care given to a group of diverse people (Betancourt et al., 2002). For the purpose of this study, ‘competence’ has been defined as “the application of knowledge and the interpersonal, decision-making and psychomotor skills expected for the practice role, within the context of public health, safety and welfare” (NCSBN, 1996, p. 5). It includes behaviours that combine attitude, training, skills, experience and knowledge (Fernandez, Dory et al., 2012) that a person has and their ability to apply them in synergy to perform a task safely. Competence is gained and expanded in jobs related to healthcare through pre-service learning, in-service training and work experience (Kak et al., 2001). It is an important component precursor in health care as it determines the ability and readiness of the health provider to deliver quality services. It is evident from literature that a distinct definition of competency has not been agreed upon (Brown & Crookes, 2017), however, most definitions include terms such as attitudes, abilities, knowledge, values and skills as is evident from the National Competency Standards for the Registered Nurse (NMBA, 2006) in Australia, the Nursing and Midwifery Council (NMC, 2010) in UK and the American Nurses Association (ANA, 2008) in the United States of America.

In an analysis of how health sciences educators define competence, a pertinent study by Fernandez et al. (2012) that attempted to compare and contrast fourteen definitions of competence provided by educators, there is an agreement that competence is composed of knowledge, skills and other components with attitudes and values being suggested as essential ingredients of competence. This study influenced the researcher to place knowledge, attitudes and skills under the term competence as most of the definitions in the

study included these three terms. Although there are best practices that a healthcare provider should use, there is still no gold standard either for defining the term competence (Brown & Crookes, 2017) or for measuring the provider's competence (Kak et al, 2001). Competence in this study is being measured as a prediction of performance which was measured in this study using a variety of methods such as self-evaluation through the modified self-perceived competence survey, interviews with clinical tutors and PWDs themselves as well through a review of the public health modules (see page 225) and clinical workbooks (see page 203) as they are not only an assessment method but a reflective tool that can provide an insight into the student's competence. There are studies that have indicated that competence cannot be reliably inferred only from performance, and that appraisals by clinical tutors, proctors and self-assessments can all be used to infer competence (Kak et al, 2001). This study has relied heavily on these two aspects- feedback from clinical tutors and self-assessments as the researcher was not ethically allowed to perform observations in the clinical area due to the nature of the study. In this study, personal competence was assessed by looking beyond the base knowledge of their subject, at important skills like communication and sensitivity towards PWDs which is gained through deliberate practice (Ericsson, 2004) and reflection on experience (Epstein, 2003).

Patient safety is an important challenge that faces healthcare worldwide (Brasaite, Kaunonen & Suominen, 2014) and there is ample evidence to show that patients are unintentionally injured during treatment (Neale & Woloshynowych, 2001). This could be a potential reason for the concept of competence to be gaining popularity in recent times. As newly qualified health care professionals enter the health field, there is a mounting need to make them competent to handle patient safety. This has prompted research in developing training

programs for health care students with the focus on enhancing their competence (Braithwaite, Westbrook et al., 2006).

1.4 Significance of the study

This study attempted to explore the competence and service delivery of health science students towards people with disabilities and the findings are significant in adding to the existing limited publications that are available in the UAE (Gaad, 2011) with regard to topics on disability especially in the field of higher education. There is a lack of relevant data regarding the prevailing attitudes and knowledge towards people with disabilities among students who are training to become health science professionals in the UAE which is a country that has a unique culture, language and laws that are very different from the western world. Perspectives from the West have dominated the source of literature in this field, therefore this study will be significant theoretically as it is the first study to be conducted on Arab health science students in the UAE that will include Emirati nationals. With the incidence of disability on the rise world over (Lyon, 2014), focus on disability education is not only a need but a requirement as there seems to be discrepancies in caring for PWDs (U.S Department of Health and Human Services, 2005). As the UAE becomes more diverse in terms of ethnicity and racial differentiation, health care providers need to be sensitive to the varied perspectives, values and behaviours of patients regarding health and well-being so that there is an understanding of the social and cultural differences that could have significant health consequences for minority groups like PWDs. Health science students during their clinical placements are exposed to people with varying disabilities and need to work closely with this group once they become qualified professionals. Taking pre conceived notions and values along with their attitudes to their chosen field of work will have a major impact on

the way they deliver their services to them (Boyle, 2010). Understanding the nature of attitudes and knowledge of undergraduate health science students towards people with observable disabilities is an essential starting point for preparing students who will eventually be entering important health fields like Nursing, Pharmacy, Physiotherapy, Radiology, Medicine and Paramedicine to treat a range of people without bias or prejudice because attitudes and feelings of these future professionals can reflect in their interaction with PWDs (Abdulwahab, & Gain, 2003). For PWDs, the access to quality health care services is an important aspect of daily living and there is enough research evidence that negative attitude of health care professionals has often resulted in negative behaviours (Carter & Markham, 2001) potentially affecting the self-esteem and inducing a feeling of hopelessness in PWDs (Tervo, Palmer and Redinius, 2004). Specific research and data pertinent to the implementation of the Federal law 29/2006 (see Appendix 1) by institutions concerning rights of PWDs in the health sector in the UAE (Alahbabi, 2009) increases the educational value of this study. Although rulings have been passed to create a more inclusive society (Ministry of Labour & Social Affairs, 2006) on a practical level it has had limited success (Hashem, 2014) in the UAE as acceptance of such laws is conditional on the level of awareness of such pertinent issues. This research will attempt to raise awareness in the health care field and serve as a crucial guide in understanding disability issues in the UAE among health science students who are important stake holders of the health care industry.

1.5 Purpose of the research

The study proposed to investigate the attitudes, knowledge and skills (competence) of undergraduate Arab health science students towards people with observable disabilities in the UAE and explored how the socio demographic variables of the participants could

influence those attitudes, knowledge and skills. Another variable that was examined was prior contact with PWDs and competence. It also proposed to explore how services towards PWDs could be influenced by the training they received from the educational institution they are enrolled in currently. In this study, attitudes, knowledge regarding disabilities, skills that are personal as well as from training and effect of contact with PWDs in relation to competence and delivery of services during clinical placements was observed from the responses that were obtained from Arab HSS through the survey questionnaire and the interviews which is discussed in detail in Chapter 3.

The service delivery of Arab HSS towards PWDs in the clinical setting was explored in the second part of the survey from the interviews of clinical tutors. Interviews with PWDs to explore the lived in experiences also helped to add strength to this study.

This research was stimulated by a lack of relevant data regarding the prevailing attitudes, knowledge and skills (competence) towards people with disabilities among students who are training to become health care professionals in the UAE. An understanding of the social constructions of disability would assist to describe why marginalisation and discrimination of people with disabilities continue to exist in society (Hannon, 2007) and attention could be drawn to help eliminate negative attitudes towards them if they exist by identifying factors such as previous experience with PWDs and knowledge regarding them which have been found to have a potential influence on having a positive attitude towards PWDs (Satchidanand et al., 2012). As demographic variables like age, gender, level of education, ethnicity, socio economic factors, marital status and religion and other variables like prior contact are important aspects that affect attitudes towards disabilities (Al- Abdulwahab & Al Gain, 2003) it is imperative that each community engages in their own indigenous research

for an understanding that is specific to them. Results of this research will help identify the negative attitudes and knowledge if any held by Arab HSS that could influence the delivery of services during clinical placements as well as their rehabilitation potential (Al-Abdulwahab & Al Gain, 2003). Increased awareness of the gaps in disability education could facilitate educators and the institutions to reduce negative attitudes in students through improvements in the modules that relate to disability education.

1.6 Aim of the study

The aim of this study was to explore the competence and service delivery of undergraduate Arab HSS students toward people with observable disabilities during clinical placements in the UAE. With this intention, the study aimed to address the following research questions:

1.7 Research Questions

1. What are the attitudes, knowledge and skills (competence) that undergraduate Arab health science students have towards people with observable disabilities in the UAE?
2. How do the attitudes, knowledge and skills (competence) of undergraduate Arab health science students affect their service delivery towards people with observable disabilities during their clinical placements in the UAE?
3. Do any of the demographic/ variables of (age, gender, educational qualification of parents, academic major, prior contact with PWDs, ethnicity, socio economic factors, marital status and religion) influence the competence and service delivery of Arab health science students towards people with observable disabilities in the UAE as measured by the self-reports of Arab HSS?

1.8 Summary

Health science students, often unintentionally while providing services for PWDs create challenges for them because of a lack of specific knowledge pertaining to disability which could lead to negative attitudes within them affecting the delivery of services during clinical placements. As there is a gap in the research related to the personal competence of HSS towards PWDs and their service delivery, this study examined these aspects and explored other potential influencing factors that could affect their competence and service delivery. As health science students are the future health care providers (Brodwin & Orange, 2002), leaders and employers (Hernandez et al., 2000) and educators (Vogel et al., 1999) an understanding of the competence of these students helped to understand the services they provide to people with disabilities.

1.9 Structure of this thesis

This research is ordered into five chapters and the organisation of these chapters are as follows: Chapter 1 has introduced the topic of study which includes the purpose of this study, the rationale and significance behind the chosen topic as well as the aims and the research questions to be explored and examined. Chapter 2 provides an overview of the existing global and local literature on topics like attitudes, knowledge and skills (competence), effect of training on service delivery, contact with PWDs and socio demographic influences on attitude and knowledge towards PWDs. Pertinent studies conducted in the Middle East on the topic of research have been included in this section. It also has the conceptual framework of this study. The methods and methodology of this study has been explained in chapter 3.

This has included the research approach as well as design that was used to collect data in an ethical manner along with a justification of the chosen methodology. Chapter 4 has reported and analysed the findings of the study and Chapter 5 has discussed and addressed the research findings. It has also included the conclusion, key limitations, implications, recommendations and suggested ideas for future research to be conducted.

1.10 Definitions of the terms used in this study

Competence – For the purpose of this study, ‘Competence’ includes perceived behaviours that integrate attitude, skills and knowledge (Fernandez, Dory et al., 2012) that a person has towards disability and their ability to apply them in synergy to perform a task safely. In this study, competence will be mean personal competence as self- perceived by the Arab HSS.

a. Attitude refers to a blend of beliefs and feelings towards disability that are intrinsic to a person which predisposes an individual to behave in a particular way when evoked by explicit referents, in this study PWDs.

b. Knowledge in this study is the comprehension of facts regarding disability that could be obtained through pre-service education and in-service training (Kak et al., 2001).

c. Skill is the ability to perform a particular action (Kak et al., 2001) with readiness and dexterity. In this study it reflects in the manner by which the HSS uses soft skills to communicate with PWDs on a personal level as well as professional level with sensitivity during clinical placements.

Service delivery- Is the quality care that is provided by the student personally and professionally towards PWDs that is a result of a combination of competences that exist before the enrolment into a course and the exclusive training from the course that the student is academically enrolled in currently.

Quality care (WHO, 2006) encompasses dimensions of effectiveness (evidence based practice resulting in improved health benefits), being patient centered, equitable treatment following safe procedures (minimising risks and harm).

Undergraduate- Students who have graduated from high school enrolled in a university or college: who are yet to receive their first tertiary degree.

Arab – All Emiratis (Natives of the UAE) and people with ancestries originating from Arabic speaking countries.

Health science student (HSS) - A ‘qualified health care professional’ is an individual who is qualified by education, training, licensure/regulation who performs a professional service within his/her scope of practice and independently reports that professional service.”(American Medical Association, 2013 as cited by Derricks, 2015). A health science student is someone who is training to become a health care professional.

People with observable disabilities- People with long term sensory, intellectual and physical impairments that are visible to the eye, that are either congenital or due to disease/accident that prevents them from participating completely in activities of daily living. In this study people with observable disabilities will be mentioned as PWDs.

Clinical Placements- A generic term describing an arrangement where a health science student during the academic year is placed in a supervised setting that offers health care services to the public to help develop the student’s skills in the field of study and is a mandatory part of the requirement for the course.

UAE- A federation of the 7 Emirates – Abu Dhabi, Dubai, Sharjah, Ajman, RAK, UAQ and Fujairah that forms the United Arab Emirates.

Gulf Co-operation Council- the political and economic alliance of six Middle Eastern countries—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain and Oman.

1.11. Abbreviations used in this study

UAE-United Arab Emirates

UAQ-Umm Al Quwain

RAK-Ras-Al-Khaimah

MoE- Ministry of Education

MoHESR-Ministry of higher education and scientific research

CAA- Commission for Academic Accreditation

UN-United Nations

PWD-People with Disabilities

HSS-Health Science Student/Students

TPB- Theory of Planned Behaviour

GCC- Gulf Co-operation Council

SADP-Scale of attitudes towards disabled persons

ATDP- Attitude towards disabled persons

IDP-Interaction with disabled persons

IELTS- The International English Language Testing System

CHAPTER -2

REVIEW OF LITERATURE

2.0 This chapter reviews the literature that is available on concepts related to this study on disability with the focus on competence (attitudes, knowledge, skills) and attributes like gender, age, ethnicity of health science students that may affect their service delivery towards people with disabilities (PWDs), prior contact with PWDs on a personal and or professional relationship, choice of college major and training on competence and service delivery towards PWDs. Major studies that have been conducted in the Middle East as the site of the research is situated within this region is reviewed as the significance of exploring indigenous research for a deeper understanding from a cultural perspective is imperative. This is followed by models and theories that underlie the concept of disability which have influenced the development of the conceptual framework of this research. A compilation of all these pertinent studies forms the foundation for this study that is situated in the UAE. The literature has been identified using the following internet databases ERIC, (Educational Resources Information Centre) PsycINFO, Google Scholar, ProQuest, EBSCO Host, reference lists of current relevant studies on the topic and library resources. Different keyword combinations were used to obtain the literature that included phrases like (undergraduate students) AND (disability), (competence of health care students) AND (disability), (attitudes of healthcare students) AND (disability), (UAE) AND (disabilities), (Skills of healthcare students) AND disability, (Knowledge of health care students) AND (disability), (disability studies) AND (higher education), (measurement of competence in health science students) AND (disability).

The search words were chosen with the intention to help the researcher be acquainted with the available literature existing in the area of interest. As there is an extensive body of work in the area of disability, it served as a guide to decide on the inclusion criteria of the studies

to be explored. It also helped to search for the theoretical roots of the study as well as focus on the methodology that could be planned. An early review of the searched literature helped the researcher to establish the context and rationale (which is one of the main reasons why the term ‘competence’ was chosen as the umbrella term under which attitudes towards people with disabilities, knowledge regarding disabilities and personal skills that are required for effective service delivery were positioned. It also revealed a lack of indigenous studies that have been conducted on this topic in the UAE and in the Middle East particularly with an Arab population. It revealed that there are no existing surveys that measure the perceived competence of HSS towards PWDs. All the tools for competence available either measures clinical competence or cultural competence, both not the focus of this study. This study aimed to explore competence from a personal level that included the attitudes, knowledge and skills that are required in handling people with disabilities so that they are able to provide the soft services such as effective communication and empathy in the most effective manner as there is limited research on the patient-provider relationship (Ellen & Martijn,2018). It helped the researcher to address the gap in literature in this area which in turn helped to conceptualize and operationalize the researcher’s questions to focus particularly on this area of personal competence and motivated the researcher to modify the 3 most commonly used scales that were used in studies to measure attitudes, knowledge and skills separately which was termed the perceived competence scale (see page 125 for modification and development of the scale). The narrowed focus of the research which was possible due to the search words also helped the researcher to relate the findings of this study to the findings of pertinent studies that have been conducted in this field of work

Negative attitudes that society preserves towards PWDs and the repercussions on the quality of their life have been the focus of discussion particularly in the last decade. With the advent of the social model/ human rights model of disability researchers have been focusing on health care, professionals' attitudes towards PWDs in particular as they are important stakeholders in the process of inclusion of PWDs into society. Factors that have contributed to influencing the attitudes towards PWDs have been socio demographic factors like age, gender, nationality, educational level and socioeconomic factors like employment and income. Contact with PWDs, having a person with disability in the family and previous experience with disability have also been strong influences for attitude formation towards PWDs as is evident from literature which will be discussed in detail in this chapter.

Literature indicates that the attitudes and knowledge towards people who have disabilities across religions (Ingstad 2001, Braddock & Parish, 2001), cultures (Parmenter, 2001), societies (Mitchell & Snyder, 2001) ethnic groups (Van Ryn & Burke, 2000) and nationalities (Crystal, Watanabe et al., 1999) is filled with judgment. Having a disability is seen as a disaster, bringing dishonour and considered a penalty from God (Pfeiffer, Sam et al., 2004). PWDs are often viewed as objects to be pitied and a liability which induce feelings of guilt within their family members (Pfeiffer, Sam et al., 2004) with it being worse for a woman with disability (Badu et al., 2016). In services related to health, professionals consider PWDs to be submissive recipients whose confidence in themselves is low and as individuals whose emotional needs need to be taken care of by others (Sahin & Akyol, 2010). Research shows that attitudes and knowledge that are negative impact the self-esteem and health care of PWDs (Pruett et al., 2008) and can also affect the successful delivery of health care services by professionals (Miles, 2000). Moreover many people in the helping

professions are threatened (Pfeiffer, Sam et al., 2004) if the genuineness of their actions towards PWDs is described as shallow or are seen as not being supportive. This questions their core identity of being perceived as a person who is expected to impart unconditional help to all, PWDs included and are expected to maintain a positive attitude towards them (Benham, 1988). However, there are studies that show that even individuals who belong to the helping professions often display negative opinions regarding the value of life of a PWD leading to decisions that can be termed as a self-fulfilling forecast, assuming something to be bad turning out to be bad (Parmenter, 2001). There are attitudes so extreme that even legalized euthanasia for ending their misery due to poor quality of life has been suggested due to lack of knowledge in the past by many scholars (Kevorkian, 1991), with some scientists even advocating the killing of the disabled child at birth (Singer, 1991). The major hurdle that people with disabilities have to overcome for complete participation is society's negative attitude towards disability (Massie, 2006) which restricts their rightful acceptance (Nowicki, 2006) in society. The first step in reducing prejudice is recognising that such oppression and discrimination against PWDs still exist (Genesi, 2000) leading to social rejection and sustenance of higher intensities of social distance (White et al., 2006). The information and knowledge that people have regarding disability also has a substantial impact on their attitudes towards disability (McCaughey, 2009b). A detailed exploration of all these challenges that PWDs face are discussed below. It has also been shown by the World Health Organisation (WHO, 2011) that around one billion people, representing more than 15% of the global population, have a disability of some manner, with around 200 million people (2% of the global population) facing large hurdles in terms of everyday physical ability.

Although the opportunity to participate freely without restrictions still faces some challenges, the general attitude held by society towards people with disabilities is changing (DePauw & Gavron, 2005) and improvements are being made in the form of path breaking contemporary research with focus on ability rather than disability. The United Nations in 2006 reported that the human rights movements have altered the way in which PWDs have been perceived resulting in more welcoming and inclusive systems and facilities. Stienstra (2012) and DePauw & Gavron (2005) have also suggested that the relationship between disability and human rights has been communicated through increasing media presence and overall accessibility to knowledge regarding disabilities.

Social definitions are not coincidental. They serve an important role and function (Sørensen & Kahrs 2006) that has the potential to accelerate the integration of people with disabilities into society, particularly with regard to improved education, health and work (Aitchison, 2010). There has also been a political evolution based on increased understanding of the inequality and prejudice that people with disabilities have to endure that has been largely prompted by disability and human rights activists (Filmer 2005). However, Stienstra (2012) argues that while the situation has improved as a result of such efforts, the rate of change has not been consistent around the globe and a large number of people with disabilities are still institutionalised, suffer discrimination and are socially isolated.

The current study has been influenced by the above mentioned factors and has combined attitude, knowledge and skills into one factor called competence which would determine the service delivery towards PWDs along with other factors which will be discussed later in this chapter.

2.1. General attitudes and knowledge towards people with disabilities

Although, the current study pertains to students of health sciences and their competence and service delivery towards PWDS, a few pertinent studies conducted on the public have been included to understand the functionary role that public plays that will influence how health care professionals provide services which will be explored in the following section. These studies have been included in the review because health care students are the future professionals and the negative attitudes, lack of knowledge and skills (competence) they have could continue into their professional lives impacting rehabilitative services and inclusion of PWDs in society (Stachura & Garven, 2003). Attitudes can be defined as a blend of beliefs and feelings, that are intrinsic to a person that predisposes an individual to behave in a particular way when evoked by explicit referents. They are regarded as latent processes that are psychosocial in nature (Antonak and Livneh, 2000). Attitudes towards PWDs often influence inclusive practices of society because of the differences in physical and mental capabilities associated with them (PWDs) leading to unequal access to community activities that include health care, education, job opportunities and social activities in society (Brostran, 2006) creating invisible barriers to successful integration (Tervo et al., 2004). Research suggests that there is a coping pattern that society develops depending on the shared values and on the affective meaning they (society) attributes to disability which arises from the socio cognitive measures within their cultural background. Pertinent information regarding inclusive and exclusive attitudes of the public towards PWDs and the manner in which PWDs are provided services because of these attitudes are the focus of this section

Blocking the inclusion of people with disabilities into society because of negative societal attitudes has been addressed by Rosenthal et al. (2006) citing studies of Brodwin et al. (2002)

and Smart (2001) to demonstrate how PWDs are prevented from being ‘mainstreamed into society’ (Chen, 2002). Many researchers like Orange (2002), Deal (2006) and Christie et al. (2000) have obtained similar findings from their studies. These findings are pertinent because negative attitudes have a direct link with behaviours that could lead to social rejection and social distance from persons with disabilities (White et al., 2006 citing Davis, 1961) which could result in discrimination at the workplace (Brostrand, 2006 citing Antonak et al., 2000) and could potentially affect employment outcomes (Brostrand, 2006 citing Kennedy et al., 2001). It could also affect policy makers as public attitudes are central to deciding the importance that needs to be given to an issue and hence negative public attitudes can be a major barrier to the success of policies that are implemented in a country. Although there have been many studies highlighting paternalistic and patronizing viewpoints that indicate negative attitudes towards disability in society (Aiden & McCarthy, 2014), the survey that was conducted in 2001 called the Euro-barometer study that surveyed more than 16,000 EU citizens reflect attitudes and knowledge that are improving (Hannon, 2004). Results indicated that 80% of participants were comfortable in the presence of PWDs with people from Ireland being most comfortable followed by United Kingdom, Netherlands, Sweden, Spain and Denmark. Germany and Greece had the least ease with PWDs on this list. Regarding integration of PWDs into society, a significant 97% of Europeans held the opinion that PWDs should be included more in society, 93% mentioned improving access to public places even if the government had to spend more money and 72% supported inclusion of children with disabilities into mainstream. This positive mind set of the Europeans reject the notion of segregating PWDs from society. Although these highly developed societies seem to be having a broad consensus regarding inclusion (Bryant et al., 2006, Scior et al.,

2010) there is still a significant minority who believe that PWDs should reside, be educated and employed in segregated environments (Gilmore et al., 2003, Burge et al., 2007, Tachibana & Watanabe, 2004a) as they believe it is in the best interest of the PWD. Nonetheless, the desire for segregation in some studies was clearly because of the fear regarding the effect of the educational integration of PWDs on the majority (Pace et al., 2010).

The Opinium survey conducted in 2014 on 2001 participants in UK conducted between 11th to 14th April indicated that that only 33% of British people felt comfortable talking to PWDs, reporting that they feared they would either sound patronizing or say the wrong thing. The survey also found that men in the age group of 18 – 34 were the least likely to interact with PWDs and held the most negative attitudes towards them with communication being the reason behind the lack of interaction. 28% of the participants mentioned that getting advice from PWDs would make them confident of interacting or communicating with them. 67% of the participants agreed that knowing someone with a disability would make them feel more confident around them hence natural interactions between PWDs and people who do not have any disabilities by creating opportunities for the same have been recommended by the authors. 43% of the participants mentioned that they personally do not know anyone who has a disability, 17% mentioned they have friends who have a disability and only 7% said they had a work colleague who has a disability underlying the high unemployment among PWDs.

In a study conducted in UK, by Grewal et al. (2002) commissioned by the department for Work and Pensions on 2064 participants, results indicated that only 47% of the respondents who had a disability were happy with their improved status over the past two decades and

they expressed that strong attitudinal and structural challenges still remain while another study conducted that included 103 PWDs in UK by Molloy et al. (2003) indicated that PWDs believed that although their opportunities in society had increased substantially indicating a positive cognizance among the general population, less was expected from them because of their disability (Aiden & McCarthy, 2014) reflecting a lack of knowledge and understanding by society regarding the capabilities of PWDs.

A recent cross sectional study conducted by Zheng et al. (2016) in China on 2912 PWDs, 507 caregivers and 354 members of society using the Attitude to Disability Scale (ADS) to identify if any discrepancies in attitudes exist between the three groups and to examine potential factors that could influence attitudes within each group, results indicated that caregivers who took care of PWD for longer durations of time maintained a more negative attitude towards disability. In China, a majority of the caregivers of PWDs are family members, who give PWDs not only emotional and physical support for daily living but do this as an uncompensated care. This becomes challenging for caregivers leading to higher levels of psychological problems like depression, anxiety and guilt. Similar results are evident in studies conducted by Chen et al. (2015), Almansour et al. (2013) and Graneheim et al. (2014) clearly influencing the caregivers' negative attitudes towards disability and PWDs. Interestingly, PWDs who had the disability for longer periods had a more positive attitude towards disability than PWDs with shorter durations of disability. A possible reasoning given by the researchers is acceptance of their disability as seen in the study conducted by Snead et al. (2002). PWDs who had the disability for lesser time needed more support and mentoring to help them cope and adapt with their disability. Results of the study also indicate high levels of public discrimination towards disability as the general perception

in China is that PWDs are not able to achieve and gain because of their disability leading to discriminatory attitudes towards them. Another reasoning that Zheng et al. (2016) have mentioned is that in China there still exists a prevalent belief among traditional families that “disability is a punishment for the disabled person’s sins in a past life or the sins of the person’s parents” (Holroyd, 2003, Huang et al., 2009) leading to a decreased compassion and a failure to appreciate the need for integration of PWDs into society.

Attitudes towards people with certain types of disabilities have been more favourable which is evident from literature. Attitudes towards intellectual and psychiatric disabilities have been found to be more negative than towards people with physical disabilities in several studies (Corrigan et al., 2000) leading to hate crimes against people with intellectual disabilities and harassment to a ratio as high as 1:2 (Morris 2005 citing from the Social Exclusion Unit 2004) in UK which is a serious concern. People have reported to feel more comfortable around people with ‘visible’ disabilities that are physical or sensory in nature when compared to less visible disabilities like conditions related to mental health (Aiden and McCarthy 2014). In a survey conducted in Ireland by Mind out for Mental Health Government Campaign, 2001 cited by McKeever, 2006) called Tomorrow’s Minds, the shocking results showed that 60% of the public who were participants admitted to have verbally abused people with mental illness and 50% of people with mental illness confirmed this abuse and harassment. However, contradicting these survey results are the Attitudes towards Mental Health conducted in Ireland in 2003 and 2005. While results showed a domination of positive attitude in both these studies (2003 and 2005), which coincided with the results of the Eurobarometer study mentioned earlier, a negative attitude towards mental illness particularly in men more than women was observed. Similar results were found by Morin et al. (2013),

however, they also found that although women seemed more comfortable than men in dealing with people with intellectual disabilities, in the knowledge, capacities and rights factor men had more positive attitudes than women. People between the ages of 25-65 in the survey were found to be more positive in their attitudes towards mental illnesses which contradicts results from a study conducted by Morin et al. (2013) that found younger people who were highly educated to have a more positive attitude and people who had experience of knowing someone with a mental illness held a more positive attitude than those who did not. Hogberg in 2010 however, found contradicting results when he conducted a study in Sweden titled 'Not in my backyard' to explore, analyse and describe not only the public's opinions and attitudes towards mental illness in general but to describe psychiatric nurses' experiences of living next to people with a mental illness. The results revealed that negative attitudes still exist not only among the public but among mental health professionals themselves. Despite the fact that psychiatric nurses have a wide range of knowledge and are in constant contact with people with mental and emotional disabilities that includes having a clear understanding of the problems they face, attitudes were found to be stigmatizing. Hogberg, in his study has prompted practitioners to reflect on their own moral conscience recommending an increase in the level of tolerance as part of the solution. Kowalska & Winnicka (2013) in their study to explore the attitudes towards different types of disability, results indicated that the participants preferred to maintain a greater social distance from people with Down syndrome than with people who were visually or hearing impaired. They displayed less willingness to interact in different situations with an intellectually challenged person than with any other type of disability. Similar findings have been observed in the studies conducted by Gordon et al. (2004) and Nowicki (2006).

Two common types of attitude that people without disability generally have towards PWDs, have been found to be inclusive as well as exclusionary (Yazbeck et al., 2004, p. 97–8, citing Myers et al., 1998). Inclusive practices include awareness and willingness to participate with PWDs ‘as consumers, neighbours and friends’ covering a range of interpersonal relationships. The exclusionary attitudes include an invisibility of PWDs, denying their very existence, their needs, the challenges they face and their personal aspirations. An extreme damaging attitude of this domain is discomfort with the ‘otherness’ of PWDs which seems to be the basis of discrimination and open hostility leading to social exclusion whether deliberate or covert. The inference from the findings of the above studies could be useful as the lack of public awareness, experience and knowledge regarding disability could be potential elements that could lead to a negative attitude towards mental disability.

Finkelstein (2001, p 6) argues that it is society and the social system that decides the fate of PWDs and not the actions of the individual as “it causes PWDs to live in a social prison”. Moreover disability is looked upon as a form of social impression (Thomas, 2004) not caused by just the impairment, but mainly due to this perceived impression of society that PWDs lack the ability to participate within their community like the majority, leading to certain levels of exclusion in the social and cultural realms (Howe, 2008). Grounds of medical reasons (DePauw & Gavron, 2005, Kissow, 2013) have also been given as a barrier to complete inclusion. The majority of these restrictions have arisen from attempts to classify different populations within society based on perceived difficulty or disability.

This culture of classifying disabilities has had many damaging impacts because blending the individual into a group based on their disability allows for the formation and survival of prejudices (DePauw & Gavron 2005) that can lead to stigma, a phenomenon that is related

to values of social roles in the community that includes psychological as well as sociological factors. Stigma is a socially constructed concept that fundamentally comprises of consistent denigration of the person (Bjorkman, 2007) acknowledging personal differences based on specific characteristics. On an evolutionary level, stigma serves to function as a survival tactic, by the formation of social groups, consisting of people with shared norms who establish norms and rules for how people should behave. Understanding societal attitudes towards PWDs is crucial for rehabilitation because the self-identity and psychological wellbeing of a PWD is influenced by society's perceptions regarding disabilities (Smart, 2001). Negative attitudes of society towards PWDs can create invisible barriers to successful inclusion and rehabilitation resulting in the marginalisation and victimisation of the PWD (Tervo et al., 2004).

2.2 Competence of health care professionals towards PWDs

This section will include studies conducted between 2006-2016 on health care professionals' competence (attitude, knowledge and skills) because as mentioned earlier in the literature review the inclusion of PWDs depends upon the members who constitute this society and is crucial for their rehabilitation and acceptance among health care professionals.

Negative attitudes, poor knowledge and skills towards PWDs seem to dominate in many studies conducted on health care professionals (Rao et al., (2009), Khan, Umar et al. (2016) even in contemporary times as is evident from a recent study done by Devkota et al. (2017) in Nepal on 396 healthcare providers to examine their attitudes towards disability using the Attitude towards Disabled Persons (ATDP) Scale and eighteen qualitative interviews with women with disabilities who used maternal healthcare services in a healthcare facility. The results showed a low score compared to the normative score of 100 or higher indicating the

provider's attitude towards disability to be negative. Scores revealed poor knowledge and skills regarding the provision of services which could have adversely impacted service utilization by women with disabilities. The qualitative interviews also revealed that a majority of women with disabilities held the perception that providers have a negative attitude with poor knowledge and skills for providing care, with only a few women with disabilities perceiving the providers as being respectful and caring. Similar results were found in the study conducted by Badu et al. (2016) in Ghana regarding the attitudes of health providers which were found to be negative from the perspective of people with disabilities. In this study it was observed that PWDs face barriers in physical, medical and communicative challenges. Inaccessible entrances, stairways, lack of elevators and ramps were some of the physical barriers reported by the respondents. Absence of readable signs, following equipment instructions, inaccessible furniture at a height were some of the challenges to medical equipment that were reported.

Rose et al. (2012) in their study mentioned that health providers who have more contact with PWDs and training tend to have more positive attitudes and knowledge supporting Allport's contact hypothesis (1954) that stipulates that attitudes centered around direct experience with PWDs have more probability to influence an individual's behaviour that can lead to the development of positive attitudes towards them. Contrasting these above mentioned studies Satchidanand et al. (2012) conducted a systemic literature review using twenty two studies on the attitudes of health care providers towards patients with physical disabilities to comprehend the barriers to care and found that overall healthcare students and professionals have a favourable attitude towards persons with physical disabilities.

A study conducted by Au & Man (2006), has been shown that increased clinical exposure to PWDs does display more positive attitudes. In this study the authors have inferred that the lack of disparity despite more exposure and training could point to the inadequacies of the content of the curricula in Nigeria regarding disability education. Taking into consideration the fact that students scored lower on perceived emotional disposition of PWDs, the authors have suggested that students need to be exposed to PWDs even in social settings and not be bound by only institution based contact to have a better understanding of their own emotions. Similar findings have been obtained in studies conducted by Ten Klooster et al. (2009) and McConkey & Truesdale, (2000) strengthening the notion that the nature of contact rather than contact per say was found to be more relevant in forming attitudes that are positive.

Factors that influence stigma and discrimination faced by people with mental illnesses was discussed by Thornicroft et al. (2008) in England in a study in which it was found that basic ignorance and lack of knowledge regarding disabilities are the reasons for prejudices against PWDs resulting in discrimination. They have suggested attitudes to improve at all levels starting from the family members to the society which includes work place, community activities and policies to end stigma and discrimination. For this they have recommended increasing opportunities for direct social contact with the PWD and aggressive social marketing of disability facts and challenges at a societal level. They have also recommend national and international level health related, social care and economic initiatives to be implemented to create a change in society. Corrigan's (2003) socio-cognitive model of stigmatization proposes that there exists a stigma hierarchy in society's attitude with physical disabilities being perceived as more favourable in comparison to emotional or social disabilities (Grames & Leverentz, 2010). This was evident in the study conducted by Barr &

Bracchitta (2014) in USA to explore attitudes towards individuals with different disability types depending on the nature of contact that they had with them. The SADP Scale and three different scenarios portraying three different disabilities representing a physical, developmental and behavioural disability was administered to a group of 238 undergraduate Psychology students. 192 were women and 46 were men between the ages of 18-24 years. Results revealed that the students had the most negative attitude towards people with developmental disabilities and the most positive towards people with physical disabilities. Similar findings have been received from studies done by Nowicki (2006), Brown et al. (2011) and Fevre et al. (2013) in which disabilities that involve impairments in communication or language or intellect display more negative attitudes than physical disabilities.

Summary

Three central factors have been recognised as influencing the health care provider's service delivery towards PWDs which include inadequate disability-specific knowledge, discomfort working with PWDs and negative attitudes towards disability (Lam et al., 2010. p. 1). These factors are so critically inter related that a deficit in any one of these factors can influence the service delivery. PWDs are subjected to barriers in quality health service because of negative attitudes, inadequate knowledge and skills (Minihan et al., 2011, WHO, 2011, Shakespeare et al., 2009). The notion among health professionals that individuals with mental illnesses are difficult to converse with and have unpredictable behaviour and feelings contribute to their social distance (Crisp et al., 2000) from people with mental illnesses. Service delivery that is based on the medical model of care that is cure based encourages

negative attitudes creating disparities and perpetuates barriers to health care (Seccombe, 2007a; Scullion, 2010) resulting in discriminative services against PWDs (WHO, 2011).

2.3 Studies conducted on the competence of health science students toward PWDs

As competence has been defined as a blend of attitudes, knowledge and skills in this study this section will review studies that pertain to them. Several studies have been conducted on the attitudes and knowledge of HSS that could affect their skills and possibly influence rehabilitation of PWDs which will be included in this section.

Studies regarding the influence of knowledge of disability of HSS on their attitudes towards PWDs

Knowledge and disability related experience of health science students' have been found to influence the quality of care extended to PWDs (Thompson et al., 2003). Education of HSS regarding disabilities along with professional contact with persons with disabilities have been found to positively influence HSS (Thompson et al., 2003) an important insight that could be adopted during the training of health care students who are being prepared to work with diverse people, PWDs included (Sheriff, 2010). This was evident in the study conducted by Olaoye et al. (2016) in Nigeria to assess undergraduate health science students' attitude towards PWDs taking into account their knowledge of disability, socio demographic characteristics which included gender, academic major, ethnicity, year of study and contact. Respondents from undergraduates programs of Medicine, Nursing, Dentistry and Medical Rehabilitation all between the ages of 18-32 were chosen using a stratified random sampling technique. The students were given a fourfold survey that included a demographic sheet, Attitudes towards Disabled Persons scale (ATDP), the Contact with Disabled Persons scale (CDP) and a section for precise information on the participant's knowledge about disability.

Results indicated that these health science undergraduates from Nigeria had an overall positive attitude towards PWDs, which is consistent with the findings of studies conducted by Tervo et al. (2004), Sinai et al. (2013) and Boyle et al. (2010). Knowledge regarding disability was significantly linked to age and higher level of study and results indicated that the positive attitude towards PWDs was influenced by their knowledge regarding disability. Haskell (2010) from his research findings reported that social work students have only a mediocre self-perceived knowledge regarding disabilities whereas Werner et al. (2013) found in his study inadequate knowledge regarding intellectual disabilities among psychiatrists. When the knowledge level of students is adequate, it is generally because of disability related courses within the curriculum, however, the authors also mention that when disability related courses are delivered from a diagnostic framework of the medical model it will not be effective on students' knowledge of disability (Gilson & DePoy, 2002). Age and year of study showed a positive association with knowledge regarding disability because more exposure to issues related to disability created more knowledge according to this study with students above the age of 26 showing more positive attitudes than the younger students of this study.

Summary

The above mentioned studies indicate that knowledge regarding disability has the power to influence positive attitudes and that knowledge is directly proportional to attitude. Students have established attitudes when they enroll in a program of study, however, that attitude can change when exposed to new knowledge and experiences (Lyon, 2014). These experiences and beliefs that the HSS form during the crucial years of study, will potentially determine

their behaviour in future careers. It is hence important to explore the quality of those attitudes before they actually start working. Investigating the effects of training on the attitudes and knowledge of the HSS will help in developing positive attitudes on these future professionals (Boyle, Williams et al., 2010).

2.4 Measuring attitudes, knowledge and interaction towards PWDs

A review to examine over forty measurements of attitudes and knowledge towards people with disabilities by Antonak and Livneh (2000) revealed that there has been no significant change in the scales used in the assessments of attitudes towards PWDs (Antonak and Livneh, 1995b, as cited in Longoria, 2006) since the past quarter of a century. They found that the most popular twenty six instruments that are used widely are over twenty four years old with most attitude and knowledge studies using either rating scales or trait attribution scales (Haskell, 2010). Rating scales quantify the degree of agreeability or disagreeability of a participant with a statement related to PWDs. Trait attribution scales measure the participant characteristics that are associated with a target group which could be a case scenario, or a picture of a target group that could reflect the emotional and cognitive elements of attitudes.

From a review of literature it is evident that the Attitudes towards Disabled Persons Scale (ATDP) is a widely used scale that measures generalised attitudes towards disability. The instrument was developed by Yuker et al., in 1960 by generating the items from literature and through discussions with psychologists (Lam et al., 2010). Three versions of the questionnaire are available with Form O being the original with 20 items. Forms A and B are the renewed versions with 30 items each. The scales consist of a Likert scale that specifically expects participants to express their agreeability to several statements that measure the traits

of PWDs, the extent to which PWDs are perceived as similar to rather than differing from people without disabilities and the extent to which the participant believes in equitable treatment of PWDs and their belief of how much individuals with disabilities accept or reject their disability (Yuker, 1986). The underlying assumption of this scale is that the more similar a participant thinks people with physical disabilities are to people without disabilities, the more chances are that they believe in equitable treatment and the more likely that they would believe that the PWD would accept their own disability leading to a more positive attitude towards this population. The ATDP is considered a good scale as it measures not only the affective and cognitive aspects of attitudes (Antonak & Livneh, 1988) but also appears to be capable of measuring the behavioural tendencies of the participants as it includes questions regarding how people should behave towards PWDs.

The Scale of Attitudes towards Disabled Persons (SADP) (Antonak & Livneh, 1982) is another popular attitude scale that assesses attitude from a societal viewpoint that includes statements that describe offensive personality stereotypes, benevolent stereotypes, behavioural misconceptions and optimism/pessimism. Items specifically focus on how PWDs should be, treated by society (Gething, Lacour, & Wheeler, 1994). It was developed as an alternative to the ATDP in 1981 by Antonak.

The Interaction with Disabled Persons scale (IDP) that was developed in Australia by Gething and Wheeler in 1992 to assess attitudes towards PWDs in terms of the level of discomfort while interacting with PWDs on a personal level of analysis by people without disabilities in contrast to the ATDP that was developed on the societal level. The 20 items on the IDP allows the respondent to express general feelings connected to social interactions with PWDs taking into consideration the affective, cognitive and behavioural aspects of

attitudes. The underlying notion is that attitudes have a close relationship with a comfortable interaction and prior contact with PWDs suggesting that with increased prior contact with PWDs, there would be more positive attitudes towards them. This could be because with frequent contact people tend to feel more certain regarding how to behave with PWDs and what is expected of them.

The Multidimensional Attitudes Scale towards Persons with Disabilities was developed by Findler, Vilchinsky and Werner in 2007. It defined attitude as including three dimensions of affect, behaviour and cognition. The survey consists of 34 questions that ask only about attitudes based on what is observed rather than any knowledge they may have about any specific disability. There are 16 items for the affect factor, 8 items for the behavioural factor and 10 items for the cognitive factor. The responses of the participants will give an inference of their attitude. The MAS is a 5 point Likert scale with values ranging between 1 (not at all) to 5 (very much) and higher the scores on this scale, higher the negative attitude. A relatively new attitude scale, the MAS has proven a significant relationship with the ATDP Scale (Yuker et al., 1966), indicating sufficient convergent validity (Findler et al., 2007). The

Summary

It is evident that the most widely used scales to measure attitude, knowledge and interaction towards people with disabilities has been the ATDP scale, the IDP scale and the SADP scale. The Multidimensional attitude scale is a newer scale that has been mentioned in a few studies, however it has not been as widely used as the other scales mentioned. This section was reviewed so that the researcher could explore the possible scales that could be used in this study that could measure the HSS attitude, knowledge and skills towards people with observable disabilities.

2.5 Socio-demographic factors and health science students' attitudes and knowledge towards PWDs

Certain demographic categories have been found to be influential in previous attitude studies in predicting attitudes and knowledge towards disabilities. Common themes found in different research studies that have examined college students' attitudes towards general disabilities have been gender, age, education, academic major, prior contact with PWDs and ethnicity. The researcher has reviewed this section to explore the socio demographic factors that could possibly influence the competence towards PWDs.

2.5.1 Gender, Age and Education

Gender, education and age are important factors that are associated with attitudes towards PWDs. Younger individuals, women and participants with higher educational achievements have indicated higher positive attitudes in many studies (Akrami et al. (2006), Burge et al. (2007), Kowalska & Winnicka (2013). There have been many contradicting studies regarding the relationship between gender and attitudes towards disability. Many studies highlight that women have more positive attitudes than men (Leyser & Greenberger (2008), Ten Klooster et al. (2009), Upton & Harper (2002), Nowicki & Sandieson, (2002), Hunt & Hunt (2000), Seo & Chen (2009), Mc Dougall et al. (2004) and Panek & Smith (2005). Simultaneously there have been studies that have indicated no gender differences in attitudes towards PWDs (Yazbeck et al., 2004), Tervo et al. (2004) Nagata, (2007), Ouellette-Kuntz et al. (2010), Morin et al. (2013b), Vincent-Onabajo and Malqwi (2015), Satchidananad et al. (2012), Pace et al. (2010), Scior & Furnham (2011).

A study conducted by Ghagare et al. (2015) in India to examine the attitude of physiotherapy students towards PWDs indicated that younger HSS have a more positive attitude towards

PWDs than older HSS students. Research into the relationship between age and attitudes is limited by the high concentration of studies with school students as participants. However, studies that did include participants across the university age span indicate that younger people generally report more positive attitudes than older people (Ouellette-Kuntz et al. (2010), Morin et al. (2013b). Recently Vincent-Onabajo and Malqwi (2015) found contradicting results that showed older students displaying more positive attitudes, a reasoning given by the authors as being synonymous with reflective practices that comes with age. There have also been studies that found no correlation between the two variables of age and attitudes towards PWDs (Lau & Cheung, 1999, Pace et al., 2010).

Summary

Although there has been no consistency in the findings of gender being influential in the development of a favourable attitude, girls have been found to have more positive attitudes and knowledge than boys regarding PWDs in many of the above mentioned studies. Generally younger HSS have also been found to have more favourable attitudes and knowledge than older HSS as is evident from the above studies.

2.5.2 Academic Major and curricular training in disability studies

There are sufficient studies that support the fact that negative attitudes can be changed and influenced through education (Stachura & Garven, (2007), Williams et al. (2007), Tervo & Palmer (2004) and Seccombe (2007). Education that includes disability studies have the ability to affect the competence of students towards PWDs positively (Thompson et al., 2003) hence the recommendation to include it during the training period in college. Devkota et al. (2017), Pace et al. (2010) and Scior and Furnham (2011) however, found contradicting

results from their studies which revealed that there is no difference in attitudes and knowledge with those who had received disability training and who did not.

It is also presumed that the academic major that the HSS is enrolled in can also be a contributing factor in influencing the competence (attitude, knowledge and skills) of the HSS which will be explored in this section.

There are several studies that have linked the academic major with attitude towards PWDs with students in help-oriented fields (rehabilitation counselling, physiotherapy, occupational therapy, counselling and health) displaying more favourable attitudes in comparison to students from non-health backgrounds (Hunt & Hunt, 2000). They have emphasised that the professional training that is given within different academic majors could influence attitudes and knowledge (Byron & Dieppe, 2000). Nursing students' attitudes have been found to be most negative than other healthcare professionals and students (Matziou, et al. (2009), Tervo et al. (2004), Au & Man (2006), Dorji & Solomon (2009), Cervasio & Fatata (2013) , Devkota et al. (2017) contradicting the results of the studies conducted by Ten Klooster et al. (2009) in Netherlands, Sahin & Akyol (2010) in Turkey and Olaoye et al. (2016) in Nigeria that found nursing students to have positive attitudes towards PWDs.

Several studies have made comparisons between the attitudes of health care students across professions. Tervo et al. (2004) and Garven and Stachura (2007) compared students of nursing, physiotherapy and occupational therapy and found that nursing students had the least positive attitudes towards PWDs whereas occupational therapy students showed the most positive attitudes towards PWDs. Results from the studies conducted by Vincent-Onabajo et al. (2015), Quartey et al. (2009), Amosun et al. (2013) and Chan et al. (2002) indicated an overall positive attitude of physiotherapy students towards PWDs, however,

Ghagare et al. (2015) found that physiotherapy students only have a moderately positive attitude towards PWDs. Sheriff (2010) found them to have neutral attitude in their study. Au, King et al. (2006) conducted a comparative study on the attitudes of health care professionals and students towards PWDs in Hong Kong. Physiotherapists, occupational therapists, social workers and nurses were randomly given the ATDP to gain insight into their attitudes. Within the groups, it was observed that student nurses and social workers had less favourable attitude towards PWDs than physiotherapists and occupational therapists. However, it is interesting to note that nursing professionals had a less favourable attitude than nursing students. It is also noticed that socio demographic variables like age, educational level, knowledge and contact with people with disabilities were factors that significantly influenced the attitudes held by the students and professional participants.

There are many studies that have also indicated medical doctors to be having negative attitudes towards PWDs (Khan, Umar et al. (2016), Dorji & Solomon (2009). Sahin and Akyol's (2010) study contradicts these studies as their results indicate that doctors and nurses have a positive attitude towards PWDs.

In a cross sectional comparison study done by Stachura and Garven (2007) in the United Kingdom to assess the probable impact of curricular and non-curricular tasks on the attitudes of students of physiotherapy and occupational therapy at the beginning of their year of study and when they were finishing, 2299 students were administered the Interaction with Disabled Persons' Scale (IDP). The results showed that occupational therapy students had a more positive attitude than physiotherapy students in the beginning of their program. Although physiotherapy students held negative attitudes towards PWDs in the beginning of their study, their attitudes improved by the end of their course while there was no difference in the

attitude of the occupational therapy students at the end of their program. A possible reasoning for this has been given by the researchers relating prior work experience with PWDs to attitudes. A large majority of occupational therapy students in this study were older, who entered into the course with work experience that too with PWDs whereas physiotherapy students were younger and with limited work experience. On a social level, the researchers found that occupational therapy students had more informal contact with PWDs than did physiotherapy students. Both these factors generated positive attitudes in the occupational therapy students in the beginning of the program. The Chartered Society of Physiotherapy were concerned with these results and they highlighted the need to investigate further into the students' negative attitudes since the students had chosen to pursue a career in physiotherapy in which they would have to regularly deal with PWDs. However, it was noticed that by the end of the program a significant positive shift in attitudes was observed in the physiotherapy students establishing that there was a correlation between the content of the curriculum and this positive shift. A similar study with nursing students was conducted by Secombe (2007) in New Zealand, aimed to evaluate the effects of attitudes and knowledge regarding disability after a change in curriculum incorporating an eight week theoretical unit that focused on disability studies for undergraduate nursing students was introduced. The observations were recorded using a quantitative pre-test post-test design. The results interestingly showed that the differences in scores on the questionnaire before and after the disability module had been introduced were not statistically significant, implying that the curriculum had not made any difference in the attitude of the students towards PWDs. The authors contend that a justification could be because even on the pre-test the students showed in their results a positive attitude towards PWDs because of the

emphasis placed on preparing nurses who follow culturally safe practices and this could be a reason that contributed to the positive attitudes even in the pre-test. Having PWDs to help prepare and deliver the nursing education program has been endorsed by the nurse educators of this study.

Although findings of several studies indicate that academic major enrollment leads to more inclusive practices (Shields and Taylor (2014), Li, Wang et al. (2013), Kleeman (2007), Krahe & Altwasser (2006) and Yazbeck et al. (2004), Dibra et al. (2013) from their study established that the enrolment of a HSS in an academic programme does not impact the students' attitude towards disability. They found that regardless of the course, the students held a positive attitude regarding the capability of PWDs and were of the opinion that they should be given equal opportunities in society.

Yazbeck et al. (2004) in Australia revealed the importance of age, education and social contact as important variables to have positive attitudes towards people with intellectual disabilities than the community in general. The reasoning given by the authors is that their education would stop them from believing in eugenic explanations for intellectual disability and more likely to support community inclusion contradicting the results of the study conducted by Horner-Johnson et al. (2000) where the researchers revealed that the level of education alone was not a sufficient indicator of lower levels of prejudice as claimed by Yazbeck et al. (2004). According to Horner-Johnson et al. (2000), the stream of study was equally important and they reported that students of health science, education, social work or psychology were less likely to report discomfort with people with intellectual disability than students in pure sciences stream. With higher levels of college education, students expressed more positive attitudes in comparison to first and second year students, who

indicated less positive attitudes towards equality and accommodations (Upton & Harper (2002). The relationship between education and attitudes has been more consistently reported, with people with higher levels of education generally reporting more positive attitudes than those with lower levels of education (Scior et al., 2010), Morin et al. (2013b), Bell et al., 2009) and Chan et al. (2002) with students exhibiting different trends of change in attitude as their professional education progresses.

Summary

Although there are inconsistencies in findings between academic major, attitudes and knowledge of HSS towards PWDs, there is a collective agreement that higher education leads to more positive attitudes. There is also a shared suggestion from researchers for enhanced exposure towards PWDs which could be incorporated into the curriculum which has been found to have a direct association with positive attitudes and knowledge building in HSS. This will be discussed later in this chapter.

2.5.3 Ethnicity and competence of HSS

Due to the heightened prominence of community cohesion and values that are collective in nature, (Scior et al., 2010), ethnicity is a pertinent variable as there is an ethnic mix within the HSS in the UAE, to obtain an indigenous understanding of how ethnicity can influence the competence of a HSS. Asian and African societies are more sensitive to potential attitudes of society that can be threatening than Westerners as is evident from a large number of studies that indicate high levels of stigma against mental health disabilities in Asia (Kramer et al., 2002, Rao et al., 2007 and Africa (Adewuya & Makanjuola, 2008, Barke et al., 2011). A cross cultural study conducted by Bell et al. (2009) to examine the attitudes of 485 occupational therapy students towards PWDs from an international perspective including 11

universities programs from Australia, United States, Taiwan and United Kingdom using the Interaction with Disabled Persons' Scale (IDP) and also to investigate the probable impact of professional education on their attitudes, results indicated a significant difference between the occupational therapy students from the different countries. Students from Taiwan exhibited the highest discomfort, which was endorsed by Brown et al. (2009) when he found similar results in his study. This has been explained by the authors as being related to cultural beliefs about disability in Taiwan. Earlier studies conducted by Chan et al. (2002), Wang et al. (2003) indicate similar findings involving individuals of Chinese ethnicity as expressing more negative attitude towards PWDs and a desire to distance themselves from PWDs. According to the researchers, the results of the study indicate that fewer opportunities to interact with PWDs along with their cultural beliefs and background regarding disability could be a possible reason for Chinese students to have the most negative attitude towards PWDs. Chen et al. (2002) & Wang et al. (2003) have also found negative attitudes towards PWDS among participants of Chinese ethnicity who displayed a preference for maintaining a social distance from PWDs. The authors justify this finding as a result of cultural stigma in the Chinese culture because PWDs are often viewed as a source of shame to be kept away from society (Tsang et al., 2003) resulting in lesser opportunities for people without disabilities to interact with PWDs. The negative attitudes of Chinese participants have also been attributed to the influence of the Confucian tradition that believes in unstinted reverence to ancestors and a religiousness that is human centered. Another justification is given to the collectivistic values of society that encourage inter dependency and sacrifice and consider it an obligatory role to look after PWDs within the family and when these roles are not fulfilled it leads to negative attitudes towards PWDs (Hampton and Xiao, 2007).

Grames and Leverentz in 2010 conducted a study on 138 American and Chinese students from the University of Wisconsin-La Crosse of which 98 were American students enrolled in undergraduate Psychology courses and 40 were Chinese international students who were enrolled in English as a foreign language course. The age range of the students was 18-25 including 49 men and 89 women and the tool used to measure attitudes was the Attitude towards Persons with Disability (ATDP) and Q-sort that ranks nine cards according to preference of 3 disability types- congenital physical, acquired physical and Psychiatric. Q-sort has 9 cards that describe people with different disabilities types and severities that need to be ranked according to preference. Interestingly it was found that the nature of disability did affect the attitudes of American and Chinese students towards PWDs in different ways. Although both sets of students ranked acquired physical disabilities on top followed by psychiatric disabilities, American students showed a more favourable attitude towards people undergoing depression than the Chinese. The explanation for this was given as the high incidence of depression in the American society, leading to more acceptability than in the Chinese society where psychiatric disabilities are viewed as a shameful character flaw that needs to be hidden. While congenital physical disabilities were most favoured by the Chinese students, psychiatric disabilities were given a higher acceptance by the American students.

One study of Chinese, Italian, German, Greek, Arabic and Anglo Australian health practitioners found that attitudes towards persons with disabilities are more negative in collectivistic societies (Chinese, Greek, Italian and Arabic) than in individualistic societies (Germany and Australia), which are comparable to the United States (Westbrook et al., 1993). The issue of cultural differences in attitudes towards disability has considerable practical implications. First understanding cultural variations in attitudes towards persons

with disabilities is particularly important for countries such as the U.S., which receive large groups of immigrants from a variety of cultural backgrounds (Westbrook et al., 1993). Secondly, the cross-cultural study of attitudes towards persons with disabilities is crucial in understanding whether an attitude is universal or culture specific. As majority of research on attitudes towards persons with disabilities has focused on western industrialized populations, there is a considerable problem when an attempt is made to generalise the results to developing countries (Wang et al., 2003).

Summary

Attitudes and knowledge towards PWDs is influenced by not only personal characteristics but by the cultural background of the person that includes their ethnicity. It has been largely researched that collectivist societies that includes the UAE where the study is positioned differ widely from the individualistic societies as the focus is on attitudes and knowledge developing less on a personal level and more being influenced by society's collective attitude and knowledge regarding disability.

2.5.4 Socio- economic status and competence

Another influencing factor is the strong relationship between competence and socio economic status (Filmer, 2005). Limited resources and poor knowledge regarding disabilities often limit organisations and governments to invest in inclusion leading to the marginalisation of PWDs making them a vulnerable group (Jolley et al., 2014). This puts the pressure on parallel faith based organisations and charitable institutions who have microscale programmes that have limitations in terms of finance and resources. (Amponsah-Bediako, 2013) to take care of the educational and health care services of PWDs. There is also a belief that the capabilities of people with intellectual disabilities are underestimated by the urban

public as indicated in the study conducted by Siperstein et al. (2011) in India that they are incapable of engaging in even simple tasks like self-help skills. The authors justify these beliefs as a result of the stereotype that exists in India that people with intellectual disabilities are not as capable as people without disabilities (Ghai, 2002). They also mention that it could be because the public may have primarily been exposed to only people with moderate and severe disabilities. They even suggest segregation as lack of skills in individuals with ID as factors that would make them incompetent in the larger society. The authors are not surprised at the results of this study as they mention that the driving forces behind the middle class in India are strong work ethics and high productivity. Morin, Rivard et al. (2012) however, in their study conducted in Canada, on 1605 adults did not find any association between the income and attitudes.

Interaction with persons with disabilities and competence (attitudes, knowledge and skills) has been linked in many studies which will be discussed in the next segment which will explore the effect of social distance and competence towards PWDs. Social exclusion involves the lack or denial of resources, rights, goods and services and the inability to participate in the normal relationships and activities, available to the majority of people in a society, whether in economic, social, cultural or political arenas. It affects both the quality of life of individuals and the equity and cohesion of society as a whole (Levitas et al., 2007). This will be discussed in the next section of the review as it directly influences the willingness of the HSS to interact with PWDs and their competence towards them.

Summary

Socio- economic status has been emphasised in this section to be an important variable in the development of attitudes and knowledge in HSS. In the UAE, this is important as there is a distinction in terms of socio-economic status as there is a mix of ethnicities within the Arab population which will be discussed later chapters of this study.

2.5.5 Social distance and competence towards people with disabilities

Interacting with PWDs has been found to be anxiety inducing for those without disabilities and one of the main reasons cited has been because of a lack of knowledge regarding the disability as well as the social outcomes (Sheriff, 2010). Full integration demands open attitudes towards PWDs on an interpersonal level (Chen, 2002), “generating affective ties” (Hewstone, 2003) with them. Social distance is the comparative willingness to be involved in different relationships with a person of stigmatized identity (Link, Phelan et al., 1999) and this distance is relative to the boundaries that are set by the majority of the society (Pittam and Gallois, 2000).

According to Ten Klooster et al. (2009), a relative or a friend with a physical disability strongly indicates a positive attitude towards them and if that relationship is on an equal status (Yuker, 1994), then it will be more meaningful and rewarding. Contact has been considered to be not only a crucial factor influencing attitudes but also an important variable to create a change in attitude supporting Allport’s contact theory as still being undisputed which is apparent in many contemporary studies (Hunt & Hunt, 2000, Smith, 2002). Studies that have indicated a connection between contact and positive attitude towards PWDs mention frequency of the contact as a contributing factor (Blundell, 2014) which was contradicted by Pettigrew & Tropp (2006), Morin et al. (2013) and McManus et al. (2011)

who positioned that it was not the quantity of the contact rather the quality that was an influencing factor in attitude formation and change. (Au, King et al., 2006). However, the findings of the study conducted by Barr & Bracchitta (2014) in America, that explored attitudes towards people with different disability types based on the nature of contact with them, did not find any link between contact with people with physical disabilities and a higher positive attitude. Contact with a person with behavioural and developmental disability, however, was associated with higher optimism and helped lower misconceptions regarding the disabilities. Chan et al. (2002) in their study also found that past experiences and contact were not significant to their findings. However, an interesting discovery in the study done by Olaoye et al. (2016) was that despite having lesser contact with people with disabilities, students displayed a positive attitude towards PWDs contradicting Allport's contact theory. Similar findings were seen in the studies done by Mukhopadhyay & Molosiwa, (2010) involving teacher trainees and McConkey R, Truesdale M, (2000) including health care students. Hergenrather & Rhodes, (2007) in their study on the effect of social context (work, marriage and dating) on attitudes of undergraduate students in America found that students have most positive attitudes towards PWDs at the workplace. Marriage had the second highest score and dating a PWD was reported as least positive among students. The authors justify the high score at the workplace with regard to the social relationships being less intimate than within the context of marriage and dating. In this study women were found to have higher scores in all three subscales than men and a reasoning given by the authors is because of a higher empathetic nature of women. Another reasoning that the authors have given is that men are more concerned about their masculine identity being preserved and they are concerned when they are perceived as anything but that by

society hence feel less comfortable when interacting with PWDs. Women in contrast have felt more comfortable with PWDs who are men as they find them 'safer' (Shakespeare, 1999) in a relationship. Shields et al. (2014) attempted to explore the effect of contact in developing professional behaviours and skills in physiotherapy students in America by introducing an eight week programme with people with intellectual disabilities. After the exposure was over, students reported a higher comfort level and more confidence in themselves to work with PWDs supporting the idea that contact with PWDs in community settings is beneficial for students irrespective of the content of the experience. The experience of contact also helped to change the representation of PWDs from being impulsive, immature and untidy to people who are vivacious, capable and satisfied. (Falanga, 2011).

These findings support the contact theory that links increased contact with PWDs with more positive attitudes toward disability as found in previous studies conducted by Stachura and Garven (2003 & 2007) and Au and Man (2006). Some researchers have noticed that contact with PWDs is not a significant variable influencing attitudes and knowledge unless it is a planned and structured one (Gordan et al., 2004, Au & Man, 2006, Shannon et al. (2009).

Summary

Prior contact with emphasis on the nature of the contact has been reported as an important variable in several studies. However, some researchers have suggested that personality characteristics determine attitude and acquisition of knowledge regardless of contact with PWDs.

2.6 Competence and service delivery

The competence of health care students towards PWDs has been found to influence the service delivery and rehabilitation (Stachura & Garven, 2003). Education about and interaction with PWDs (Thompson et al., 2003), family centered services like parent education and personalised service delivery depending on the unique characteristics of the PWD (Wade et al., 2005), participatory practices of professionals through active listening, empathy and respect for the PWD that reflects unconditional support (Dunst et al., 2002), on the job training that increased the confidence of health providers to provide quality services (Cooper et al., 2014) have all been linked to influencing the competence of HSS towards PWDs.

Robson, Haddad et al. (2013) in their study aimed to assess whether there was a connection between practice and training on attitudes of qualified mental health nurses from a Mental Health Trust in the UK. Results indicated that specific training is linked to positive attitudes and engagement in practice, however, prospective and controlled study designs are needed to clarify causal direction and extent of effects. Experiential learning experience, when included in the curricula with reflective components, was found to help develop students' comfort level in handling people with disabilities as seen in the study conducted by DeLucia and Davis (2009) in Buffalo on third year students of dentistry. They were given didactic instructions for a week., related to patients with intellectual disabilities and their comfort level while working with them were assessed after a week, six months and a year later after the lecture was given. Results showed that students indicated previous experience with individuals having developmental disabilities and their own general and professional capabilities as being influential factors on them. General and dental capabilities were

expected to be higher after training, which coincided with the results, however, the comfort level was not expected to be higher after one training. Statistics indicated substantial positive relationships, between experience and baseline comfort levels after one year, indicating that experiential learning had indeed influenced their comfort levels of working with people with intellectual disabilities. This strategy has been endorsed by Corrigan et al. (2003) in their study, that the familiarity with mental illness is linked with more positive attitudes towards people who suffer from them (Corrigan and Green, 2001) which is a pertinent observation as more people with mental disabilities are opting for private services with the trend of moving towards total inclusion. Researchers suggest more exposure to patients with mental disabilities and rigorous training as an important part of their professional training as they have noticed a sense of discomfort in students when handling people with mental disabilities (Wolff et al., 2004).

A study conducted by Flynn et al. (2005) to assess the core competencies that are required for support providers working with people having psychiatric disabilities in the community, an extensive literature review was conducted by 18 individuals who were receiving psychiatric services and 16 support providers of psychiatric services. A list of 68 competencies were identified that could be grouped under personal attributes, knowledge and skills. Using the technique of card sorting, the receivers of the psychiatric services sorted 59 out of the 68 competencies as a necessity for support workers. Competencies of personal attributes were sorted as a pre-employment necessity and on the job learning and special knowledge regarding psychiatric illnesses were grouped under knowledge and skills indicating the complexity of competencies required for mental health support. The findings indicate that skilled specialised training for professionals who work with individuals with

psychiatric disabilities is an absolute necessity to improve attitudes, knowledge and skills towards people with psychiatric disabilities.

The studies mentioned above indicate that university based curriculum does influence knowledge (Tait & Purdie, 2000) which in turn influences attitudes. They illustrate the value of combining information-based instruction with structured fieldwork experiences in changing attitudes towards disability and inclusion. It also suggests that raising awareness of one disability may lead to changes in attitudes towards disability in general.

2.7 Studies on disability conducted in the Arab world

The Arab world can be described as those countries that lie in the MENA region (Middle East and North Africa). This would include Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank, Gaza, Ethiopia, Sudan and Yemen.



Figure 1: Pictorial image of the MENA countries (Google)

Two studies conducted in Saudi Arabia are significant to this study, as results from these studies could be the closest comparison that could be made in terms of socio-cultural similarities. In a study to determine the attitudes of health care professionals towards people with physical disabilities in Saudi Arabia by Abdulwahab and Gain (2003) using the SADP (Scale of Attitudes towards Disabled Persons), 130 Saudi Arabian health care professionals of which 50 were females and 51 were males within the mean age of 32.4 with a minimum of 8 years' experience working in four hospitals were administered this scale. From the participants, 50 were physical therapists, 28 were speech pathologists and 23 were family medicine physicians. All the participants had experience working with disabilities, including physical disabilities which was the focus of this study. Results indicated an overall positive attitude towards people with physical disabilities. The authors reason this out to be due to the influence of contact with PWDs and because of accurate knowledge regarding disability over the 8 years they have worked. They have also justified more contact with more positive attitudes because the fear of the unknown does not exist in them and with knowledge negative stereotyping decreases. Age and gender were not variables that showed any significant influence on the attitudes of the health care professionals. The authors suggest in this study that health care professionals with their positive attitudes towards PWDs can be the 'voice' of society as they have a good standing in society and their attitudes would be acceptable and welcomed by society if highlighted in the correct way. The authors mention that these professionals could even influence policy makers and help in resource allocation. The other study one on 282 undergraduate students in Saudi Arabia, of which 134 were male and 148 were female, to explore attitudes towards PWDs by Haimour (2012) based on gender, academic major, level of contact and education, a researcher developed questionnaire

consisting of 25 items from the ATDP-O (Yuker and Block, 1986) and the St Joseph Curriculum based attitude (Reinhardtson, 1980) was administered on the students. Results indicated that female students, advanced major students in special education and those who had a deeper contact with PWDs had a more positive attitude towards PWDs than the other students. Both studies found contact to be a significant factor in influencing attitudes, however, results on gender were different as gender was not found to be significant in the study done by Abdulwahab and Gain (2003) but was found significant with females displaying a more positive attitude than males in the study done by Haimour (2012). Both studies endorsed specialised knowledge as being a significant factor, in developing positive attitudes.

A study conducted in Turkey by Coban et al. (2017) that aimed to determine the attitudes of health care students towards PWDs found them to be generally positive. They found that students from the departments of physiotherapy and social work departments had more positive scores and a possible reasoning given by the researchers was that the courses incorporated disability issues within the curricula and numerous internships that include PWDs were part of the training. They also found that students from lower income families had higher scores in attitude towards PWDs than students from higher incomes. A related study conducted by Sahin & Akyol (2010) in Turkey comparing 182 nursing students with 471 medical students' attitudes indicated that despite the medical students having more contact with PWDs than nursing students, their attitudes were more negative negating the theory of increased contact relating to positive attitudes (Stachura and Garven, 2007) and confirming the observation that it is not as much the frequency of contact than the quality of the contact that helps to develop the positive attitudes due to informed reflection (Au,

King, 2006). Another study conducted by Uysal et al. (2014), to investigate the attitude of undergraduate nursing students in Turkey, results indicated a moderate attitude (mean ATDP score of 64.27, range 33-96) towards PWDs which is comparable to the results obtained from a study conducted on Greek nursing students by Matziou et al. (2009) who also revealed moderate attitudes (mean ATDP score of 61.7). In Turkey, where the society is basically socio centric, the role of the family is paramount and it is considered a religious duty to look after a member of the family with disabilities. Disability is given to someone by God and 'nothing can be done about it'. The PWD is looked upon as an object of embarrassment, one who has to be looked after for the rest of their lives as well as be loved dearly. Viewpoints such as these could hamper personal growth of PWDs (Shaw & Hughes, 2006) as the responsibility in such cultures lies with the society and not with the individual. This could be a reason why the students have taken a moderate view towards PWDs according to the authors. Regarding demographic influences, students who were between the ages of 18-21 had more positive attitudes when compared to students who were older, contradicting the belief that the older one gets the more positive the attitude would be. It was also noticed that prior knowledge regarding PWDs had a positive impact on the attitudes of the nursing students. However, prior contact with PWDs in the family, society and during clinical internships, did not make any significant difference in their attitudes towards PWDs, raising the question regarding the nature and duration of the contact (Seccombe, 2007b).

The findings have indicated a need to make revisions in the curricula in order for students to work effectively with PWDs because professionals though they have a positive attitude generally towards PWDs they display negative attitudes when in contact with them. This can be rectified only through improving their knowledge regarding disabilities. Yildirim et

al. (2010) have obtained similar findings from their study done in Turkey but stressed on adding social communication skills into the curriculum.

Sahin and Akyol (2010) evaluated the attitudes of 182 female nursing students and 471 medical students, of whom 40.4 % were female and 59.6% were male, towards PWDs with the intention of providing suggestions to make curricular changes in a cross sectional study in Turkey. The Turkish Attitudes towards Disabled Person Scale (TATDP) was used on all students of the first and second year of both colleges. A demographic questionnaire consisting of gender, age, prior knowledge regarding disability, prior contact with PWDs and source of prior knowledge were included. The TATDP developed by Zehra Yasin Dokmen (2004) composed of three subscales – Compassion, Social Value and Resource Distribution. Overall results indicated a relatively positive attitude among both nursing as well as medical students irrespective of class. The authors justify this to a shared cultural background. However, despite not having an educational program related to disability awareness, both groups of students self-reported responses that indicated positive attitudes. These results contradict the results found by Tervo et al. (2004) in America that indicated nurses to have more negative attitudes than other health professional students. Results show that nursing students had less contact as well as less prior knowledge regarding PWDs than medical students. This study indicates that girls had a more positive attitude than boys. The justification given by the researchers is the inherent feelings of motherhood and cultural differences between gender expectations in Turkey to be the cause of the more positive attitudes in girls. In the society, girls are seen as more accepting, tolerant and patient, less likely to have attitudes that are prejudiced towards PWDs. Similar findings have been obtained by Chen et al. (2002) and Martin et al. (2005) in their studies which showed girls

with a more positive attitude than boys regarding their attitudes towards PWDs. Regarding contact with PWDs, nursing students had less contact with them than medical students. The results of the study have been recommended to be used as needs assessment data to recommend the development of a disability awareness curriculum by the researchers.

In Israel, Werner & Stawski (2012) explored the available literature on knowledge, attitudes and training of psychiatrists and other professional caregivers such as social workers, psychologists, nurses, general practitioners (GPs) or direct service workers in the field of Dual Diagnosis of intellectual disability with psychiatric disability. 27 studies after the year 1995 (inclusion criteria of the researchers) that was published on this topic were identified and examined. Results indicated that there is a need to increase and improve the existing knowledge, competence and attitudes of professionals in this field through training and opportunities as knowledge was found to be scattered and underdeveloped. Ignorance regarding the special needs of this group as well as specialist knowledge pertaining to diagnosis and treatment of psychiatric problems were found to be the most difficult challenge and lack of training was highlighted as one of the reasons for psychiatrists avoiding this population (Lunsky & Bradley 2001) leading to less adequate care from poorly trained professionals even if not avoided. An interesting observation according to the authors was that even when provided with training, due to their cognizance, some psychiatrists still chose not to work despite getting trained to work with people with DD, a challenge that needs to be worked on if attitudes have to change (Ruedrich et al., 2007) for successful community care for people with DD. Here the challenge lies within the health care professional to consciously reflect on the moral conscious self (Hoberg, 2010) to be able to work with PWDs. An evaluation done by Nagata (2007) in Jordan using a translated version of the

SADP to determine the existing attitudes of the public towards PWDs in Jordan and to examine the relationship between 191 randomly selected participants' attitudes and their previous exposure to and experience with disability, it was found that there was an overall negative attitude towards PWDs within society.

Attitudes towards disability in the UAE are predisposed by the culture of the country which has a strong domination of the Islamic faith influencing all aspects of social life whether legal, economic or political (Heard-Bey, 2005, p 135). However, attitudes towards a member in the family with special needs is still a cultural stigma (Alghazo and Gaad, 2004) as the society is small and people are familiar with each other, leading to problems in marriage if there is a member in the family with a disability. This is evident from accounts of parents who prefer to have them hidden within the home (Alghazo and Gaad, 2004) because negative attitudes of society towards a PWD sometimes leads to a courtesy stigma (Barnes and Mercer, 2003) in the form of discrimination and disadvantages encountered by not just the PWD but extending to the other members of the family too. Gender inequality and relations towards people with disabilities in the Middle East, is influenced more by political and socio-economic impacts than religious impressions (Arif and Gaad, 2008). Cultural perspectives that are local, influence how attitudes towards people with disabilities are shaped, which directly influences the manner in which the needs of PWDs are met (Hashem, 2014). Removal of children from family and community has for centuries been justified on the basis of disability (Lancaster, 2008) in the Middle East.

The results from the above studies are critical to the proposed research because of a shared core belief and worldview of these countries due to socio cultural similarities particularly with religion. It would seem logical to assume that the attitudes and knowledge displayed in

these countries towards PWDs would be similar to the attitudes and knowledge that would be displayed in the UAE. Based on the literature review particularly in the area of competence and the limited research that has been conducted in the field of disability among undergraduate health science Arab students in the UAE (Gaad & Almotairi, 2013) the researcher has decided on this topic for the study which will explore the competence and service delivery of undergraduate Arab health science students towards people with observable disabilities during clinical placements in the UAE.

2.8 Conclusion of the studies reviewed

Analysing the attitudes and knowledge of society towards people with disability is pertinent to rehabilitation because PWDs incorporate the perceptions of society while constructing their self-identity which affects their emotional wellbeing (Smart, 2001). Negative societal attitudes can be a hindrance to successful rehabilitation that can lead to the PWD being marginalized, isolated and victimised (Tervo et al., 2004). Although most of the studies mentioned above indicate attitudes varying between negative, moderate and positive depending on factors that could be demographic (place, age, gender, specialty of study, ethnicity) or contact and exposure to PWDs (socially or professionally), the studies demonstrate that it is not rare for one group of people (in this study health science students) to be fairly intolerant of another group (PWDs in this study). This intolerance is seen as an integral social fabric that keeps PWDs disadvantaged according to the social model and as a stigmatizing reaction to identity that is constructed by society regarding PWDs according to the social constructionist model (Pfeiffer, 2003). As health science students and providers are integral to the inclusion of PWDs into society, the hope would be that members of the helping professions would be more tolerant of the group they are being trained to provide

services to. Regarding contact, context and social influence on attitudes towards people with disabilities negative attitudes still persist in young students, limiting the chances of active inclusion of PWDs in society (Shannon, Tansey et al., 2009). A substantial relationship between contact and prejudice between people with and without disabilities exists and more the contact, less the prejudice between the two groups (Pettigrew et al., 2006). Studies indicate a positive connection between quality contact with PWDs and increased knowledge regarding disabilities when disability related content is present in the curriculum with attitude towards PWDs.

The above literature also highlights the significant influence of demographic variables on attitude formation towards PWDs. It is interesting to note that studies conducted in different parts of the world seem to obtain different results despite using common scales of attitude confirming the influence of another important variable, culture. Indigenous research can substantially help in understanding the problem from a cultural perspective and though there will be global connections to an issue, native perspectives can give a fresh outlook to the challenge.

From the literature that has been reviewed, three main challenges confront the health care provider when handling a PWD- attitudes and misperceptions regarding the disability, lack of knowledge of specific disabilities (Lam, Gunukula et al., 2010) and discomfort while interacting with PWDs.

Change in attitude is considered to be a difficult process, however, there are enough studies to support that it can be influenced by education (Stachura and Garven, 2007), Williams et al.(2007), Tervo & Palmer (2004) and Seccombe (2007). There are several findings regarding the effectiveness of clinical experience with increased exposure to persons with

disability with each passing year level of the academic course, community-based interactions and classroom lectures in fostering positive attitudes towards disability in students (Lyons, 1991, Williams, 2007, Au and Man, 2006).

Key themes that emerged from the literature revolved around Stigma & Isolation (which translated into Social distance as a construct), Worth (Social Value), Productivity (Resource distribution) and emotional dispositions (Social compassion) in this study. These themes helped the researcher to decide on the constructs which in turn guided the choice of questions to be placed under each construct to help in attempting to answer the research questions that were framed by the researcher. This formed the basis of the choice of items to be chosen during the modification of the self-perceived competence scale which was used in the first phase to collect information from the Arab HSS to examine their perceived competence towards PWDs during their clinical placements. Questions from the three most popular surveys that measured the attitude towards and interaction with PWDs were chosen keeping in mind the themes that had emerged from the review which could best answer the researcher's questions. These were also used as a guideline when the questions for the semi structured interviews were being formulated so that triangulation of data could be done during analysis and the findings could be contextualized and linked to existing studies on the topic.

Although most of the above mentioned studies have explored attitudes and knowledge in detail in relation to disability separately, this study will combine the two constructs under the term 'competence' along with skill of the HSS. The researcher intends to explore this term with the belief that knowledge influences attitudes which can affect the performance or services delivered. There is a dearth of indigenous literature pertaining to this topic of the

research and the closest work that could be found were the two studies conducted in Saudi Arabia which could be the best reference as both the UAE and Saudi Arabia are neighbours who share the same religion and socio cultural profiles. The study conducted by Sahin and Akyol (2010) in Turkey will also be a guiding study as it has a researcher modified survey from a pre-existing survey which the researcher intends to do in the present study so that the constructs of attitude, knowledge and skill can be grouped under the term ‘competence’.

Competence is an emerging field that strategizes to handle disparities in the quality of health care given to a group of diverse people (Betancourt et al., 2002). The idea of this research was stimulated by a lack of relevant data regarding the prevailing attitudes and knowledge towards people with disabilities among students who are training to become health science professionals in the UAE. An understanding of the social constructions of disability will assist in describing why marginalisation and discrimination of people with disabilities continue to exist (Hannon, 2007) and attention can be drawn to help eliminate negative attitudes towards them.

2.9. Islam & models of disability

As this study is based in the UAE and the participants are mostly followers of Islam, a brief section connecting Islam to the models of disability has been mentioned. Islam, the religion followed by the people in UAE, began in the seventh century AD (Qutb, 2000). It means ‘peace’ (Abdul Rauf, 2004) and has asserted that any disadvantage, disability included is ‘the will of God’ (Hashem, 2014). People who follow the religion of Islam are called Muslims or Moslems that can be used as an adjective as can the term “Islamic” to refer to followers of Islam. The world comprises of more than one billion Muslims (Ott, Al-Khadhuri and Al-Junaibi, 2003). Islam is the second largest religion in the world after Christianity, but it is the

fastest growing religion in the world (Lipka & Hackett, 2017). Although often associated with the Middle East, only about 25% of Muslims are Arab. The majority of Muslims are either Asian or African (Ott et al., 2003). In Islamic tradition the best therapy is the one designed to enhance the health of the person, his psyche and spirit (Grey et al., 2015). However, like in several Islamic countries, disability in the UAE is viewed as a punishment for a past deed (Ahmed, 2007), revenge of a jealous person (Davidson & Jalla, 2009) or a test of faith (Alghazo & Gaad, 2004). Although, Islamic norms advocate that the sick, poor and the disabled need to be treated with kindness (Hashem, 2014) Arab social norms prefer social avoidance due to shame and fear (Ahmed 2007). Current perspectives regarding disability have changed but not enough to be part of social activities (Arif and Gaad, 2008). This is partly because honour and dignity in Arab cultures is linked to peoples' perceptions about their family (Alghazo & Gaad, 2004).

Islam provides a background for different models of disability starting from the point where a society is responsible for PWDs and the onus is not just on the individual. This view on disability can be considered as a precursor to the social model of disability (Hashem, 2014) that has been made popular by the West because disability according to Islamic views is considered a human condition that should not be discriminated against rather has to be accepted and empathized with. It also sets out disabling conditions that can be prevented by the adoption of ways of life and strategies that can treat most disabilities with the active participation of the general public and establishments (Hashem, 2014) urging universal inclusion despite a person's capabilities (El-Hessen, 2006). The religion believes that disability is a social issue that requires the Muslim society as a whole to be responsible for

(Hasnain et al., 2008) unlike western society who used to look upon the condition as a medical issue that the individual had to be treated for.

Sharia law (Islamic law) which is the rule of law that Muslim societies base their smooth functioning upon believes in equitable treatment in society for all, PWDs included as one of the key. Social welfare and human rights are also important according to this law (El-Hessen, 2006). There are instances in the Quran where the prophet himself was criticized for sending away a blind man who interrupted a meeting with the leaders of Mecca clearly proving that Islam is a religion that encourages people to behave responsibly towards everyone and to evaluate people based on their core strengths and not just on their physical features. The above story shows the unacceptability of judging people based on their level of ability or strength (Ghaly, 2009) and the importance that the religion and the law of the land places on equitable treatment for all.

Zakah (charity) is a social obligation that all Muslims have to adhere to which ensures that anyone who is economically disadvantaged is looked after collectively by society through this social welfare scheme (Ghaly, 2009) which makes PWDs who are not able to work compulsory recipients of Zakah. PWDs who need professional training could benefit out of this social welfare and opportunity creation schemes are highly encouraged for PWDs under this (Rispler-Chaim, 2007). The government is the authority of the Zakah funds in the UAE and they ensure that PWDs are looked after by providing them housing facilities, health services and opportunities for education and employment. This coincides with the charity model of disability.

From a human rights point of view, Islamic teachings preach that everyone has a shared humanity that is common to all, hence equitable treatment that upholds dignity is expected

within society (Rispler Chaim, 2007). Islam establishes a comprehensive view of disability which expects society to be responsible for the welfare of its people.

These dictates of the Sharia law coincides with what the Social Model, Human Rights' Model and Charity Model propagates, that society is responsible for looking after PWDs by giving them equitable care and dignity in society through inclusion.

Although Islam as a religion has stipulated inclusive practices, a reason why PWDs are restricted from participating fully in society is because they often take a minority stance as society sets the standards for all and when the standards cannot be reached by one set of people, they become the minority (Hashem, 2014). The standards set by society are sometimes so high that it can lead to a perceived lack of ability which is another obstacle that keeps PWDs away from full participation leading to a certain level of exclusion socially and culturally (Howe, 2008).

The two models of disability that have been most widely used and supported are the bio medical model and the social model. The bio medical model views disability from a medical perspective, as an impairment caused by an illness or disease that restricts people from participating in life as others do. The main focus is on treating the disability by eliminating the flaws (Disability, 2008). The social model approaches the concept of disability as the limited opportunities to participate in community due to the physical and social barriers (Disability, 2008) created by the society. In the former model, individuals are considered helpless and dependent on others whereas the latter model recognises PWDs as being independent with equal rights and opportunities as every other member of society (Sheriff, 2010).

2.10 Bio-medical model of disability

The medical model was developed in the mid-1800s following the advent of the scientific and medical fields in the late 1700s (Castaneda et al., 2000). It was during this period that the concept of normality emerged and the ‘average man’ with characteristics that were correct and normal was considered a benchmark (Davis, 2003,) implying that any deviation from this average was considered abnormal and in need of correction to be accepted in society. As the fields of science and medicine advanced, so did the understanding of diseases and their etiologies (Drum, 2009). By the late 1800s disability was viewed as a health concern to be treated by physicians in exclusive institutions created for this purpose (Drum, 2009). By the early 20th century the medical model of disability was formalized by professionals and policy makers and disability was placed under the authority of medical professionals (Nielson, 2012).

Traditionally, disability has been perceived as a personal deficit (Le Clair (2011) within an individual due to biological or physiological malfunction and categorised into disabilities they are suffering from (Kasser and Lytle, 2005) subjecting them to stigma by preventing them from integrating with the non-disabled group (Shapiro et al., 2012) leading to segregation. With a label of ‘being disabled’, society would respond in restrictive ways of ‘fixing’ the person through medicine and rehabilitation through medical professionals who were given the authority to use specialised terminology (Brittain, 2004) leading to a sympathetic view of looking upon them as victims needing assistance which was also known as the charity approach which handed over the responsibility to professionals who controlled all fundamental decisions regarding their lives.

A distinction between the terms illness, impairment and disability is necessary to further understand the concept of disability.

The traditional concept of impairment as a 'personal tragedy' and the focus of intervention being the oppression that this creates (medical model) was made popular by the World Health Organisation (WHO) in 1980 with this linear progression.

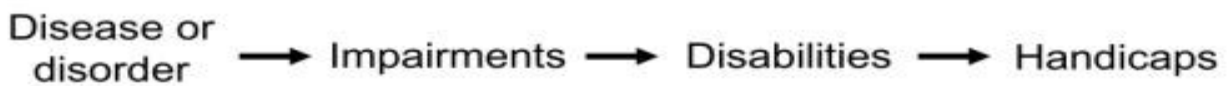


Figure 2: The traditional concept of impairment (WHO, 1980)

Impairment has been explained in terms of damage or aberration of physical, mental, or structural loss of function due to a disease or a disorder. Disability is considered a result of the impairment with the inability to perform an activity within the normal range of functioning. Handicap is viewed as a drawback for a person, as a result of his disability, limiting normal role execution that is dependent on the demographics as well as sociocultural factors for that person (United Nations Division for Economic and Social Information, 1983). Within this linear (Minaire,1992) medical model framework, the functional limitations of a person is considered to be the root cause of any difficulties experienced, that can be corrected only by treatment or cure. It is imperative to distinguish between illness and disability because this is one of the main concerns that professionals face when classification of disabilities needs to be done. Some illness could lead to consequences that are disabling and some PWDS may face various illnesses at different stages of their lives. Disability is caused due to illnesses, trauma , diseases or internal conditions that are biological in nature (Drum, 2009) that could lead to cognitive and physiological impairments making them seem

different from those who are ‘normal’ (Meade and Serlin, 2006). The resulting symptoms limit people from performing activities of daily living which becomes the focus of professionals who follow the medical model, of attempting to cure the disease and getting the person back to normal functioning (Lutz and Bowers, 2012). With the onus on the medical professional the decision to ‘cure’ is on the professional and the PWD has to obey what is prescribed in order to ‘get well’ (Pfeiffer, 2000,p 7) and disobedience would come with ‘blame’ on the PWD for failing to respond to the prescribed treatment. (Drum, 2009). Disability studies used the concept of ‘colonisation’ to signify the medical and professional dominance exerted over people with disabilities (Hirsch, 2000) and disability activists reject equating disability with abnormality or illness (Bricher, 2000).

2.11 Social model of disability

Developed in Britain, this model is a contemporary viewpoint where a major paradigm shift has been noticed in the way disability has been understood with the focus being on the social environment that limits or restricts the individual’s interaction within society. Based on the ‘Fundamental principles of disability’ (1976), a document published by the Union of the Physically impaired against segregation, Oliver et al. (1990) formalized the ideas in the document and came up with social model of disability as an alternative to the medical model. This model advocated a change in the stereotypical attitudes by society towards PWDs through the eradication of stigma that surrounds disability. The focus of disability has changed obviously from just being rehabilitated within medical facilities which was propagated by the medical model to being completely integrated into society (Hashem, 2014). The model’s argument is that PWDs have been segregated for years because the majority of the population (non-disabled) have been holding a common view point that the

minority (the disabled) are 'less able' or 'different' (Shapiro et al., 2012) rather than being looked upon as persons with unique successes and challenges (Brittain, 2004). Disability according to this model is considered to be a socially constructed concept, the meaning dependent on the perceptions of the members of society (Olkin, 2011). Proponents of this model debate that disability is in the social environment rather than inside the body which is oppressive and exclusionary (Marks, 1999) for the PWD creating economic, physical and social challenges in society for them. (Tregaskis, 2002). Rather than creating segregated and adapted facilities for PWDs and making them feel different from the 'normal' world, social modelists prefer a 'universal design' (Evans, 2017) to cater to all people with and without disabilities. This model paved the way for some changes in society towards PWDs by depathologising disability by giving it a new perspective of looking beyond the body into society and focusing on the true cause of disability discrimination because of prejudiced attitudes (Fougeyrollas and Beauregard, 2001).

2.12 Critical disability theory

A newer framework that emerged from postmodern critiques of disability theories (Corker and Shakespeare, 2002), arose basically as a challenge against the dominating social model (Davis, 2003) and its idea of looking at disability as a social oppression. It was critical of the medical and functional limitation models as much as it was against the collective 'disabled identity' of the minority model (Smith-Chandler and Swart, 2014, p 424). A complex model that is multifaceted, there are four core components to the CDT. Disability is described as a 'slippery fluid' and heterogeneous (Shildrick, 2009, p4) implying that disability is dynamic, prone to change over time depending on aspects of social identity with the interpretation of the experiences of disability differing between cultures and over time. A fixed stable disabled

identity (Smith- Chandler and Swart, 2014) is rejected in this framework. CDT believes in including local knowledge in understanding the lived experiences of PWDs and places value on bringing social justice into issues that are meaningful for the PWD (Meekosha & Shuttleworth, 2009) moving beyond the socio political focus of the other models. A final core component of CDT is the recognition that both impairment and environment are equally important, recognising an interpersonal discourse between embodiment and disability (Meekosha and Shuttleworth, 2009).

2.13 Social Justice (Ableist or disability oppression) model

Inspired by the concepts of the social justice movement in America, which was in turn inspired by various civil rights, women's and New Left Movement of the 1960s and 70s, (Bell, 2015), liberation, oppression and social justice are employed to explore, analyse, evaluate and change discriminatory practices of institutions and culture (Adams et al., 2007). The focus of this model is on ableism to define the oppression towards PWDs (Griffin et al., 2007, p335) as it creates a hostile environment for those who do not adhere to the normal physical, cognitive or emotional functioning that is socially accepted. The word ableism sounds like a superlative equating to 'normalcy' carrying an implicit message of a negative status that needs to be changed or eliminated (Campbell, 2003). It is also known as the disability oppression theory, to describe the discrimination and prejudice that is directed on the PWD by an ableist society (Castaneda and Peters, 2000) without being accepted for who they are without being fixed so that they would 'fit' into the ableist society (Nocella, 2008). Ableism is seen in all levels of society- personal, institutional (Griffin et al., 2007) as well as societal that the ability –diverse (Wolbring, 2012) people need to tackle routinely in order to empower themselves in order to take on meaningful and important roles and tasks in

society. This model is unique in its approach as being an educational mission that focuses on understanding diversity and supporting the intersectionality of the PWDs experiences, identity and roles with an attempt to shift the privilege and power that the ableist society has over the PWD to so that they are no longer viewed and treated in ways that are oppressive and discriminatory. Oppression can be observed personally through attitudes and behaviours, institutionally through policies and laws and on a societal level through values, beliefs and customs. Thus this model aims to eliminate the notion of ableism and redefine the concept normality thereby developing a positive disability identity that can draw respect and equitable treatment from society (Evans, 2017).

2.14 Defining disability

The most prevalent models in most parts of society are still the moral/religious/traditional models whereas, the medical and social model are the most debated ones. Policy makers are supported by the economic model to gauge the benefits that need to be distributed to those people who are unfit to involve fully in work. In using all the above mentioned models to help with the operational definition of disability the focus will always be to include and adapt PWDs into the society. Over the past two decades, anecdotal writings by PWDs have made a significant change to our understanding of the true essence of disability. The fact that the move has been from personal limitations that they face, to societal restrictions that have been enforced by an inconsiderate society, disability is now being understood as a social and political concern rather than just a medical one leading to the pertinent questioning of interventions that are medical in nature that only attempts to cure impairments to repair the body functioning to a normal state (Oliver, 1990). The inconsistency in the definition, measurement and analysis of the term disability could be attributed to various factors like

estimation of the prevalence of disability in a society, assessment of provisions and services required for PWDS, competent distribution of those services and also consistent monitoring of the equitable opportunities given to them by society (Altman & Bernstein, 2008).

The framework of WHO has been the most unified viewpoint to describe health and health related conditions which includes disability too.

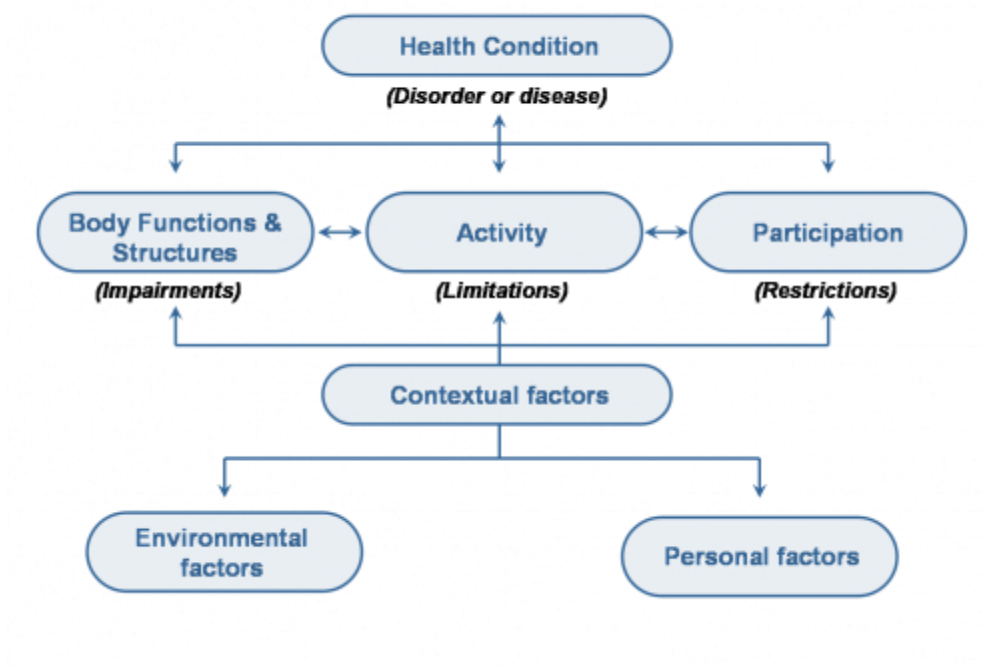


Figure 3: The International Classification of Functioning, Disability and Health WHO (2001)

This revised model of the WHO conceptualizes functioning as a ‘dynamic interaction between a person’s health condition, environmental factors and personal factors.

2.14.1 Definitions of the components of the International Classification of Functioning (ICF) framework (adapted from WHO, 2001)

Body functions refer to the psychological and physiological functions of the body system.

Body structures refer to the anatomical structures such as limbs, organs and their components.

Impairments are the loss of structure and/or function of body parts.

Activity is the when an individual executes an action or task.

Participation is when an individual involves in a life situation.

Activity limitations are hindrances that an individual faces when executing an activity.

Participation restrictions are problems faced by an individual when involving in life situations.

Contextual factors include **environmental factors** that refer to the environment around the individual which comprises of the physical, attitudinal and social components as well **personal factors** that refers to the unique background of a person's life and living.

According to this diagram, a person's function in any particular domain is considered a complex dynamic interaction between the health condition and contextual factors which includes environmental as well as personal factors. An intervention in any of these factors has the ability to modify or influence the other factors. In essence, ICF is an integration of the medical and social models and to further explain the integration of the different viewpoints of 'functioning', the biopsychosocial approach which was systematically developed by George Engel and .John Romano (1977) is helpful as the ICF tries to synthesize the varying perspectives of health from a biological, psychological and social perspective to understand the concepts of health, illness and delivery of health care following the bio-psychosocial model of care that can help to promote holistic care and help to change the way

people view disability. It can also inform society about the inequalities that PWDs have to face (Lyon, 2014). Hence disability in contemporary terms is considered a dynamic multidimensional concept (Altman & Bernstein, 2008) that includes the individual and the environmental factors. The categories of the ICF framework are highly pertinent to all health science students and professionals (Mueller et al., 2008). Conceptually, it can enable the HSS to consciously view impairment in a broad sense that accommodates an individual's associated restrictions adding a heightened awareness of multiple dimensions of disability that could be social, cultural or political in nature (Kearney & Pryor, 2004). Practically the ICF model can be used to assist HSS to extend their position in assessments and for providing services by including an individual's personal and social contextual elements such as functional deficiencies, activities and inclusion (Van Achterberg et al., 2005). It could also benefit them if this model is kept as a framework throughout their service delivery, from the pre-service planning stage to when the care plan and patient notes are being recorded and even when the patient is being prepared to be discharged into the community (Kearney & Pryor, 2004, p. 167). This framework when incorporated into the curriculum enables learning and teaching from a biopsychosocial viewpoint that considers the patient in a holistic manner (Kearney & Pryor, 2004).

2.15 Developing the framework of this research

It is evident that several studies discussed in the literature review section have their basis on the social model of disability as PWDs and HSS are components of the society and attitudes, knowledge and skills of HSS can influence the manner in which PWDs are cared for, empowered and provided for in clinical settings. Inclusive or exclusive practices of society influences the development of the identity of the PWD and can be an important factor in

seeking rehabilitative services. This research is also based on the tenants of the social model of disability which will form the foundation upon which various theories of attitude and knowledge will be explored to explain the different variables of this study that include competence and service delivery of Arab HSS towards PWDs. As competence is a term that is influenced by the biological (personality characteristics), psychological (attitudes and beliefs) and social (cultural influences) factors, the biopsychosocial model will be an important reference to the study.

2.15.1 The influence of the biopsychosocial model of health on disability

Introduced by George Engel in 1977, This model put down propositions that focused on shifting from the existing bio medical approach to health and disease to a biopsychosocial approach as he felt that looking at health only from a medical perspective was too reductionist. (Henriques, 2015). A more holistic approach was proposed which was endorsed by the World Health organisation as it resonated with the model's main mission of developing well-being taking into consideration the biological, psychological and social aspects that contribute to the overall health of a person. This holistic model that includes these diverse perspectives is the main framework that is used in health care professions. HSS who follow this model could have a better understanding of disability in terms of recognising that PWDs have an impairment which may lead to social exclusion/inclusion depending on the nature of the attitudes, knowledge, experiences and cultural setting of a place. If the attitude of society in general is positive and there is knowledge regarding disabilities and experiences with PWDs are positive within the community then the probability of inclusion is higher than when these factors are negative. This will influence the role of the HSS in providing services for PWDs which can affect the manner in which PWDs comprehend their

impairment in positive or negative terms, a critical factor in the development of their self-identity which can either empower or enslave them.

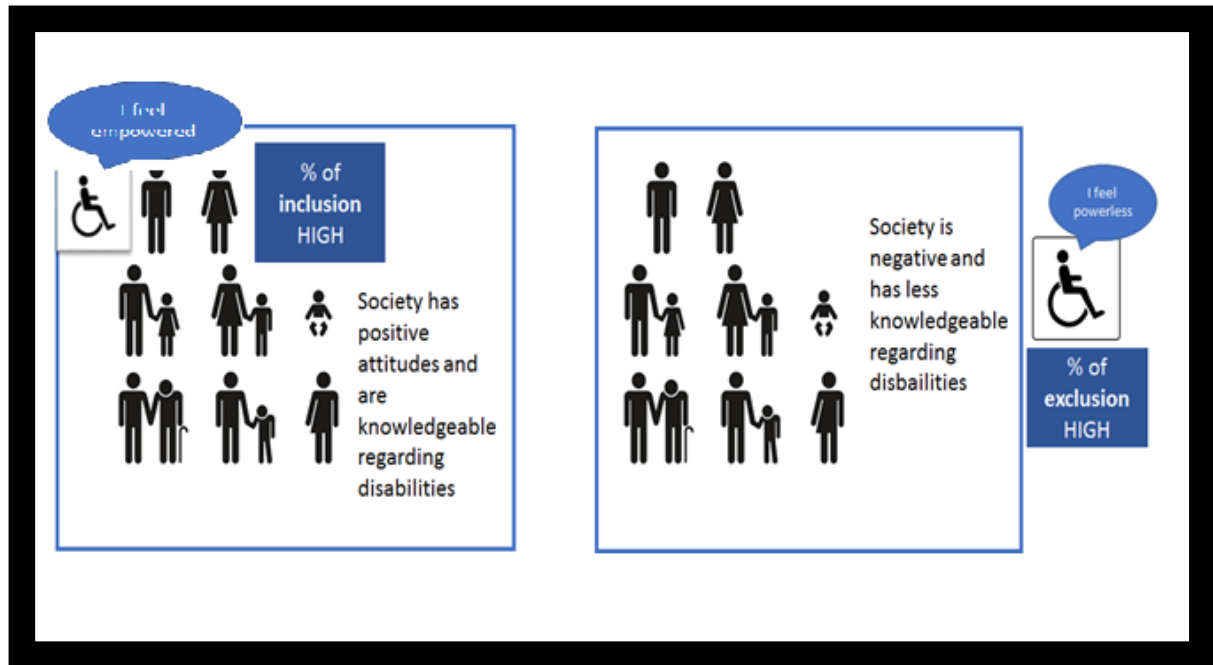


Figure 4: The influence of the biopsychosocial model on PWDs (from the framework of the researcher)

2.15.2 Social model of disability

Developed by PWDs themselves, the model was created as a rejection of the basic tenants of the medical model. Although this model, does not refute the existence of disability, it positions the problem within society rather than on the individual which is the basic belief of the medical model. According to this model personal limitations are not the root cause of the problem, it is the failure of the society to address the issue of disability appropriately through necessary inclusive provisions and services. The consequence of this collective failure of society affects not just the individual but all PWDs as a group manifesting itself as

an institutionalised discrimination throughout society (Oliver, 1990). Hence the real disabling factor is the society that prevents the PWD from inclusive participation according to this model thereby restricting their true potential (VSO, 2001, p 1-2).

The social model of disability encompass components of the social (culture, people), environmental (infrastructural supports, accommodations), attitudinal (emotional, cognitive and behavioural aspects) and institutional (policies, services and systems). These are the factors that have been defined by the WHO as factors whose presence or absence in an individual's environment could act as barrier and limit their functioning aggravating the disability.

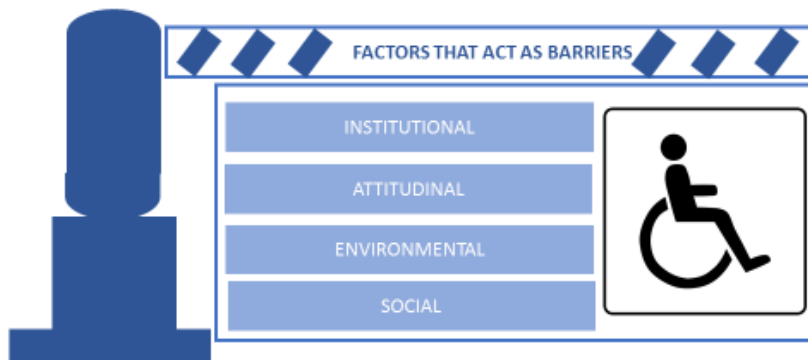


Figure 5: Societal barriers towards disability as mentioned by WHO (2001)

2.15.2.1 Social & Attitudinal barriers

Attitudes play a major role in the construction of disability because a PWD becomes 'disabled' mainly because of society's attitude which was endorsed by Coleridge (1993). He was of the opinion that if the feelings of fear, hostility, anxiety or horror could be replaced along with the patronising behaviours of society towards PWDs, the problem of 'being disabled' would cease to exist. According to him there is a vicious circle between prejudice and discrimination creating a sense of being disabled by the PWD which leads to even more discrimination and prejudice. To change the existing human behaviour and attitudes of society towards PWDs, the change has to begin with the PWD who needs to change their subjective attitudes towards themselves and their disability if they want to see a change in society (Slikker, 2009). When the PWD is empowered enough to believe in their own potential of becoming valuable contributors in society, stand up for their own rights and see themselves in a positive manner, society is bound to view them in a similar way. This is critical for their self-esteem to be raised as it cannot be done in isolation from the environment around them. PWDs are a reflection of the society they live in (Devlieger et al., 2003) so if they are seen as victims by society, the chances of PWDs resonating with that view is high hence the focus on changing the attitudes of not only society but the PWD as well to bring about a social change in society towards disability.

Researchers have linked attitudes and knowledge toward PWDs as formed through socio-cultural socialization, inferring that an individual learns norms, beliefs and customs (Livneh, 1982) through this process making culture a variable that influences attitudes (Getachew, 2011). They have indicated that the attitudes displayed by society towards PWDS in

collective and individualistic cultures are different. In collective societies like Asia and the Middle East, behaviour is directed by the norms of the cultural group in a communal pattern (Mills & Clark, 1982) whereas in individualistic cultures like the Western world, behaviour is autonomous from the cultural in-group where there is more concern about personal achievements than the success of the group (Triandis, 2001).

From literature it is evident that there are common personal dimensions that influence the attitude towards disability. These have been placed under the term dimensions of diversity which include the following:

Dimensions of diversity								
Gender	Age	Ethnicity	Marital Status	Religion	Socio Economic Status	Education of Parents	Academic Major	Prior contact with PWDs

Figure 6: Dimensions of diversity (Researcher developed based on literature)

2.15.2.2. Environmental barriers

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) mandates the relevance of interventions to develop access to different domains of the environment which includes buildings, roads, transportation, information and communication. Although not a factor that will be explored in this research, the concept of universal design that develops usability, safety and social participation, through a design that has been created in response to the diversity of people and abilities, will be recommended by the researcher, as enabling environments help not only the PWD to feel part of the society but will enable a

wider usage by the society at large without making the PWD feel privileged or endowed. This will not be measured as it is beyond the scope of this study.

2.15.2.3. Institutional barriers

Another factor that this research will explore is Institutional Disablism (Miller, Gillinson et al., 2004) which can be defined as the unrecognised and unacknowledged attitudes that are filled with prejudice that govern the policies and practices that directly or unknowingly discriminates against PWDs in institutions. This behaviour arises from the credence that PWDs are an inferior group (Miller et al., 2004). Disablism exists in the form of under-resourcing of and an almost invisible low status given to PWDs which leads to them being left off the policy-making schema. Thus negative attitudes towards PWDs are a product of not only the individual beliefs but also of societal and organisational practices.

Disability as is evident from literature is complex and hence the ‘one size fits all policies’ (Miller et al., 2004) is not practical as it covers a range of impairments and there is nothing called the ‘average’ PWD. Conditions could be short lived and impairments could be invisible with subtle adjustments. People could have multiple impairments, severity of the impairments could differ. Likewise PWDs could have a multitude of opinions and identities, some identifying themselves as disabled, some others not depending on how society views them. Common to all PWDs are the barriers and prejudice that they all face, irrespective of their differences, called disablism (Miller et al., 2004). As this study is about Arab HSS and their competence and service delivery towards PWDs, the institution they are enrolled in will be considered to be an influencing factor on the competence of the Arab HSS and hence the term institutional disablism as an important factor in this study.

2.15.3 Theory of Reasoned Action

Proposed by Ajzen and Fishbein (1980), this theory makes an attempt to predict behaviour by understanding the attitudes of a person, including the degree of negative or positive evaluation of the behaviour of interest, based on consideration of the consequences of executing the behaviour. Intentions are viewed as determinants of behaviour, which is essentially an amalgamation of all the motivational factors of attitudes towards behaviour and the subjective norms that are unique to an individual, including the influence of social pressure on a given behaviour. The basic belief of this theory is that the stronger the intention to execute a behaviour, the higher the likelihood of the behaviour being performed (La Morte, 2016). However, this intention is directly influenced by subjective norms which is a belief about the collective approval or disapproval of the behaviour of the significant peer group and people of importance who think he or she should engage in the behaviour. As this study has measured perceived competence, the self-reported responses of the Arab HSS have been the basis of the analysis as the intention of their behaviour has been considered to be the manner in which the actual behaviour would be performed.

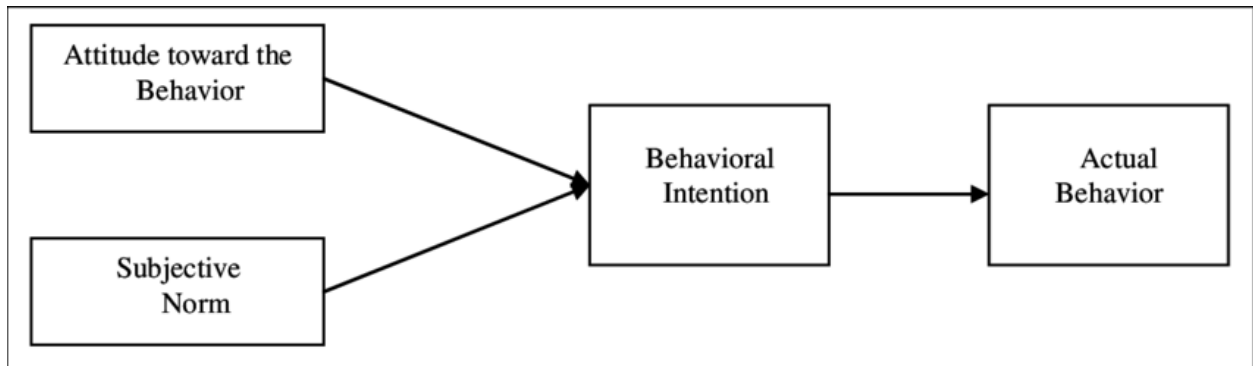


Figure 7: Theory of Reasoned Action Model (La, Morte, 2016)

2.15.4 Core competencies for health professionals

The study has relied on the model that has been recommended by the Quality Chasm report (Institute of Medicine, 2001) to explore the service delivery of Arab HSS towards PWDs. According to the model, health professionals are expected to function as an interdisciplinary team to provide patient-centered care, focusing on practice that is evidence-based, making use of informatics and approaches that would improve the quality of their service delivery.

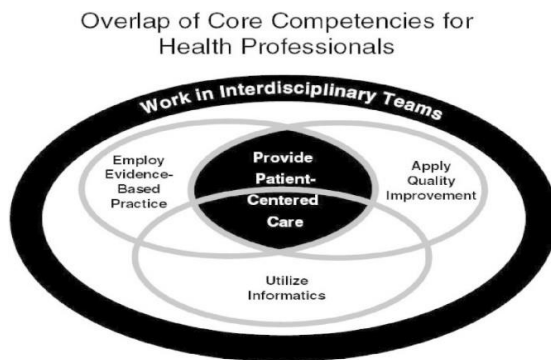


Figure 8: Core Competencies (Institute of Medicine, 2001)

2.15.4.1. Defining the terms of the competence model (Institute of Medicine, 2001)

- **Patient-centered care**— involves the identification and the respect that is given to the patient based on their differences, values and required needs to impart care with the intention to educate and empower them by being empathetic and involving them in shared decision making to improve their health care.
- **Interdisciplinary teams**—to maintain continuity and reliability of care through cooperation, collaboration and effective communication, in teams.
- **Evidence-based practice**—integration of the best research evidences, practical expertise during clinical placements and personal values of the patient to make decisions that contribute to the effective care of the patients. These are the best practices to avoid underusing, misusing and overusing care (Chassin, 1998).
- **Quality improvement**—identification of errors and risks in care so that safety design principles like standardization and simplification can be implemented with the intention of being cognitively aware of how the structure, process and results of quality of care can be measured relating it to the needs of the patient so that there is a reduction in inefficiency, incompetence and waste (Holman et al., 2001).
- **Informatics**— in health care is not just about information technology. It is used for developing and applying systems in healthcare research, education and application (Masys et al., 2000), in communication, management of knowledge, error mitigation and also as a support in decision making (Institute of Medicine, 2001). It is also an assessment of how competent health care professionals are, as it assists in the collection of process and outcome data of the professionals (Blendon et al., 2002).

Patient-centric care is relevant in a country like the UAE that is characterized by ethnic and cultural diversity. Challenges of working within culturally diverse populations go beyond just language competencies. The implications of lifestyle, familial patterns and cultural differences with regard to health-related behaviours need to be understood if a treatment plan and mode of delivery is to be effective keeping in mind the prominence and influence of non-traditional providers and related family members increasingly making health related decisions on their own (Lorig et al., 1999).

Working with people with disabilities requires the involvement of professionals to be person centered, have knowledge that is specialised, methods and skills to work as a team, to integrate their expertise to optimize care for a diverse patient group whose requirements are complex and unique, so that quality care can be delivered across settings in accordance with changing technology and being responsive to the payers demands (Hall & Weaver, 2001).

2.15.5 Conceptual framework of this study

A conceptual framework that is developed carefully defines pertinent concepts, establishes theoretical and realistic rationale, directs the selection of methods that are appropriate and supports data analysis and interpretation. When all the key components of the research processes that include literature, theory, methods and interpretation of findings are combined, a conceptual framework develops. (Antonenko, 2015).

Based on the literature reviewed, the researcher deduced a few assumptions from the studies

1. Competence (Attitudes, knowledge and skills) can (positively) influence the service delivery of Arab HSS towards PWDs

2. Prior contact with PWDs can (positively) influence the competence of Arab HSS towards PWDs
3. Demographic variables like gender, age, academic major, ethnicity, educational qualification and income can influence the competence of Arab HSS towards PWDs.
4. The curricular training and clinical exposure given by institutions of the Arab HSS influences their competence towards PWDs

These assumptions guided the development of the research questions (See 1.7, page 21) that formed the foundation of this study.

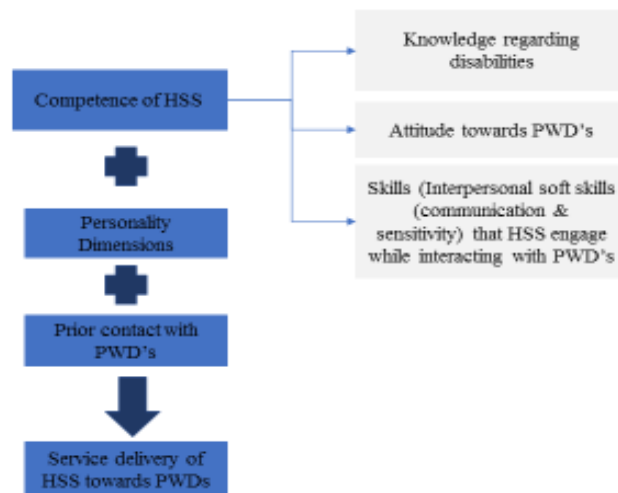


Figure 9: Relationship between competence and service delivery in this study

Evidence from literature indicates that the limited knowledge regarding disabilities, negative attitudes towards PWDs and prior contact with PWDs can influence the services provided to them as well as influence the level of interaction with them. Based on these evidences, the

researcher has positioned the research around the two main constructs of the study competence and service delivery and an attempt was made to explore the factors that could possibly influence them. Prior contact and personality dimensions were other variables that could potentially influence the competence and service delivery of Arab HSS towards PWDs. To examine and explore these assumptions, the researcher has attempted to answer the three research questions (see section 1.7, page 21) using a mixed method that includes a modified survey and semi structured interviews with clinical tutors and PWDs. Documents such as the public health modules and clinical workbooks have been explored as supportive evidences.

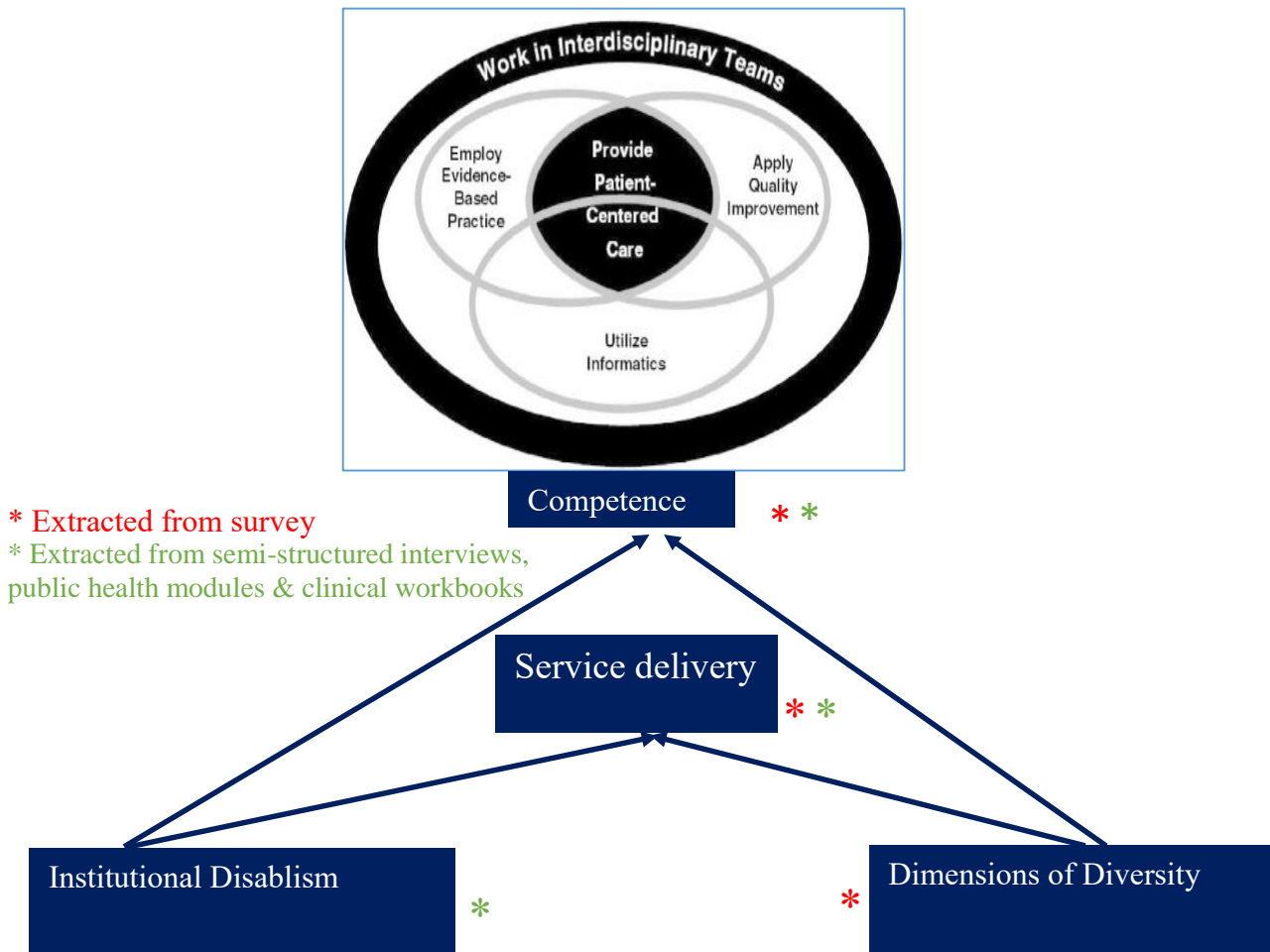


Figure 10: Conceptual framework of this research

The two main variables under investigation in this study were competence of Arab HSS and their service delivery towards PWDs. Variables marked with a red star have been extracted from the self-perceived competence survey that was modified by the researcher (see page 125 for scale development). Variables marked with a green star have been extracted from interviews, clinical workbooks and the public health modules of the academic majors of the four institutions that were part of this study. Elements of two models, the social model of disability and the core competency model (Institute of Medicine, 2001) have been used as the basis for developing a conceptual framework of this study, which is illustrated in the Figure 3.2 and explained in the following subsections. Features of theories of institutional disablism and reasoned action have also been used as a basis of this frame work. These concepts have been explained in sections 2.15.2.3, page 92 and 2.15.3, page 93.

The service delivery variable was influenced by three components that formed the frame work of this study- competence, personality dimensions and institutional disablism. The social model of disability propagates that attitudes towards and knowledge regarding disability directly influence the services that are provided to the PWDS. Services provided are also dependent on the dimensions of diversity that are the personal characteristics/socio economic factors of the Arab HSS that include gender, age , ethnicity, religion, marital status, family income, educational qualification of the parents, academic major. It also includes prior contact of Arab HSS with PWDs. This (personal dimension) was examined through the items of the self-perceived competence survey to establish the influence on competence. Another factor that influenced competence was institutional disablism which has been defined as the unrecognised and unacknowledged attitudes that are filled with prejudice that govern the policies and practices that directly or unknowingly discriminates against PWDs

in institutions in this study. This could be evident in the form of giving less importance to PWDs by not including enough learning material or not giving students enough exposure to PWDs during clinical placements which was explored through semi structured interviews with clinical tutors and PWDs themselves and through a review of the public health modules and a sample of clinical workbooks of the students. Only features of the competency model that were relevant to the scope of this study was focused upon. This included patient centered care, evidence based practice and informatics. As this study focused on personal competence, working in inter disciplinary teams and quality improvement which were also features of competence within the competence model (see figure 8, page 94) was not examined.

Competence can be measured by understanding the attitudes, knowledge and skills of Arab HSS (Fernandez et al, 2012). As there has been no scale developed for measuring personal competence till the time of this study, the researcher had to adapt questions from similar existing scales to suit the research context that could measure attitude, knowledge and skills of Arab HSS towards PWDs. The modified self-perceived competence survey instrument consists of ten demographic questions, two questions on prior contact with PWDs, thirty two closed-ended questions to measure competence and four open-ended questions to explore service delivery of Arab HSS towards PWDS. (See page 125 for the modification of the scale). Based on the theory of reasoned action that mentions behavioural intention as being predictive of the actual behaviour, the researcher has used the perceived competence scale as a predictive scale to determine the actual behaviour during clinical placements in the absence of observed behaviour in this study. Descriptive statistics to cross tabulate socio demographic variables with competence and service delivery variables and inferential statistics using Chi square and Pearsons coefficient were used to test for statistical

significance in the variables. Median was chosen as the measurement of central tendency in this study. The scoring key of the survey was between 0-128 as there were 4 domains and 32 items in total. It was pre-determined by the researcher along with a discussion with the supervisor of the study to categorise the scores received on the self- perceived competence scale as 32 and below (low), 32-64 (neutral), 65-96 (moderate) and 97-128 (high).

To triangulate and validate the data collection and results, the researcher chose a mixed methodology in which the modified perceived competence scale was administered to 590 Arab HSS and 26 semi structured interviews were conducted on 18 clinical tutors and 8 PWDs. Questions asked to the two groups revolved around the competence and service delivery of the Arab HSS which gave the researcher an insightful perspective from two different viewpoints. The results obtained from the Arab HSS, clinical tutors and PWDs helped the researcher to triangulate results (see page 257) of this study. The researcher had some prior assumptions regarding the two variables based on the literature review, hence the decision was to conduct this study using the sequential explanatory design which is shown in Figure 13, page 123.

Based on the extensive literature that has been reviewed, the researcher intends to answer the research questions of this study through the following objectives

- To identify the current attitudes and knowledge that undergraduate Arab health science students have regarding PWDs in the UAE
- To assess the influence that socio-economic status, prior contact with PWDs and personal influences (age, gender, ethnicity, religion, academic major, parental education, marital status) which might affect competence of Arab HSS towards PWDs

- To determine the factors that influence how Arab HSS deliver their services to people with disabilities
- To identify current practices that undergraduate Arab HSS follow when providing services to PWDs during clinical placements.
- To explore the health modules to identify the areas that prepare the Arab HSS to provide services to PWDs.
- To explore the clinical workbooks for reflective writings of the Arab HSS
- To understand the experiences and views of PWDs with Arab health care workers in the clinical setting.

Given below is the operational method used in this study to conduct this research.

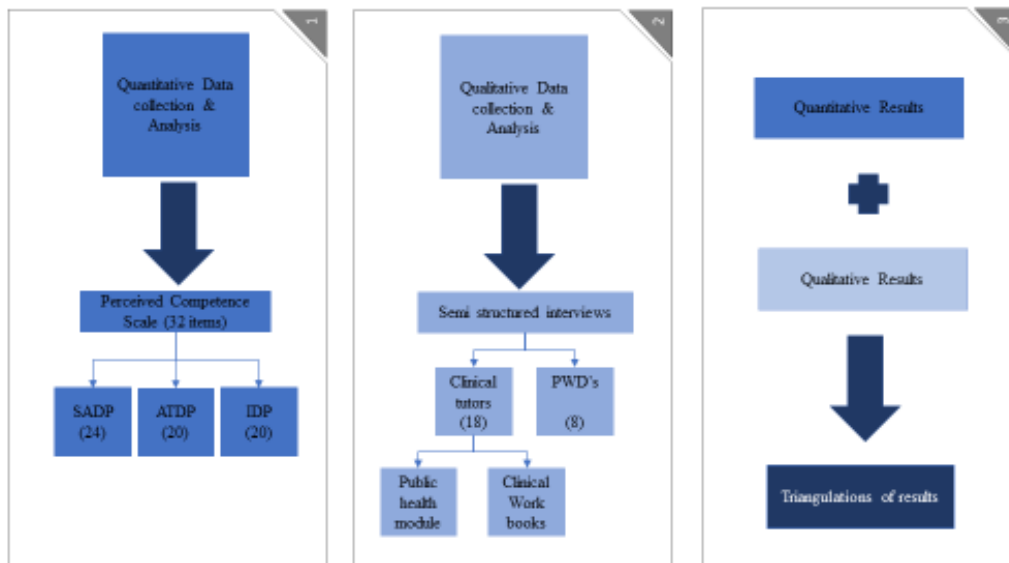


Figure 11: Operational method of this study

2.16 Conclusion

After an extensive review of literature pertaining to competence (attitudes, knowledge and skills) and service delivery of the Arab HSS which has been discussed under section 2.8, the researcher reviewed the different models of disability and some pertinent theories relating to disability to help develop the conceptual framework of this study. A major influence of this study is the biopsychosocial model that proposes to take a holistic approach towards health incorporating the physical, psychological as well as social dimension that could influence a person's wellbeing. Disability if viewed from the viewpoint of the medical model will ignore the social and emotional factors which could lead to stigmatising attitudes from society that could encourage discrimination and segregation of the PWD from society. The social model that puts the onus of responsibility on society for causing a hindrance to the active inclusion of the PWD is the main framework upon which this study rests as it is only when society is ready to accept the diversity of people without them having to conform with the majority and when there are strong laws that can give the PWD their right to be included, a PWD can be a part of active society. PWDs are a reflection of the society they live in and they build their self-image around the perceptions of the society they live in hence the attitudes, knowledge, skills, provisions, laws, services, willingness all become integral factors for inclusion of PWDs into the community. This study was supported by the social model of disability because the PWD, the Arab HSS and the setting are all part of society. It is also pertinent to have an understanding of the attitude, knowledge and skills (competence) of the Arab HSS as health services will be used by the PWD as an ongoing activity throughout their lives and if there exists any negative attitudes, thoughts or skills in them, it is important to acknowledge

them and explore options to minimise them so that the PWD will be encouraged to access their services rather than avoid them.

CHAPTER -3

RESEARCH DESIGN

AND

METHODOLOGY

3.0 The review of literature in the previous chapter identified the gaps that helped to formulate the research questions pertaining to the competence and service delivery of undergraduate Arab health science students towards people with observable disabilities during their clinical placements in the UAE. From the review, it was evident that literature is dominated by research on attitudes. Other important facets, such as basic knowledge about disabilities, causal beliefs and skills that could provide a multi-faceted understanding of disability, although available, was not as extensive. The term ‘competence’ was chosen by the researcher to try and understand the concept of disability from a social constructivist point of view because the phenomenon of disability cannot be understood only through grand theories or metanarratives. Rather the focus is on the co-existence of multiple varieties of situation-dependent ways of life (Burr, 2003). This chapter has attempted to place the study within the most appropriate research paradigm and has mentioned a justification for the selection of the methodology which would include the design of the study, instruments used for data collection and the procedures used for the study.

The chapter has been divided into two main subsections - the first for the approach and the second for the methodology. A detailed description of the collection of data, followed by procedures for data analysis to describe the mixed method analysis that includes data from the qualitative as well as quantitative methods is explained to mention how data from both the methods have been integrated for interpretation. An overview of the data analysis adopted for this study has also been mentioned which has also been discussed in detail in chapter 4. Methodological challenges that the researcher confronted and was mindful about, have also been acknowledged in this chapter. It concludes with the ethical considerations that have been followed which is evidence that the researcher consciously followed all the

protocols of research to conduct this study with integrity without compromising on the ethics of this research.

3.1 Research Approach of this study

The researcher attempted to do an exploratory study on the ‘competence and service delivery of undergraduate Arab HSS towards people with observable disabilities during clinical placements in the UAE. The study aimed to explore and examine the two variables of competence and service delivery by using a mixed methodology (see section 3.1.2 page, 110 for the justification of using a mixed method approach).

In the proposed study, both quantitative and qualitative approach will be used. The quantitative approach will use a post-positivist paradigm, or world view as Creswell (2014) terms it, to obtain an empirical and common sense reasoning from the statistical results (Sharp et al., 2011) and a social constructivist paradigm will be followed in the qualitative part of the research to explore the competence and service delivery of Arab HSS towards PWDs.

3.1.1 Research Philosophy or worldview

In the post positivist worldview, the causal relationship between variables to the outcome is investigated as it maintains that claims of knowledge cannot be ‘positive’ when dealing with human beings (Creswell, 1994), whereas, according to the social constructivist viewpoint, the aim is to discover the participant’s view of the situation being explored that leads to insight and construction of meaning which will offer a better understanding because ‘individuals seek to comprehend the world they live and work in ’ (Creswell, 1994). This makes the participants and the specific context important to the research process. In this

study, assumptions that are obtained from the literature review will be examined using quantitative methods (survey). Following the survey, the concepts of competence and service delivery that will be constructed through the students, the clinical tutors and the PWDs themselves through qualitative methods (interviews).

3.1.1.1 Post Positivism

A traditional form of assumption required for research using quantitative methods, this world view is also known as the scientific method because it reflects the need to examine the causes that influence results as found in experiments. It is called post positivism because it epitomises the thinking after positivism that essentially held the traditional notion of the absolute truth of knowledge (Phillips & Burbules, 2000). Post positivists challenge the positivists' thinking claiming that one cannot be positive about the claims of knowledge, particularly when studying human behaviour and action and that knowledge is conjectural (Phillips and Burbules, 2000) and needs to develop based on careful observation and objective reality that 'exists out there'. Reductionist in nature, quantitative methods aim to condense ideas into discrete variables that comprise of hypotheses and research questions (Creswell, 2014), which needs to be examined by developing numeric measures of observation and studying human behaviour. Post positivists focus on testing and verifying the larger theories that govern the world with an attempt to understand the world better. The researcher, by adopting a post positivist approach in this study, has begun with an assumption that the competence of a Arab HSS will affect the service delivery towards PWDs during their clinical placements and this assumption has been a guidance for the data that has been collected from Arab HSS through the survey which is described in detail in section 3.3.3.1.2 page 133.

3.1.1.2 Constructivist world view

Also known as social constructivism, this world view has a sociological origin and is popular within qualitative research as it attempts to define the nature of reality. Given its current and profound influence on grounded theory, social constructionism has a social rather than an individual focus (Young & Colin, 2004) on the processes through which meanings are created, modified and sustained (Schwandt, 2003). The origins of social constructivism trace back to an interpretivist approach of thinking in which there is shared understanding of the world of lived experiences from the viewpoints of those who live in it and have been influenced by the post-modernist movement. Interpretivists make a distinction between the social and natural sciences with a goal of understanding the meaning of social phenomena which are varied and multiple, valuing the subjective experience of the individual. Their aim is to develop an objective science to study and describe social phenomena, which in itself, is a paradox as the goal is to objectively interpret subjective experiences through the application of a logical empirical methodology. The researcher looked for the complexity of views, hence, the study focused on the participants' views of the situation being studied. Through the means of interaction during interviews, the intention was to try and make sense of and interpret the meanings that were held by the participants regarding the chosen topic. The open-ended questions in the survey (see appendix 8) further enabled the researcher to record and interpret what the participants said in the actual life setting. As people are born into a world of meaning culturally, the subjective meanings that are created socially and historically through their interaction with others (hence social constructivism) was a compelling reason for the researcher to choose this worldview as being appropriate for this study in the

qualitative phase. Social constructionists understand knowledge and truth as something that is created, not discovered by the mind (Schwandt 2003). Hammersley (1992) termed this subtle realism and his opinion was that although reality is socially defined, this reality can be understood better through subjective experiences of life.

The researcher realises that, within this worldview, the interpretation of data will be shaped and influenced by the personal backgrounds and cultural experiences of the participants. According to this worldview, meanings can vary depending on the complex views of participants towards the phenomenon that is being explored. According to Glesne (2006, p4), 'qualitative research methods are used to understand phenomena from the perspectives of those involved to contextualise issues in their particular socio-cultural-political milieu and sometimes to transform or change social conditions'.

3.1.2 Why mixed method?

Mixed methods is the course of research where the researcher combines the research methods, approaches and concepts of quantitative and qualitative enquiry into a single study. Popularly known as the "third wave" of research (Onwuegbuzie & Johnson, 2004), it confronts the paradigm wars, mixing logical and practical alternatives. Philosophically, mixed research makes use of pragmatism using inductive as well as deductive methods of enquiry. In this study, the researcher too has adopted an inductive and interpretative approach in the qualitative research section, where the researcher has generated meaning from the data collected in the field, whereas in the quantitative research section, the process has been inferential and deductive, with the aim to test an existing theory or hypothesis to learn about causal laws (Papadopoulos, 2009).

The inferential paradigm focused on collecting data that is explanatory to examine relationships among variables which can be analysed statistically. In this study it has examined the relationship between competence and service delivery of Arab HSS towards PWDs. The data obtained was measurable evidence, which could facilitate replication and be generalised to a population including comparisons between groups. It also provided insight into the magnitude of the problem at hand (Creswell, 2009) which was the relationship between competence and service delivery. The interpretative paradigm, on the other hand, opposes this viewpoint by focusing on the contexts and meaning of human experiences and lives. These opposing views have laid the foundation for the differences between the schools of thought of the positivist quantitative stand and the constructivist qualitative viewpoint. However, by the 1930's social science researchers realised the need for multiple methods of data collection (Creswell, 2012) and it is in 1970's that 'triangulation' in which integration of various research methods in one study, started gaining popularity. The three points of the triangle that are central to triangulation was explained by Creswell as being the types of data and the phenomenon that blends information in a manner that the strength of one type of dataset neutralises the weakness of the other. With the complex nature of issues emerging from the health care field of research, there is an urgent need to employ methodological diversity (Creswell et al., 2010) which has been suggested by the office of Behavioural and Social Sciences Research (OBSSR), a changing trend that has been noticed from the earlier incompatibility issue between worldviews to a more integrated compatible viewpoint that contends that the contribution of both methods is a required necessity (Teddlie and Tashakkori, 2012) in research that involves human beings and social phenomena. While pragmatism allows the researcher to use 'whatever works'

when looking at a problem under study, post positivism and social constructivism focuses on antecedent conditions as being responsible for a problem (Creswell, 2003, p11) which are all insights that help a researcher when a detailed and comprehensive answer needs to be explored.

This study has thus adopted a mixed method approach including the paradigms of post positivism for the quantitative part and social constructivism for the qualitative part to examine and explore the competence and service delivery of undergraduate Arab health science students towards people with observable disabilities in the UAE. It will enable clarity in understanding the phenomenon being researched by interpreting the quantitative data and exploring opinions and data from the qualitative section following Creswell's (1994) notion that, 'knowledge can be claimed through a scientific method or through an alternate process including a set of assumptions that are socially constructed'.

Some of the main rationales for using a mixed methodology in this study are based on Bryman's (2006) reasoning for:

- Triangulation- to check for convergence of results from both the methods of data collection (quantitative as well as qualitative)
- Complementarity - by seeking elaboration and clarification of the results of one method with the results of the other
- Development of data - which will be possible from the results of the quantitative data collection in Phase 1 which will help to inform and construe the qualitative data collection and analysis in Phase 2.

- Initiation- which will emerge as new perspectives, ambiguities and paradoxes from the results of both methods
- Expansion - the final result of the study which will extend the breadth and range of enquiry from the results of both the methods as different questions require diverse methodologies to answer them.

By adopting these directives, the researcher intends to increase the credibility of the study by making it useful for practitioners from an applied focus and to obtain a quantified confirmation of a theory that has been generated from a qualitative perspective with the intention of building upon previously generated findings from both methods of qualitative and quantitative enquiry. This mixed methodology will also help to offset the strengths of one method to remedy the challenges of the other method, thereby obtaining a complete data set regarding the area of inquiry.

Using a mixed methods approach, it is an attempt to legitimately employ multiple approaches to answer the research questions of this study (See page 116) without restricting the researchers' choices, as the combination of questions are best answered completely through mixed research solutions. Hence, it becomes an inclusive, expansive, pluralistic and creative type of research, not limiting in its form.

3.2 Research design

By adopting a mixed methodology for this study, there was a collection of two strands of data (Creswell, 2012) which was mixed in a manner that bridged the two philosophies involved- post positivism as well as social constructivism (Greene, 2007) to explain the concepts of competence and service delivery, thereby aiding the convergence of results

obtained (Teddlie and Tashakkori, 2010). In order to understand the social and health world, the researcher gathered evidence based on the type of research questions with the conscious knowledge that social inquiry was aimed at not just the health science student, but towards various sources including the content of the public health module regarding disability, from clinical workbooks of the Arab HSS and from clinical tutors and the PWDs themselves. An intentional collection of both types of data – quantitative and qualitative helped the researcher to build on the strengths of both sets of data to combat the individual weaknesses to produce the optimal answer to the research questions that were formulated by the researcher. The quantitative data provided descriptive and inferential statistics that helped to give an explanation to the frequency of the responses. However, numbers by themselves were not adequate to explain and understand the multiple perspectives of the participants, hence, the interpretive means was adopted for the interviews and documents that were analysed by the researcher to provide a complex multi-layered viewpoint to this research. This enabled the researcher to produce an ‘alternative perspective’ with the different sources of information lending a ‘condensed’ and detailed view of the problem (Creswell, 2012).

In research within social sciences, as is this study that focuses on factors such as competence, service delivery and disability, the inherent social phenomena are so complicated that it requires more than just one method of data collection to study the complexities. As Creswell and Clark (2010) mention, a key decision for making an informed choice of a mixed method in a study should depend on the level of interaction between the quantitative and qualitative data strands, the priority and timing of the strands of data collected and the point of interface where the data will get mixed and integrated. Creswell’s (2012) steps to conduct a mixed method research has been used as a guide in this study which is illustrated below.

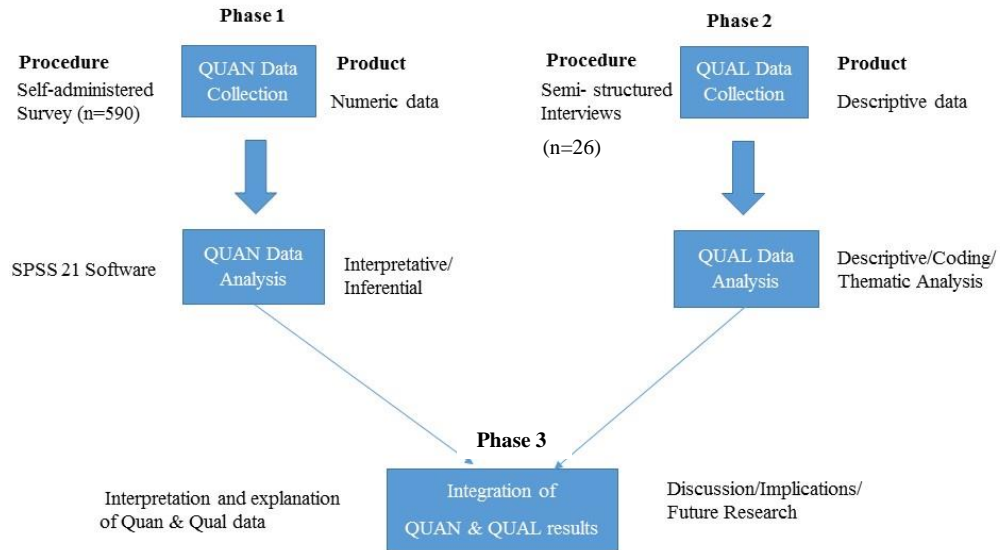


Figure 12: An overview of the Research Design (Creswell (2012))

Research questions that are the driving forces of a research are probably the most crucial task of a researcher. They are precursors of the objectives that are stated in a study. Based on relevant literature, the researcher has conducted a quantitative cross sectional survey followed by semi structured interviews and analysis of documents to answer the following research questions.

1. What are the attitudes, knowledge and skills (competence) that undergraduate Arab health science students have towards people with observable disabilities in the UAE?

2. How do the attitudes, knowledge and skills (competence) of undergraduate Arab health science students affect their service delivery towards people with observable disabilities during their clinical placements in the UAE?

3. Do any of the demographic/ variables of (age, gender, educational qualification of parents, academic major, prior contact with PWDs, ethnicity, socio economic factors, marital status and religion) influence the competence and service delivery of Arab health science students towards people with observable disabilities in the UAE as measured by the self-reports of Arab HSS

To answer the above mentioned research questions, a non experimental correlational survey methodology was utilised first to describe the relationships between the two variables of the research, competence and service delivery of a large group of Arab HSS. This was the primary method of data collection from the students. These components were not manipulated or controlled by the researcher and were statistically analysed to find out whether a relationship exists between them and based on the relationships, predictions were made (Lodico, Spaulding et al., 2010). To complement and validate the findings of the quantitative analysis achieved with numerical results, semi structured interviews with clinical instructors regarding the disability content in the public health modules and information in the clinical workbooks as well as interviews with PWDs regarding their expectations of the clinical services of Arab HSS were conducted by the researcher to further understand the relationship between the two components of the study. Analysis was iterative because the data collected in the first phase served to reorient the next wave of data to be gathered and analysed (Miles & Middlebrook, 2000) in the second phase.

3.3. Research Methods

A major element in the research framework is the specific research method that includes the types of data collection, data analysis and interpretation that researchers choose for their study based on the design and worldview. To answer the research questions mentioned earlier, the following objectives were identified:

- To identify the current attitudes, knowledge and skills that undergraduate Arab health science students have regarding PWDs in the UAE
- To assess the influence that socio-economic status, prior contact with PWDs and personal influences (age, gender, ethnicity, religion, academic major, parental education, marital status) which might affect competence of Arab HSS towards PWDs
- To determine the factors that influence how Arab HSS deliver their services to people with disabilities
- To identify current practices that undergraduate Arab HSS follow when providing services to PWDs during clinical placements
- To explore the health modules to identify the areas that prepare the Arab HSS to provide services to PWDs.
- To explore the clinical workbooks for reflective writings of the Arab HSS
- To understand the experiences and views of PWDs with Arab health care workers in the clinical setting

3.3.1 Site of the study for the survey

To ensure that the colleges and universities of the United Arab Emirates operate on international levels of quality, the Commission for Academic Accreditation (CAA) under the Ministry of Education (MoE) is the entity that audits all tertiary institutions of the UAE by committing itself to maintain the rigour of the standards that are stipulated for accreditation and licensure of the institutions yet encouraging them to maintain the diversity of educational provisions and strategies through innovation and creativity (CAA, 2011).

According to the Ministry of Education, (MoE) there are twelve accredited institutions for health science programs at the bachelors' level in the UAE. Given below is the list of institutions as per 2017 update (see Appendix 3).

Table 3.1: List of health science institutions accredited by the CAA under the MoE

Name of the Institution	Location	Specialties offered
Abu Dhabi University	Abu Dhabi	Bachelor of Science in Public Health
Ajman University of science & Technology	Ajman/Fujairah	Bachelor of Pharmacy, Nursing, Doctor of Dental Surgery
Al Khwarizmi International College	Abu Dhabi	Bachelor of Science in Medical Laboratory Analysis
Canadian University of Dubai	Dubai	Bachelor of Science in Environmental Health

		Management, Information Management, Health Organisation Management
Dubai Medical College for Girls	Dubai	Bachelor of Medicine, Surgery
Dubai Pharmacy College	Dubai	Bachelor of Pharmacy
Fatima College of Health Sciences	Abu Dhabi, Al Ain, Western Region, Ajman, Morocco	Bachelor of Emergency Health (Paramedics), Physiotherapy, Nursing, Pharmacy, Radiology
Jumeirah University	Dubai	Bachelor of Science in Environmental Health
Mohammed Bin Rashid university of Medicine & Health Sciences	Dubai	Bachelor of Medicine, Surgery
Ras Al Khaimah Medical & Health Sciences	Ras Al Khaimah	Bachelor of Medicine, Surgery, Nursing, Dental Surgery, Pharmacy
University of Sharjah	Sharjah	Bachelor of Medicine, Surgery, Nursing, Dental Surgery, Pharmacy, Clinical Nutrition & Dietetics,

		Environmental Health, Health Services Administration, Medical Diagnostic Imaging, Medical laboratory Sciences, Physiotherapy
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The context of the present study is four of these institutions within the UAE that are situated in different emirates, such as Abu Dhabi, Sharjah Ajman, Fujairah and Ras- Al- Khaimah to be able to cover a majority of the UAE. The sample was dependent on the consensual accessibility of the universities in conducting research and on those specialties that deal directly with PWDs. Details are given in (Table 3.2, page 122) as a compilation of the universities and academic majors that have been chosen based on this criteria set by the researcher.

3.3.2 Sample size and technique

A population can be defined when all the people or items with the characteristic that one desires to understand are included (Creswell, 2003) in the study which is not realistic. The aim was to find a sample that was reflective of the larger population which is essentially a smaller group that is used to define realities concerning that population (Field, 2005).

Probability and non-probability sampling are the two major approaches used in research conducted within social sciences. In probability sampling, some form of selection that is random is used ensuring equal chances of selection among the population increasing the

generalisability of the results, as the chances of the sample being very similar to the target population is higher. This becomes time consuming if the entire list of the wider population is unavailable (Bell, 2005). Samples under this approach can be selected systematically, known as systematic sampling or selected in clusters in large population studies known as cluster sampling, stage sampling where a sample can be chosen from a sample and stratified sampling, which uses the techniques of random and systematic sampling (Cohen et al., 2003). In social research, non-probability sampling is used more frequently as it allows for the samples who are rich in information to be chosen to enhance a deeper study of the phenomena being researched (Cohen et al., 2003). Common techniques include convenience or accidental sampling which involves choosing the nearest available sample, quota sampling that includes respondents being chosen because of shared characteristics, purposive sampling that involves the researcher conducting a subjective selection of an array of participants who have experience regarding the phenomena being studied and snowball sampling in which the researcher recruits a few participants who then recommend other participants who could be recruited (Blaxter et al., 2006).

In this study, the selection of participants in the quantitative part was a consecutive sample of 590 health science students followed by a purposeful sampling in the qualitative phase, of 31 participants who were the key holders of information that relate to the study (Lodico, Spaulding et al., 2010). Consecutive sampling is a type of convenience sampling in which all eligible participants who are representative of the inclusion criteria are approached for enrolment. Consecutive sampling provides some structure and has hence, provided additional rigour to this study by including all Arab HSS students who are of Arab ethnicity enrolled in undergraduate health science majors in institutions that are accredited by the CAA

under the MoE who are accessible within the defined study time period (Straus et al., 2005). This resulting sample is likely to be more representative of the target population than one taken from simple convenience sampling which involves a sample being taken from a population that is easily available and convenient. However, it is still a type of nonprobability convenience sampling, a decision that had to be taken by the researcher based on convenient accessibility and availability of the sample. In this study all Arab undergraduate health science students from the universities accredited by the CAA that gave their ethical clearances were invited to be participants of the study. The total number of students who were eligible were 820 Arab HSS across the UAE but only a total of 590 Arab HSS completed the survey and were part of this study. Details are given in Table 3.2.

Table 3.2: Students' sample from the 4 accredited health science institutions

Specialty	Institution 1	Institution 2	Institution 3	Institution 4	Sample Size
Medicine		✓			57
Pharmacy	✓	✓	✓	✓	137
Nursing	✓	✓			227
Physiotherapy	✓		✓		92
Medical Imaging	✓		✓		63
Paramedics	✓				8
Others (who did not mention the					6

name of their institution)					
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This study followed a sequential explanatory in which the quantitative data was collected initially followed by the qualitative data as one of the aims of the mixed methodology was data development (Creswell, 2012). Quantitative data was used to test the prediction that competence would [positively] influence the service delivery of undergraduate Arab Health science students during clinical placements. The interviews by clinical instructors and PWDs in the second phase explored the perceived competence and service delivery of undergraduate Arab HSS during clinical placements and within the institution to further interpret the data collected from the students in the quantitative phase through the self-perceived competence survey that was modified by the researcher.

.An illustrated overview of the design of this study is given below:

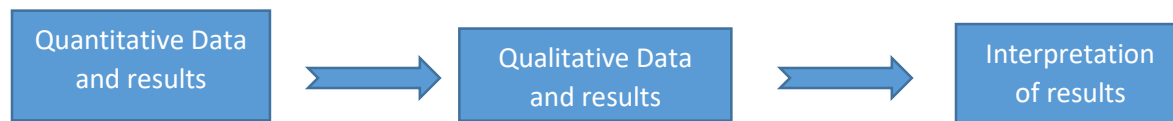


Figure 13: Sequential Explanatory Design (Creswell, 2012)

In a research design that follows the sequential explanatory method, the two sets of data are collected in two phases. The quantitative data set informs and is followed by the qualitative data set which helps to explain or elaborate on the results that have been obtained quantitatively. According to Creswell (2012), the rationale behind this research design is that the results from the quantitative methods would provide only a general data base for the problem that is being researched about. The more detailed analysis would be possible by the

qualitative dataset which could build upon the generalised picture obtained from the quantitative results. This has facilitated the advantages of both parts- quantitative as well as qualitative while designing and conducting this study (Creswell, 2012).

3.3.3 Data collection instruments

A consecutive sample of 590 undergraduate Arab students, from the four institutions that offer health sciences in the UAE completed the questionnaire. In this mixed method study, two instruments were used: a cross sectional self-perceived competence survey and semi structured face-to-face interviews. Instruments were chosen after going through the literature in accordance with the research topic, to answer the chosen research questions. Analysis of important documents like the public health modules and clinical workbooks of the students were used as supporting evidence.

3.3.3.1. Survey - The survey instrument used was a researcher modified self-perceived competence questionnaire that consists of 3 parts, (1) a demographic data sheet to collect descriptive information about the participants which included questions to assess age, gender, academic major, prior contact with PWDs, ethnicity, educational status of parents, marital status, religion and socio-economic status. These are the co-factors that are mentioned in the third research question of this study (2) A modified self-perceived competence survey that included questions from the Scale of attitudes towards disabled persons (SADP) , Attitudes towards disabled persons (ATDP) and the Interaction with disabled persons' scale (IDP). It consists of 32 Likert based questions that require choosing the correct option from strongly agree to strongly disagree (3) Four open ended questions that reflect the service delivery of Arab HSS towards PWDs. Background information regarding the intention of the survey necessary for the student was created through a

statement that led them to the questions to help the respondents understand the purpose of participating in the survey. Additional information like the amount of time for completion of the survey, confidentiality and gratitude for their participation were also included in the lead-in statement.

3.3.3.1.1 Modification of the survey

Literature review indicates that attitudes towards disability till recently have been examined through direct means that involve self-administered surveys. Instruments commonly used include the Attitude towards Disabled Persons Scale (ATDP) developed by Yuker et al. (1960), the Scale of Attitudes towards Disabled Persons (SADP) developed by Antonak (1982) and the Interaction with Disabled Persons Scale (IDP) developed by Gething et al. (1991). These typically examine attitudes from a social perspective with questions aligning around how this group is or should be treated at the societal level (White et al., 2006 citing Gething et al., 1994).

Explanation of scale development

The following steps were undertaken while developing the modified self-perceived competence scale

Step 1: Item selection (Face validation)

Step 2: Content Adequacy Assessment (Content validation) & Construct validation by experts

Step 3: Reliability

Step 4: Data collection technique

Step 5: Questionnaire administration (Pilot testing)

Item selection (Face validation)

To enable the researcher to answer the research questions, a decision was taken by the researcher after a discussion with the supervisor of this study to take three existing scales to modify and develop the self-perceived competence scale that would measure the attitudes, knowledge and soft skills that Arab HSS have towards PWDs. The use of existing survey questions has been considered a perfectly feasible option in the design of modified questionnaires (Hyman, Lamb & Bulmer, 2006) hence the three scales that were chosen were the Attitude towards Disabled Persons scale (ATDP) developed by Yuker et al. (1960), which had 20 items and a reliability coefficient of .80, Scale of attitudes towards disabled persons (SADP) developed by Antonak (1982) measures attitudes towards people with a disability as a group. It has 24 items and a reliability coefficient ranging from .81-.85. The Interaction with disabled persons scale (IDP) developed by Gething et al. (1991) with 20 items and a reliability coefficient of .85 was also one of the instruments chosen. This scale measures groups of factors like discomfort in social interactions which relates to how a person would behave and react to a person with a disability. Higher scores reveal higher discomfort in interacting socially with PWDs (Gething, 1994). The scales were all found to have high validity, widely used and most appropriate for the chosen research questions. Items from the above mentioned scales were chosen by the researcher after a detailed review of the items that could measure the four constructs - resource distribution, social compassion, social distance and social value which were constructs that emerged from the key themes obtained after the literature review. Items that measured knowledge and skills required when interacting with PWDs were given priority as the researcher did not want questions to be skewed towards only attitude which is only part of the definition of competence. The

researcher followed the 7 principles of questionnaire construction that have been recommended by Johnson & Christensen (2014) which included matching the items with objectives, understanding the research participants, using familiar, clear and precise language for the participants, avoiding any double negative, loaded, double barrelled or leading questions when the items had to be arranged.

By choosing statements from the three existing scales that appeared to be able to measure a concept and thereby enable answering the research question, the face validity was maintained.

Content and construct validation by experts

The chosen items were sent to five experts in the fields of Special Education and Psychology along with the definitions of the 4 different constructs to be categorised and placed under (See appendix 6) to ensure correct alignment between the concepts to be measured and the proposed expression of survey items (Muijs, 2010). An agreement index was predetermined by the researcher as a consensus from the team which would be a minimum of a similar responses from 3 or above experts as items to be placed under the four constructs. This was to check for the content adequacy and satisfy the content and construct validity of the modified scale (See appendix 5 for feedback from the experts). The feedback from the experts with minor changes resulted in 32 items that were placed under the four domains with 7-9 items under each construct which is considered adequate to be a quality scale (Hinkin et al, 1997) (see Table 3.3, page 130). This modified scale was termed the (self-perceived) competence scale towards people with disabilities as it essentially measured self-reported responses regarding the students' competence. The new items were scaled using a five point Likert scale that ranged from 'strongly disagree to strongly agree' to create

variance that was essential to investigate the relationships among items and scales and to create adequate coefficient alpha (internal consistency) reliability estimates.

Reliability

Reliability analysis revealed a high score for Cronbach's alpha on the self-perceived competence scale (0.77). Values > 0.70 reflect good internal consistency of the scale (Ten Klooster et al., 2009) indicating that the scale has construct validity which essentially implies that the questions were well distributed among the pre-determined four factors (see Table 3.3 page 130) with validity.

Data collection technique

Ethical approvals were obtained from the British University in Dubai where the researcher is enrolled and from the institution where the pilot study was conducted. A detailed proposal had to be given to the institutions so that the process of conducting the study could be examined by the ethical boards of the institutions. The researcher's study was placed as 'low risk' as it involved only exploring attitudes, knowledge and skills of Arab HSS, clinical tutors and PWDs. Once the necessary approvals were obtained the researcher decided on a date and time to conduct the pilot study in the chosen institution. Arab HSS students were randomly chosen from the health sciences department and the pilot testing was conducted during the lunch break.

Pilot testing

There are two reasons why a pilot test of a survey is done. The first is to confirm the clarity of the format and presentation of items to check if the target participants can understand them. The second reason is to gain understanding about the reliability of the instrument

(Cohen, Manion, and Morrison, 2011, pg. 402). In this research, a pilot study on ten Arab HSS who were chosen randomly from one of the health science institutions was carried out as a trial run (Polit et al, 2001) in preparation for the main study. The students who were chosen were given information regarding the survey. The aim and the purpose of the study, how long it would take them to finish the questionnaire and the value of their contribution to the study were explained. Assurance was given regarding the confidentiality and anonymity of their responses. The students were also told that the responses of the survey would be stored only on the researcher's laptop that was password protected and used only for this particular study. They were guided through the survey which had the following sections

The informed consent sheet that included the aim and purpose of the study with information regarding anonymity, confidentiality and storage.

A demographic sheet that had closed ended options regarding age, gender, religion, ethnicity, marital status, college major, institution they are enrolled in, parents' educational background and monthly income.

A closed ended question on prior contact with PWDs, followed by frequency of that contact and an open ended item on the nature of the contact.

The 32 item self- perceived competence scale that measured the attitudes, knowledge and skills of Arab HSS towards PWDs

Four open ended questions on service delivery regarding comfort of working with patients with disabilities, involving PWDs in shared decision making regarding their health, curriculum based clinical preparation to handle PWDs in clinical settings and the influence of technology in handling PWDs in clinical settings.

From the feedback of the students the researcher was able to confirm the cultural suitability of the study in terms of understanding, applicability and lucidity (Lancaster et al., 2004). All the students returned the completed paper based surveys without any difficulties and no changes were recommended. The researcher believes that this could be because the questions were taken from established surveys that were developed by experts who would have chosen words that were unambiguous and created statements that had clarity of thought. The pilot test confirmed the feasibility of conducting the survey on a larger population.

Table 3.3: Definition of domains and grouping of questions under the four domains

Domains	Definition/ Types of questions	Questions under each factor
Social Compassion	Social Compassion includes questions pertaining to communication with PWDs and emotions associated such as fear, pity and anger towards PWDs	Qs 3,7,10,16,17,23,25,26,31 (See Table 4.4, page 171)

Social Distance	Social Distance will include questions that will determine the willingness to engage in relationships of different degrees of intimacy with someone whose identity is stigmatized (Bowman, 1987)	Qs 2,4,5,11,14,20,22,29,30 (See Table 4.3, page 168)
Social Value	Social Value includes questions that ask about positive interaction and integration of PWDs in society. This will give an idea of their behavioural intention (Theory of reasoned action) as that could predict actual behaviour (Olson & Zanna, 1993).	Qs 6,9,18,24,27,28,32 (See Table 4.6, page 176)
Resource Distribution	Resource distribution includes questions that ask Arab HSS about the potential of PWDs, allocation of	Qs 1,8,12,13,15,19,21 (See Table 4.5, page 174)

	resources within society and employment of PWDs.	
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All the above mentioned domains included questions that examined the attitudes, knowledge and skills (competence) of Arab HSS towards PWDs. Attitudes are influenced by personal dimensions (discussed in the theoretical framework section) as well as the knowledge that a student has. This knowledge refers to general knowledge about disabilities and practical knowledge gained during training regarding PWDs which could be utilised during clinical practice. Practical knowledge is information that is exclusive to the field of study that an Arab HSS is enrolled in which enhances their skills while handling PWDs during clinical placements. This could be information they receive from textbooks, seminars, laboratory simulations and classroom discussions. This information regarding disabilities is actively applied to their field knowledge. General knowledge regarding disabilities is the knowledge received that is outside their curriculum and hence is personal and individualistic.

The researcher modified self-perceived competence scale explored the socio demographic details through questions 1-9, prior contact with PWDs through 10 – 12 and the attitudes, knowledge and skill (competence) towards disability in general through Question 13 that has 32 sub questions. Questions 14-20 explored their service delivery towards PWDs in the clinical placements. Each of the items was scored on a Likert type scale that ranged from ‘strongly disagree to strongly agree’ (See appendix 8 for a completed survey tool). Respondents responded to the items on the scale ranging from 0-4. To score the survey, items that were negatively worded were reversed scored. (Qs 5, 13, 21 and 22). The scores of all

32 items when summed had a range between 0-128 with a higher score indicating a higher competence level.

3.3.3.1.2. Procedure for conducting the survey

Permission to conduct this research was obtained from all the 4 institutions that gave their permission to conduct the survey on the students. (See appendix 7 for permission letters). An appointment was reserved individually with the heads of the department of Physiotherapy, Medical, Pharmacy, Radiology, Paramedics and Nursing of the 4 institutions who were willing to be part of this research to enable the researcher to explain the aim and objectives of the study. During this meeting a decision regarding a convenient time for the researcher to conduct the study with the respective students was planned. A department tutor who could help the researcher with finding slots for the survey to be distributed to the students in the department and help identify tutors who could be part of the interviews was also suggested during this meeting. The researcher next visited each department depending on the plan and conducted the data collection. During the student group session the researcher explained the intention of the study to the students and also the value of their contribution to the study. The ethical issues regarding confidentiality and storage issues were also explained in the front page of the survey. It is only after this was explained, that the students were invited to participate in the survey after obtaining a signed consent form (See appendix 8 for a filled survey). The surveys were self-completed by all the students through hand delivered questionnaires. All the respondents were asked the same questions in the same order without any differentiation between age, gender, ethnicity, academic major or socioeconomic level. This was used to answer the first, second and third research questions of this study that aimed to explore the current attitudes, knowledge and skills (competence) and service delivery of

undergraduate health science students towards people with disabilities in the UAE. Completed surveys took the students 5-7 minutes to finish. The researcher has maintained a record of all the departments and institutions of the students who participated to ensure that no department that had given permission was missed. As the institutions were situated in different Emirates, data was collected over an eight-week period. The numerical data gathered was summarised and made meaningful by using descriptive and inferential statistics which has been reported in Chapter 4 and discussed in Chapter 5.

In the quantitative phase, the data was analysed using the SPSS, version 22 software. Wilcoxon rank sum test and Kruskal Wallis one way ANOVA were used to test the difference in competence by various independent variables such as gender, ethnicity, socio economic status, academic major, income and education of parents. Statistical significance of pairwise comparison was also calculated. The descriptive data was compiled and presented using frequency tables as percentages or medians, minimum and maximum. Significance was considered to be achieved when $p < 0.05$.

3.3.3.2. Semi - structured interviews

Purposeful sampling was conducted following the survey to understand and delve deeper into the competence and service delivery of Arab HSS towards PWDs from the findings that were obtained from the survey. Purposeful sampling of interviewees were chosen as a sampling method because the goal of the study was to gain valuable insights regarding the competence and service delivery of Arab HSS towards PWDs (Onwuegbuzie and Collins, 2007). The participants were chosen for the one-on-one semi - structured interviews based on their background knowledge and experience of the topic of research chosen by the researcher which helped to gain insight by understanding the experiences of the key stake

holders involved (Seidman, 2014). Given below are the interviews that the researcher conducted with the key stake holders (Table 3.4).

Table 3.4: Semi structured interview list

Institution	Institution 1	Institution 2	Institution 3	Institution 4	Total
Clinical	2	2 (Medicine)	1 (Radiology)	1 (Pharmacy)	18
Instructor	Physiotherapy	2 (Pharmacy)	2 (Physiotherapy)		
	2 (Radiology) 6 (Nursing)	2 (Nursing)			
PWDS	3 (Hearing impaired) 1 (Visually challenged) 4 (Physically Challenged on wheelchairs)				8

This research has adopted the semi-structured interview using general open ended questions because the researcher has some knowledge in the area of study and the interviews have helped to discover the perspectives of the interviewee (Chenail, 2011). Open ended questions allow for further follow up questions depending on the responses of the participants. Semi-structured interviews consist of key questions that enable to define the areas to be explored and permits the interviewer or interviewee to pursue an idea or response in more detail. As this interview format is used most frequently in healthcare (Gill et al., 2008), this study used the semi-structured interview format to provide a 'deeper' understanding of the social phenomena being explored which would complement the data obtained from the self-

perceived competence survey (Silverman, 2000). In this research, the interviews were useful as there is very little information about the study phenomenon and the detailed insights from the individual participants helped to understand the phenomenon from a societal point of view. It enabled the researcher to build a holistic picture by enabling the participants 'to speak in their own voice' (Berg, 2007, p.96) and express their inner feelings and thoughts. This was very valuable as observation in this study was not permissible because ethical clearance to be around patients when they are being provided with services from hospitals was not granted, hence, the interviews, which were interactive proved to be an effective tool to explore and attain clarity on constructs such as competence, disability and service delivery.

3.3.3.2.1. Development of the interview questions

The researcher developed open ended interview questions that would yield longer and more descriptive answers from the respondents. This was necessary because the lived experiences of the participant is a valuable resource for analysis and theory building. Care was taken in the structure of the questions to avoid any leading questions and the language used was influenced by the cultural background and language skills of the participants. Questions were concise by keeping them short and specific and were framed without a strong positive or negative connotation. The questions were influenced by the competence model for health care students (Institute of medicine, 2001) which is the part of the conceptual framework of this study (see figure 10, page 98). The findings of the quantitative method also guided the interview questions. These interview drafts (one for the clinical coordinators and one for the PWDs) was sent to 5 experts in the field of health care for content validation to ensure that

the tool of measurement that was developed was able to include all the items that would operationalise the concepts to be measured through adequate representation of questions (Dikko, 2016). The suggestions and feedback from the experts became the foundation upon which the final interview format was created (see appendix 9) which was then distributed to the chosen participants after the survey had been collected and examined for initial analysis.

3.3.3.2.2. Procedure for conducting the interviews

The researcher conducted semi-structured interviews with 8 PWDs and 18 clinical instructors of the different programs of study that were chosen for this study. Polit and Beck (2006, p.273) prescribe that the sample size for semi structured interviews depends on the informational needs of the study with a minimum of 10 interviews. In this study, a total of 26 interviews were conducted using the method of saturation (Papadopoulos, 2009) to inform when the sample size of interviews was adequate and suitable. 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. Participants were informed before the interview regarding the topic and purpose of the study. Emails and telephonic calls were used for taking appointments in advance. The interviews of the clinical tutors were done in the institution premises within one hour, prescribed by Glesne (2011) as being appropriate for the session. Methods used for documentation and analyses included electronic recording either by a video or a microphone after an informed consent was obtained from the

interviewees (see appendix 10 for consent form). This was useful to correctly transcribe the written version which was later analysed in detail (DiCicco- Bloom & Crabtree, 2006). If the consent was denied, the researcher would take notes which were later transcribed and kept secured in a locked place. Notes of the interview not only enabled the researcher to create new questions as the interview progressed but also helped in locating important quotations later during analysis. Explaining the purpose of the study at the beginning of each of the interviews so that any concerns of the interviewee could be addressed was an advantage as it resulted in discussion which was feedback in itself. The most important challenge for the researcher was to develop the trust in the interviewee as it is considered a traditional magical key (Ryen, 2004, p 234) to enhance field relationships so that the quality of the data generated within the interview setting is beneficial (Green & Thorogood, 2004, p 90).

The primary idea of detailed interviews was to generate data that would give authentic insight into people's experiences, not reducing it to just a report on some external reality but rather as a reality that is constructed between the interviewer and the interviewee (Punch, 1998). This was possible as the researcher, the clinical tutors and the PWDs all shared a common goal of connecting experiences that reflected on the competence and services provided by Arab HSS towards PWDs during clinical placements. The researcher interviewed 8 PWDs who had different observable disabilities. This was conducted either in their workplaces or homes as was convenient for them to understand their views regarding service delivery of Arab HSS towards them during their clinic visits. The inclusion of PWDs themselves into the scheme of interviews conducted by the researcher helped to add an interesting dimension to the existing practices of Arab HSS that enabled the researcher to identify the gaps between

the two groups involved (the Arab HSS and the PWDs) which is discussed in Chapter 5 in detail.

3.3.3.2.3. Thematic Analysis of the qualitative data from interviews

In this research, recorded interviews were transcribed, coded and analysed for content to identify key themes following the Braun and Clark (2006) recommendations which are described in Table 3.5 (page 145). The researcher used the support of NVivo software to organise and sort the qualitative data before coding was conducted. Coding helped to sort data into categories which made it easier for the researcher to collate them into themes by gathering codes from all the transcripts of the interviews of clinical tutors and PWDs comparing them and placing them under distinct themes which then led to the emergence of patterns of thinking and categories (Punch, 1998). Although Computer Assisted Qualitative Data Analysis (CAQDAS) is an accepted means in contemporary research for managing and coding qualitative data giving the research a scientific gloss (Ahmed, 2007), the analysis however, is still the researcher's core responsibility and manual indexing and manuscript notes of the researcher are still important tools. The researcher had the advantage of speed and comprehensiveness of the searches and the emergence of underlying nodes (in NVivo language) or codes which was a prompt that was used by the researcher in the manual transcripts. The use of the NVivo software reduced the time for data analysis (Ford et al., 2000) and helped in the refinement of the analysis by enlivening the coding process. It also helped to organise the data into a formal structure which helped while writing the analysis and because the data was stored in one place it was revisited by the researcher multiple times to strengthen the process of analysis through multiple revision (DiCicco- Bloom & Crabtree, 2006).

The researcher decided to use the NVivo software as it is a supportive tool to help researchers gather, organise and analyse text data that can be imported for classification and analysis making this software attractive to researchers who use various methods of data collection. The researcher imported documents on word, portable document format (pdf) which were then transcribed and coded by the researcher to consolidate all the data into themes which is a key characteristic of qualitative research (Castleberry, 2014). These storage containers also known as 'nodes' on NVivo allowed for easy organisation of themes in the data. Coding was done manually by an easy function of "drag and drop" by highlighting sections of text that were similar that could be placed together under the nodes that the researcher created as well as through the auto coding function of the programme that generated the themes which were then analysed by the researcher under the guidance of the research supervisor. Using NVivo for assisting the process of analysis helped the researcher to explore multiple meanings of the data collected. It also challenged the researcher's assumptions regarding the initial impressions of the data (Garcia-Horta & Guerra-Ramos, 2009) because the programme generated auto codes that enabled the researcher to look at the data with a new conceptual lens (Sin & Lyubomirsk, 2009) and also assisted in developing themes that helped the researcher answer the research questions by reflecting on the socially constructed evidence by the software as well as the researcher. As Gilbert (2003) has eloquently stated 'tools extend and qualitatively change human capabilities'. However, it needs be cautioned that human factors like cognition and imagination cannot replace the qualitative interpretation of any given data and likewise the computer cannot be expected to turn incomplete messy work into sound interpretations. Hence the onus of responsibility was still on the researcher to conduct and gather data in a manner that could be compiled, stored and retrieved by the

computer and to use programmes to assist not to replace the interpretative function of the human brain. NVivo merely has the capacity to work on various data, track queries, help in coding the relevant parts of the data and creates illustrative displays of findings. It also helped in the initial brainstorming phase by offering the mind maps function (Adu, 2016).

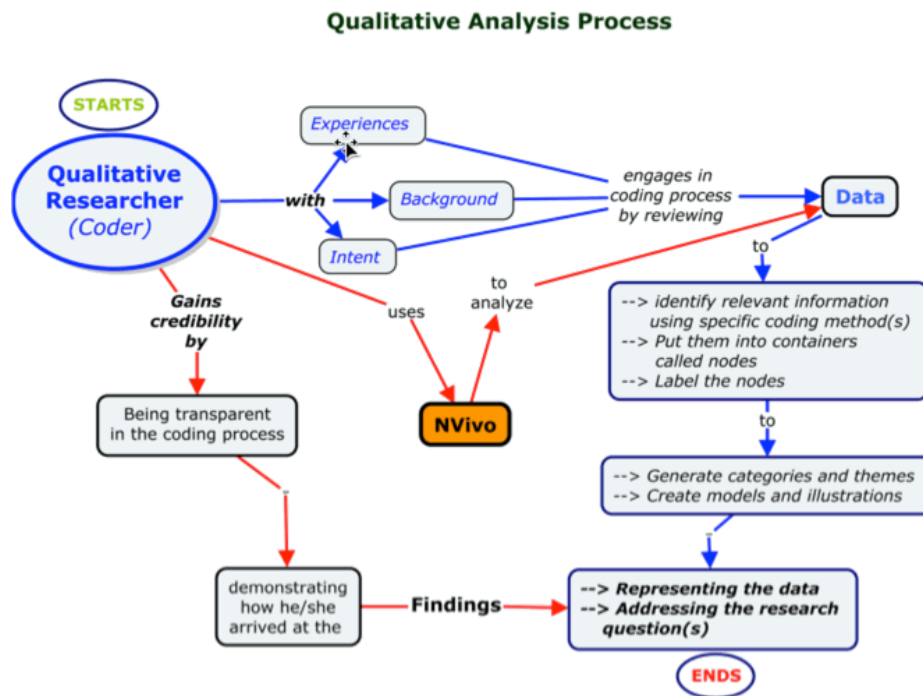


Figure 14: NVivo Qualitative Analysis Process (Adu, 2016)

3.3.3.3.2.4 Challenges of using the software for analysis

The researcher had to be careful of not creating a distance from the data as over reliance on computer software could lead to descriptions rather than theory building (Ahmed, 2007). Caution had to be taken while doing the content analysis as the language of the participants as well as the researcher affected how questions were asked, understood and interpreted. Extra diligence had to be utilised by the researcher as the participants and the researcher did

not have a shared first language (Green & Thorogood, 2004). Hence English was the chosen medium of communication and with people with hearing disabilities, an interpreter who was fluent in English as well as sign language was used to communicate to maintain the level and quality of the interviews and to collect accurate information.

The researcher used conventional methods of transcribing the verbatim recordings of the interviews by hand along with the NVivo data organising features so that ‘homogenisation of analysis’ (Bazeley, 2007) could be avoided. This was later typed by the researcher so thematic analysis which is widely used and accepted in health studies (Bywaters et al., 2003) could be utilised by the researcher to analyse the abstract entities that conveyed meaning and identity to a patterned recurrence of experiences (DeSantis & Ugarriza 2000). The researcher took a constructivist approach to explore the manner in which experiences, meanings and realities of the respondents were a result of a multitude of discourses that operate within society (Braun & Clarke, 2006) because the purpose of this study was to examine the competence and service delivery of Arab HSS towards PWDs. The process of thematic analysis was based on the format suggested by Braun and Clark, 2006 (Table 3.5, page 143). To help with the thematic analysis, the researcher took the help of the NVivo software that helped to generate auto codes which propelled the researcher’s insight for themes.

3.3.3.2.5. Maintaining the credibility of the NVivo coding

The themes which were the findings on NVivo, represented the data as well as reflected the subjective intentions, experiences and thought processes of the researcher hence transparency throughout the analysis was required. During the coding stage credibility was maintained by ensuring that the nodes created had consistency in order to obtain representations that were visually meaningful. Transparency was ensured in the pre coding

stage when the researcher became familiar with the data that had to be analysed, in the coding stage when labels were assigned to the generated nodes so that identifying relationships between them was easier and the underlying semantics could be acknowledged to create themes that related to the research questions (Saldana, 2013). In the post coding phase it was when the data had to be credibly reduced and themes had to be built to answer the research questions (Adu, 2013). Findings had to be presented with evidence based explanations for each theme which has been presented and explained in Chapter 4.

Table 3.5: Phases of thematic analysis (Braun & Clark, 2006)

	Phase	
1	Getting familiar with the data	Transcribing data by repetitive reading and putting own initial ideas
2	Generation of initial codes	Coding interesting features of the data in an orderly manner across the whole data and organising data pertinent to particular codes
3	Search for relevant themes	Arranging codes into potential themes and collating data according to potential themes
4	Review of themes	Cross checking themes in relation to the coded information and the whole document by generating a thematic analysis map

5	Definition and naming of themes	Ongoing analysis to enhance the details of each theme providing the overall story based on the analysis by generating clear names and definitions for each theme
6	Report creation	Final analysis of the extracts selected by linking it back to the research questions and literature by creating an erudite report of the analysed data

Through the above mentioned phases, the research adopted the cyclical three-stage process of data reduction, organisation and interpretation (Sarantakos, 2004) emphasizing on constant comparison and contrast of emerging concepts and theories within the interviews. This helped the researcher to test the concepts as it was being formulated and guided the researcher to look for evidence within the data collected to support or refute the emerging concepts and theories (Dunn and Johnson, 2001, p 3).

3.3.3.3 Exploration of documents as supportive evidence

As documents are good sources of information (Bardach, 2009), this research was supported by documents like an over view of the modules pertaining to disability to check the curricula for educational evidence based practice (Stromquist, 2006) like exposure to disability factors, incorporation of communication skills with PWDs, strategies for addressing challenges of PWDs and bias, provision of differential health services and the empowerment of the patient

(Betancourt, Green et al., 2002). Clinical workbooks also served to obtain information regarding the reflective thought processes of the students while handling PWDs. Information from these documents helped the researcher to probe the clinical tutors during the interviews with pertinent questions relating to the data extracted from the documents as it provided historical insight (Bowen, 2009), thereby adding to the existing knowledge base. Analysis of documents as a supporting method of data collection was decided upon after diligent perusal of its merits to the study. As the researcher could not employ observation in this study because it was not ethically appropriate, the documents proved to be valuable assets and helped in the evaluation of already collated data providing valuable insights into thoughts regarding disability and revealing the way Arab HSS behave in the clinical settings.(Pole & Lampard, 2002).

The researcher chose to look through the documents because to comprehend a phenomenon, it is imperative to know the history behind that phenomenon (Glesne, 2006, p, 65). On an institutional level, documents collected were, public health module overviews from the four institutions and samples of clinical workbooks. These documents were used to assemble and interpret the information relating to the research questions of this study and to understand the challenges faced by undergraduate Arab HSS regarding their service delivery towards PWDs. Analysis of the public health module was done initially by counting the textual elements to identify, organise, index and retrieve information. The researcher particularly looked for words like inclusion, disability, differential treatment and strategies, challenged, disabled, integration, accommodations and modifications as a guide to scan through the public health module overviews. This was followed by considering the literal words along with the context that were identified from related literature (Table 4.33 page 205).

Twenty clinical workbooks that were explored by the researcher included documentation of and self-reflective accounts regarding specific areas of competence such as communication, patient centric care, evidence based practice and use of technology of the Arab HSS (Carraccio & Englander, 2004) that demonstrated their personal care plan progress and technical capacity. These workbooks included learning materials such as procedure logs, self-assessments, learning plans, and reflective essays. This enabled the researcher to assess the various domains of competence in an integrated, coherent manner using multiple methods that provided for frequent and constructive feedback (Epstein, 2007). The advantage of multiple methods of assessment is that it can overcome the limitations of individual assessments (Epstein et al, 2004) as it allows for broader insights into the topic of study which in this study was competence and greater variety in the areas of content that were evaluated from multiple observers which in this study were the responses from Arab HSS, PWDs and clinical tutors. The researcher focused on the care plan and reflective notes of the Arab HSS in the clinical workbooks to substantiate the responses that were obtained from the self-perceived competence scale relating to areas of communication, patient centric care, use of technology, evidence based practice and shared decision making.

3.4 Trustworthiness

The methods used by quantitative researchers to establish trustworthiness is through validity, reliability and objectivity. According to Morrow (2005), qualitative researchers on the other hand use credibility (for internal validity), transferability (external validity), dependability (reliability) and confirmability (objectivity).

Credibility of this research was ensured by adopting methods that were well established during data collection and analysis based on a thorough review of literature conducted.

Although a ‘prolonged engagement’ (Lincoln & Guba (2000) was not possible with all the participants, the researcher made a genuine attempt to get familiar with the culture of the chosen institutions by making multiple fields visits before data collection and consulting the appropriate documents like the public health module overviews before the interviews were conducted. The researcher approached all the interviewees personally for appointments so that there could be a familiarity between them before data collection. By interviewing a wide range of informants, the researcher was able to verify the participants’ viewpoints and experiences which contributed to the understanding of the variables of the study, competence and service delivery. By interviewing people across the four institutions, the researcher has achieved site triangulation which has helped to reduce the effects of potential local factors exclusive to one institution and provided diversity which is recommended by Dervin (1983) as the “circling reality” which is essentially getting a variety of perspectives to obtain a wider, more stable view of reality. Member checks were done by paraphrasing the interviewee’s dialogues after the interview as well as through reading the transcripts that the researcher created from the audio and video interviews. This was done to confirm that the words matched with the intention of the interviewee and to verify the emerging theories and inferences that the interviewer had constructed so that the field data that the researcher had collected was not accumulated information that had been collected without regard to the bits of information in the contextual sense (Van Maanen, 1983). Finally, the research’s results were examined with previous findings of similar studies for congruence. Relating the findings to the studies explored in the literature review has been an important criterion for assessing the work of qualitative analysis Silverman, (2000).

Another method that the researcher adopted was peer debriefing which helped to ensure that there were no biased opinions in the study. Colleagues at work and co-students at the university who were not familiar with the study helped to provide an impartial feedback by examining the final report and general methodology. By doing this the researcher was able to determine whether the results aligned with the data. Also the fresh perspective that the peers brought in allowed the researcher to challenge some of the assumptions that had inhibited the ability to look at the study with true detachment because of the close involvement with the research. The pertinent questions and observations raised by the peers enabled the researcher to refine the methods and helped to strengthen the explanation and arguments of the research design. Frequent debriefing sessions with the supervisor of the study whose vision was wider than the researcher's because of extended experience in the field helped to provide a sounding board for the researcher to explore developing ideas and explanations and recognise personal biases within the research. Reflective techniques that included initial impressions of the data collected, emerging patterns and theories being generated all led to "progressive subjectivity" (Guba and Lincoln, 1989), the process of monitoring the developing constructions, critical in establishing credibility and helping to inform the results of the research.

Transferability is the idea that findings and conclusions of a qualitative study can be related to similar studies when enough contextual information about the sites and participants are provided. Though conventional generalisability (Erlandson et al., 1993) is not possible because of the specific contexts they occur in which should not be belittled in terms of significance (Gomm et al., 2000). A variety of findings conducted in multiple environments provide a more inclusive overall picture which help to create a baseline understanding

(Gross, 1999) that could be used to compare results of subsequent studies thereby slowly gaining an understanding of the phenomenon being researched (Borgman, 1986). Results could vary without being consistent with each other implying the existence of multiple realities rather than considering them as untrustworthy. The use of overlapping methods like the interview and review of documents has helped to make this research more credible and by detailed reporting of the processes of this study it has made the research a prototype model (Lincoln and Guba,2000), more dependable for future researchers to replicate, even if similar results are not obtained. Objectivity in quantitative analysis is obtained through the use of instruments that are independent from human skill and insight. The use of surveys and tests enable the researcher to achieve this to an extent. In qualitative analysis this concept is known as confirmability. By the use of triangulation, the effect of researcher bias that could have affected the study has been reduced. Through explanations of the research decisions taken and methods adopted with justification of the chosen method and methodological challenges that had to be confronted, confirmability to an extent has been achieved. The role of triangulation in promoting such confirmability must again be emphasised, in this context to reduce.

3.5 Methodological challenges

As the analysis of the qualitative section of this study has been in accordance with the experience and knowledge of the researcher, it is pertinent to acknowledge the influence it had especially on the interview process with regard to the threats to the validity and the strategies that the researcher had to employ to maintain the validity of the research. Reactivity, misinterpretation of behaviour and researcher bias (Maxwell, 2005) were three threats that the researcher had to be wary of during the process of the study. Reactivity could

be personal or professional which on a personal level could have affected the study as there was a cultural variation between the researcher and the Arab HSS chosen for the study. However, it was reduced as both are from the Asian continent. Having resided in the Middle East for over twenty years and having worked closely on a personal and professional level with the local population has made the researcher culturally sensitive to the society. The topic of the research is a familiar and comfortable area of specialisation for the researcher and hence there was an acute consciousness that the knowledge and views could influence the collection, analysis and interpretation of the results leading to bias. To ensure that personal views and assumptions would not affect the choice of participants, reporting and interpretative skills which could lead to invalid data, this internal knowledge was utilised as a strength to critically analyse the findings and report them contextually. There were constant validation attempts from the researcher to consult with various researchers who became sounding boards and there were constant revisits to the literature that was reviewed to ensure that the findings and interpretation were comparable with existing literature. Academic conversations with the supervisor of the study also enabled the researcher to evolve into a more critical, less biased and more open minded investigator. The research used the technique of reflexivity which is the process of looking both inward and outward with regard to the positionality of the research and the research process (Shaw & Gould, 2001). It was also part of the production of knowledge (Blaxter et al. (2006), Hammersley & Atkinson, 2002). Clearly, researchers will always have an effect on the research they are exploring since they have their own knowledge about this investigation. They also play an important part in analysing the data that is produced. In short, researchers cannot avoid having an

impact on the process of research (Kosygina, 2005), however, they can considerably reduce it by using reflexivity.

Time management was a challenge that the researcher had to face through the process of the study as working out a work- study balance because of the commitments of the researcher as a full time employee with no time off for research related work had to be managed. Researcher fatigue had to be overcome by scheduling interviews on weekends when the researcher and the interviewees were comparatively free. This was pertinent to the research process because in an interview the researcher is required to be observant, attentive and be prepared to manage diverse personality types (Kreuger, & Casey, 2009) to ensure the quality of the interview without reducing it to a conversation of irrelevant matters (Orvik et al., 2013). With time being an important factor and the respondents belonging to the different Emirates of the UAE, it limited the researcher from collecting data that could have been larger and more representative of the population.

The researcher was aware of the fact that all the respondents of this research have English as their second language which implies that they do not think in English. This was a major challenge that the researcher had to overcome because the survey as well as the interviews were conducted in English. However, as the researcher's first language is also not English, it was easier to identify with the participants' lingual limitations, despite the fact that all the participants were fluent in English and have studied or are studying in institutions that have English as their medium.

The anonymity of the people involved have been maintained by using their initials and with the use of numbers. However, the researcher is aware that the names of the four institutions maybe revealed from the documents that have been used for analysis as they have been

included as appendices in this study. In a small country like the UAE, it is difficult to maintain this anonymity.

The researcher was not able to conduct observations during clinical placements because of the security rules of the hospitals which operate under the Ministry of health in the UAE. This study would have been even more valid if the responses of the Arab HSS on the self-perceived competence survey could have been validated with observations of the students handling people with disabilities during their clinical placements. As this was not permissible, reflective writings from their clinical workbooks had to be relied upon.

3. 6 Ethical considerations

Ethical approval for this study was obtained from the British University in Dubai (See appendix 11) following the university's guidelines for ethics in research. The proposal was reviewed by the institutional review board (IRBs) whose members established that it was a low risk study and that all ethical concerns have been followed by the researcher. (See appendix 11). Approvals from the institutional review boards of the four institutions who participated in this study were also obtained before the surveys (See appendix 7) were given to 590 participants along with the information sheet regarding the research for participants. As researchers are only guests in the private spaces of the people (Stake 2005) and all interactions with the research participants as well as the data collected has to be treated with sensitivity and transparency, honest communication and non-judgmental interactions were maintained by the researcher to maintain good field relations (Lodico & Spaulding et al., 2010) through informed consent where the participants were informed regarding the procedures of the study. Participation being voluntary the participants were given the opportunity to withdraw from the study at any time. Participants were reassured of

confidentiality as well as anonymity. Their names and identities were not asked to be mentioned in the surveys hence the data could not be linked back to their identities. Only numbers have been used across the study for the quantitative data analysis. In addition, while the context of the institutions has been adequately described, care has been taken to prevent the identification of the names of the institutions. Only one institution wanted the informed consent in Arabic which was used (See appendix 12) as the first page of the surveys to only participants of that institution. The translation was done by a bilingual academician who is fluent in Arabic as well as English so that the intended meaning of the text from the source text (English) to the target text (Arabic) of the researcher's consent form could be preserved (Basil & Ian, 1990). According to Cohen et al. (2007), interviews are considered an intrusion into respondents' private lives, hence the time allotted for the meetings was a maximum of one hour and level of sensitivity of questions asked were carefully planned and followed. Interviewees were assured of confidentiality of their responses not being conveyed to the administration in any manner that could be harmful to their job security or position at their institution. Their identities have been kept anonymous and the only information that has been used in original are their designations to separate them from being a PWD or a clinical tutor.

CHAPTER -4

RESULTS

4.0 Data collected through the mixed method research design combining both the quantitative and qualitative methods is reported and analysed in this chapter. The key findings are reported first with the use of tables and figures followed by the analysis. As discussed in chapter three this study was completed in two phases so that data from the first phase could inform the data in the second phase for expansion and elaboration.

The chapter has been divided into two phases – the quantitative phase in which the results of the survey of the Arab HSS students are presented and analysed followed by the qualitative phase which includes excerpts of the transcripts along with the themes that have emerged following the interviews with selected respondents. Exploration of supportive documents such as the overview of the public health modules and clinical workbooks of the students are also mentioned in this chapter.

4.1. QUANTITATIVE ANALYSIS

The self-perceived competence survey was given to 820 health care students across the UAE personally by the researcher over a period of two months. These students were part of the specialties in the four institutions that gave their ethical clearance to conduct this survey. At the end of data collection, 597 filled in surveys were received, the response rate being 73%. This was transferred to an Xcel sheet after initial coding was done for all the items on the survey including demographic details before it was transferred into the SPSS spreadsheet. The first task that the researcher conducted was to screen the surveys to identify patterns of data that were missing. Respondents who did not answer the entire self-perceived competence survey, but had filled in the demographic details were eliminated from the calculations. Similarly, respondents who had not filled in responses to particular demographic questions, but had answered the self-perceived competence survey were

retained, but omitted from particular calculations that required the particular demographic details. This has been mentioned clearly in the tables that describe the demographic details. Of the total 597 surveys collected, 7 had to be removed due to missing data, reducing the total number of participants to 590. Given below are the findings from the self-perceived competence survey.

4.1.1. Descriptive analysis

This section is dedicated to describing the socio demographic details (age, gender, parental education, marital status, academic major, religion, ethnicity), the socio-economic details (monthly income of family) and other pertinent variables such as frequency and prior contact with PWDs to relate it with the competence and service delivery of Arab HSS in the UAE as measured by the self-perceived competence survey. Details of the descriptions are given below

4.1.1.1. Socio-demographic details of the participants

Based on the obtained results, the gender distribution differed between male and female Arab HSS with female Arab HSS being the majority over their male counterparts. Out of the total 590 participants who completed the self-perceived competence survey, 522 were female (90%) and only 61 were male (10%). It can be inferred that the obtained sample was biased towards the female gender, as male participants were underrepresented. This probably reflects the actual gender representation within the UAE in health care professions (Ministry of health, 2012) and hence should not be seen as a study limitation.

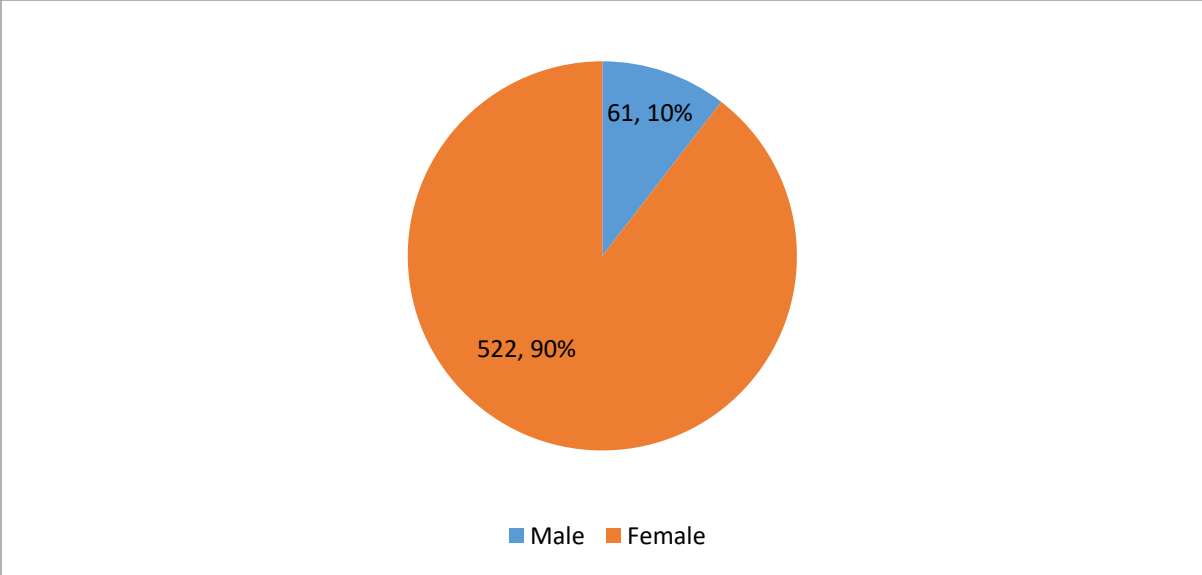


Figure 15: Distribution of Gender

Regarding age, 321 (55.3%) participants were between the ranges of 21-24 years, making them a majority followed by 165 (28.4%) participants who were between the 18-20 age ranges. Only 94 (16.2%) participants were found to be above 24 years. 10 (1.7%) respondents did not mention their age. The distribution indicated the highest number of students between the ages of 21-24 which is expected as the focus of this study was on undergraduate Arab HSS.

Table 4.1: Distribution of age of the participants

Age	No.	%
18-20	165	28.4
21-24	321	55.3
>24	94	16.2

Regarding nationality, 194 (34.6%) students out of the 590 students are local Emirati, which

essentially means that they are UAE nationals. 72 (12.9%) students fall into the group that is categorised as other high income/upper middle income by the World Bank classification (2017). (See appendix 13). Countries that fall under this group are Lebanon, Iraq, Kuwait, Oman, Saudi Arabia and Bahrain. 294 (52.5%) students fall into the lower middle income/low income category, which are countries like Jordan, Egypt, Syria, Palestine, Sudan, Yemen and Somalia. 30 (5%) of students did not mention their nationality. Expats dominating the distribution of the nationality in the UAE is indicative of the general population index which asserts that only 20-22 percent of the eight million people in the UAE are Emirati citizens (Ministry of Planning Report in UAE, 2010)

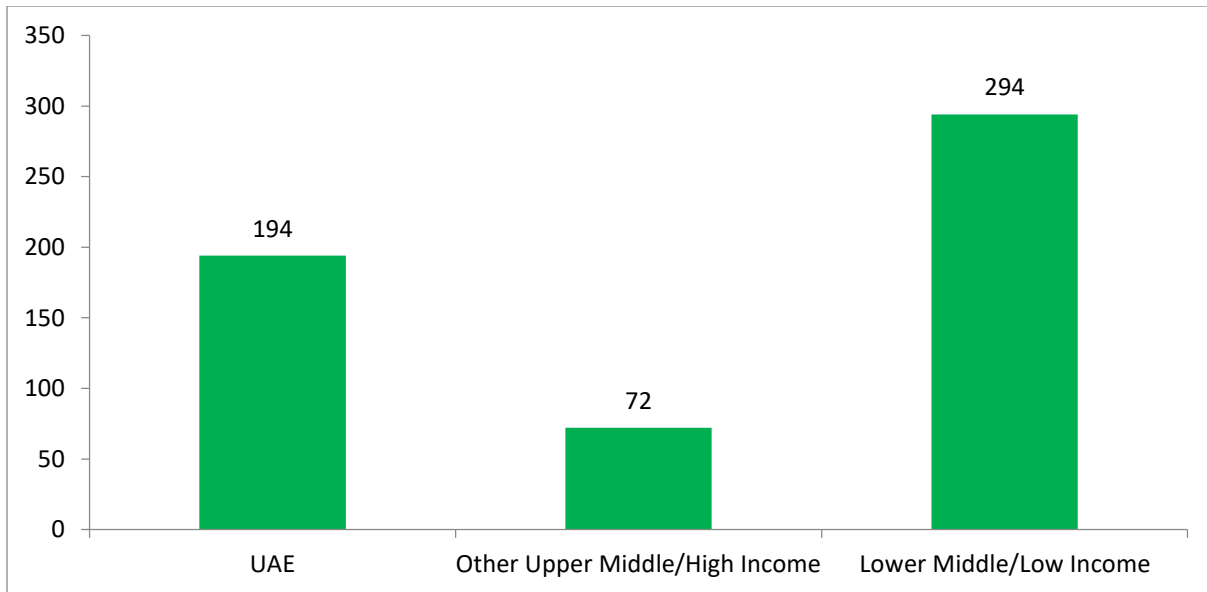


Figure 18: Distribution of participants according to the economic level of the country by the World Bank (2017)

Out of the 590 respondents, 194 (33.3%) are from University 1, 211 (36.3%) are from University 2, 141 (24.2%) from University 3 and 36 (6.2%) from University 4. Eight students (1.4%) did not mention which University they are enrolled in. Regarding the academic major,

227 (38.7%) participants are enrolled in the Nursing programme, 92 (15.7%) in the Physiotherapy programme, 63 (10.8%) in the Medical Imaging programme, 8 (1.4%) in the Paramedic programme, 137 (23.4%) in the Pharmacy programme and 57 (9.7%) are enrolled for specialisation in Medicine. Two (0.3%) students mentioned other against the major and 4 (0.7%) students did not mention their academic major. Institute 1, 2 and 3 had a larger sample size than Institute 4 because Institute 4 had only one academic major (Pharmacy) department that fit the inclusion criteria while the other three institutes had between three and six academic majors that fit the inclusion criteria (See Table 3.2, page 122).

Table 4.2: Distribution of academic major of the participants

Academic Major	No.	%
Nursing	227	38.7
PT	92	15.7
RMI	63	10.8
Paramedic	8	1.4
Pharmacy	137	23.4
Medicine	57	9.7
Others	2	0.3

A majority of students, 569 (97.4%) identified themselves as being Muslim while only 15 (3%) mentioned being Christian. Six students did not mention their religion on the survey. This is expected as it is representative of the larger population which comprises of a majority of Arabs (76%) in the UAE who are Muslim. (Indexmundi, United Arab Emirates demographics profile 2018)

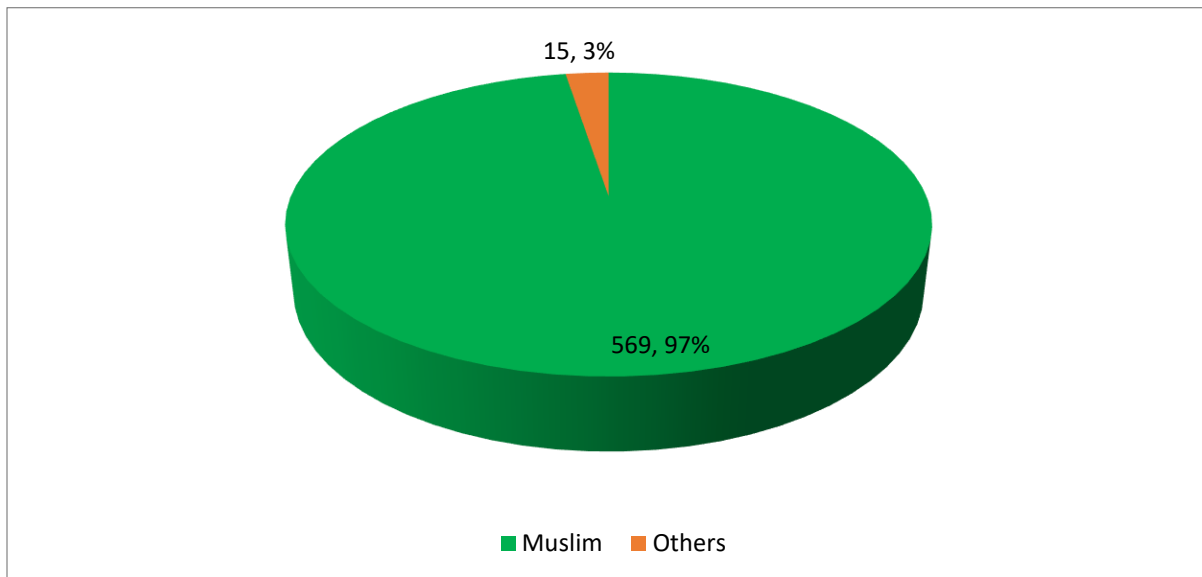


Figure 19: Distribution of participants according to their religion

Regarding marital status, 490 (83.6%) participants of the study mentioned being single and 96 (16.4%) mentioned being married. Four (0.7%) students did not reveal their marital status. This coincides with the report that was released by the Statistics Centre Abudhabi (SCAD, 2017) which reported that the average age for an Arab man to marry was 27 years and for an Arab woman 24 years. Since a majority of the participants of this study were between the ages of 21-24, this statistic coincides with a majority of participants being single.

With regard to the education qualification of the father, 240 students (41.7%) mentioned a degree, 131 (22.8%) a high school certificate, 52 students (9%) a Masters’ degree, 36 (6.3%) a doctorate and 116 (20%) mentioned that their fathers had not completed high school. Fifteen students (2.5%) did not mention their fathers’ educational qualification. With regard to Mothers’ qualification, 159 (27.9%) mentioned their mothers’ not finishing school, 139 (24.4%) cited having a high school certificate, 240 (42.1%) stated a bachelors’ degree, 21 (3.7%) with a Masters’ degree, 11 (1.9%) cited doctorate degrees and 20 students (3.4%) did not mention their mothers’ educational qualification. According to a report by the Embassy of UAE in Washington (2018), the rate of adult literacy was 54% among men and 31% among women in 1975. Currently it stands at 95% for both genders. The statistics of the educational background of the parents of the students are indicative of the lack of options for higher education in the country during the 70s as the three federal universities Higher colleges of technology (HCT) was established in 1988, Zayed University in 1998 and United Arab Emirates university (UAEU) in 1976.

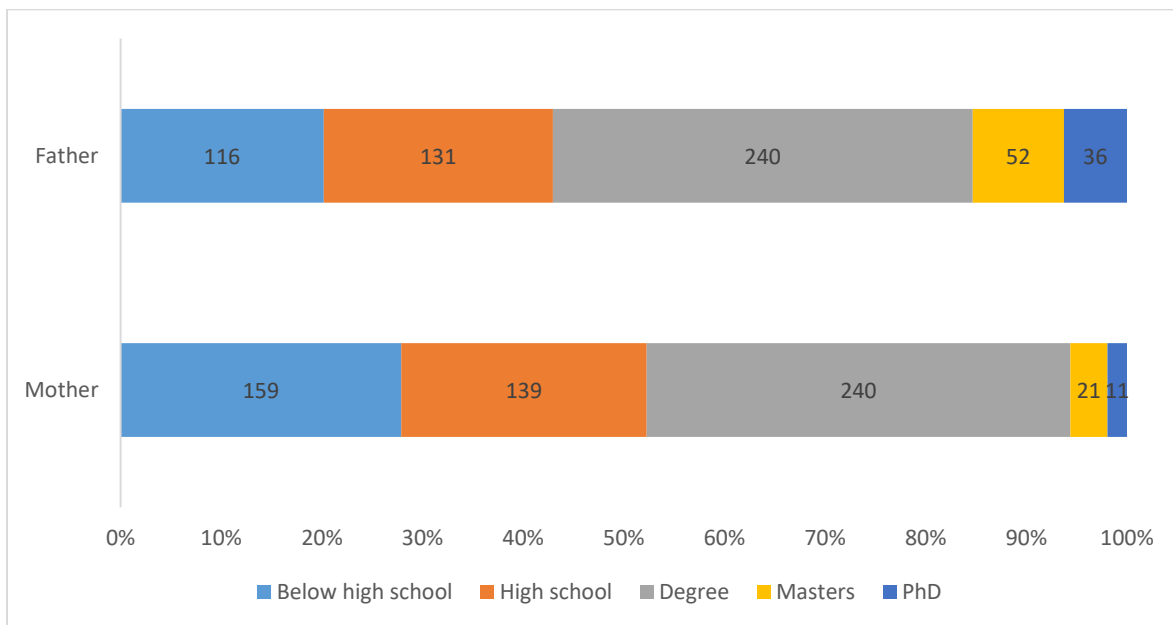


Figure 20: Distribution of educational qualification of mother and father

In the income range, 26 (4.5%) mentioned a monthly income of less than AED 5000, 94 participants (16.2%) mentioned a range between AED 5000-10,000, 139 students (23.9%) chose the range between AED 10,000-20,000, 143 students (24.6%) mentioned above AED 20,000 and 179 (30.8%) were not aware of the monthly income of their parents. 9 participants (1.5 %) did not want to reveal the income in the survey. These details are given in the table below. Students who were unaware of the monthly income of their parents were the highest (31%).

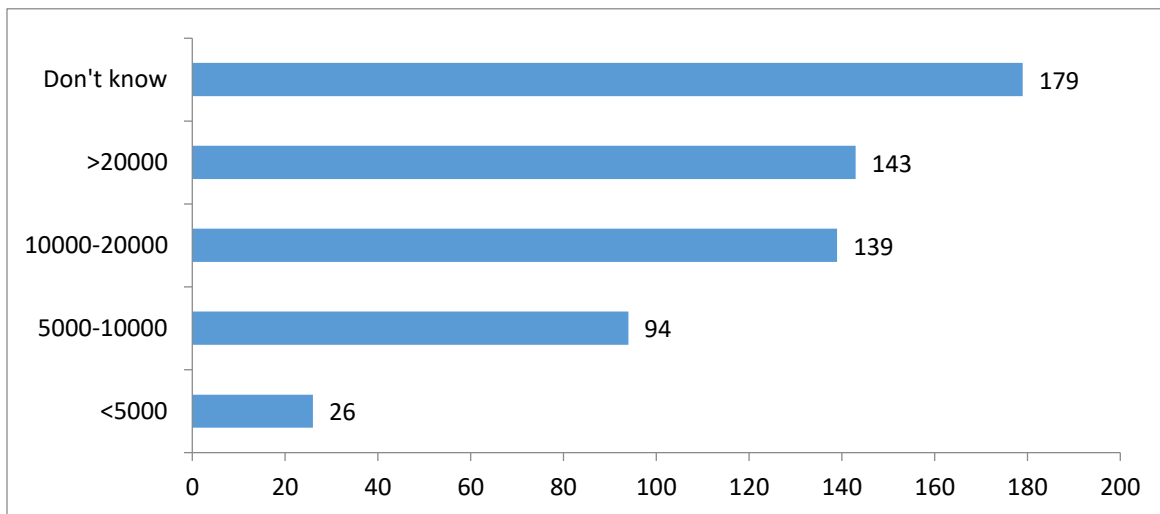


Figure 21: Distribution of the family income of the participants.

Descriptive statistics discovers trends in the data and describes the important characteristics of the data. These demographic details are important to this study as they form the personal dimensions that is mentioned in RQ3 also known as the dimensions of diversity. (See Figure 6, page 91). From the above tables and figures, it is evident that the sample chosen is representative of the larger population that the researcher intends to make generalizations upon.

4.1.1.2. Item analysis of the perceived competence survey with sociodemographic categories

The 32 statements of the self-perceived competence survey were analysed with age, institutions, ethnicity and gender. This was done to answer the first research question that explored the existing attitudes, knowledge and skills that Arab HSS had towards PWDs during clinical placements in the UAE. Student responses to individual test items on the survey were examined with various socio demographic categories that are mentioned below.

4.1.1.2.1 Age

Age was analysed with items on the self-perceived competence scale and there was an even distribution of scores between the age groups. However, to Q.13 which stated ‘Not too much should be expected from a PWD’, 50% of the students between the age group of 18-24 either disagreed or strongly disagreed with the statement whereas students above the ages of 24 seemed neutral to this statement. For Q.7, ‘PWDs are not as confident as physically normal people’, students between the ages of 18-24 were neutral regarding this statement, whereas 50% of students above the age of 24 disagreed or strongly disagreed with the statement. For Q.21 which stated ‘Simple and repetitive work is appropriate for PWDs’, students above the age of 21 were neutral, but 50 % of the students between the age of 18-20 agreed or strongly agreed with this statement. (See appendix 14)

There was an equal number of younger students who agreed (50%) and disagreed (50%) with the notion that not much should be expected out of PWDs and that simple and repetitive work is appropriate for PWDs. Arab HSS above the age of 24 did not think that PWDs are as confident as the younger Arab HSS.

4.1.1.2.2 Institutions

A comparative look at students of the four institutions indicated that Q.1 'PWDs do not contribute much to society' evoked more or less the same response from Institution 1, 2 and 3, which was 50 % of the students disagreeing or strongly disagreeing with this notion. However, 50% of the students of Institution 4 agreed or strongly agreed with this statement. Q.6 'Usually PWDs expect special treatment from people around them' evoked a neutral response from students of Institution 2,3 and 4, while 50% of the students of Institution 1 agreed or strongly agreed with this statement. For Q.13 'Not too much should be expected from a PWD', 50 % of the students of Institution 1, 2 and 3 disagreed or strongly disagreed with this statement. Students of institution 4 were neutral to this statement. Q.14 'PWDs cannot have a normal social life' received a response of 50 % of students of institution 1, 2 and 3 disagreeing or strongly disagreeing with this idea. However, students of institution 4 took a neutral stand. Q.19 'PWDs can be expected to fit into competitive society', had 50 % of students of institutions 1, 2 and 3 agreeing or strongly agreeing while students of institution 4 were neutral. Q.21 'Simple and repetitive work is appropriate for PWDs' made students of 2 and 4 take a neutral stand while 50 % of students of institutions 1 and 4 agreed or strongly agreed with this statement. Q.23 which stated 'PWDs experience the same emotions as people without disabilities' evoked similar reactions from 50% of the students of institutions 1,2 and 3 who agreed or strongly agreed with this while students of institution 4 were neutral about this. For Q.29 which stated 'I try to interact only for a short time with PWDs', only 50 % of students of institution 2 disagreed or strongly disagreed. All the other students had a neutral response to this statement.

4.1.1.2.3 Ethnicity

Q.1 ‘PWDs do not contribute much to society’ received a neutral response from local Emirati students and from students from high/high middle income countries. However, 50 % of students from low/lower middle income countries disagreed or strongly disagreed with this statement. Q.6 which states ‘Usually PWDs expect special treatment from people around them’ evoked agree or completely agree responses from 50 % of the local Emirati students, while students from all other nationalities took a neutral stand. Q.13 ‘Not too much should be expected from a PWD’ made 50 % of students from low/lower middle income countries disagree or strongly disagree with the statement while students of all other high/higher middle income countries seemed neutral. Q.21 ‘Simple and repetitive work is appropriate for PWDs’ made 50 % of local Emirati students agree or strongly agree while students of all other nationalities were neutral regarding this statement. Q.29 ‘I try to interact only for a short time with PWDs’ evoked a 50 % disagree or strongly disagree from students of low/lower middle income countries, while students from high/higher middle income countries seemed neutral (See appendix 14)

50% of the Emirati Arab HSS agreed that PWDs do not contribute much to society, expect special treatment from people and need to be given simple and repetitive work to do. However, 50% of Emirati Arab HSS disagreed with these statements. 50% of expatriate Arab HSS from lower middle income countries however disagreed with the notion that not much should be expected from PWDs and that they interact with PWDs only for a short while.

4.1.1.2.4 Gender

Both males and females indicated identical responses to all the statements except in Q.13 that stated ‘Not too much should be expected from a PWD’, evoking a 50% response from

the female students disagreeing or highly disagreeing with that thought. Male students took a neutral stand towards this statement. (See appendix 14).

Summary

An even distribution of scores was noticed between the different age groups and the items on the self-perceived competence survey. Older students (above 24 years) stated that PWDs are as confident as anyone else. Although the younger students disagreed with the statement of not expecting much out of PWDs, they seemed to agree that simple and repetitive work is appropriate for them. Students from Institute 1 stated that PWDs expect special treatment and they also stated that simple and repetitive work is appropriate for PWDs. Students of Institute 2 disagreed with the statement regarding interacting with PWDs only for a short time. Students of Institute 4 stated that PWDs did not contribute much to society and that only simple and repetitive work is appropriate for PWDs. Students from lower income families disagreed with the notion that not too much should be expected from PWDs as much as they disagreed with they do not contribute much to society. They also disagreed to the statement of interacting with them only for a short time. Emiratis (local Arab people in the UAE) stated that PWDs expect special treatment from people around them and they agreed that PWDs should be given simple and repetitive work to do. Female Arab HSS disagreed with the statement that not too much should be expected from PWDs. Similar responses were reported by men and women for all other items on the survey.

4.1.1.3. Domain Analysis

The domain analysis was conducted to answer the second research question which examined how the competence of Arab HSS affect their service delivery towards people with observable disabilities during their clinical placements in the UAE.

The self-perceived competence survey was modified by the researcher from the original three scales- ATDP, SADP and IDP (explained in Chapter 3 under section 3.3.3.1.1 page 125) after it was sent for content and construct validation to experts in the field. The items were placed under the four major domains, social distance, social compassion, social value and resource distribution after validation from the experts. A description of each construct is explained in Chapter 3 (Table 3.3 page 131).

4.1.1.3.1 Social Distance

The items within this domain aimed to examine the willingness of Arab HSS to engage in relationships of different degrees of intimacy with PWDs.

Of the 590 respondents, 464 participants (79%) agreed or strongly agreed with the statement that PWDs would benefit if they lived and worked with people without disabilities. Regarding the benefit of PWDs living in special communities, 252 participants (43%) disagreed or strongly disagreed. However, 201 respondents (34%) agreed or strongly agreed with the statement. 427 (72%) of the participants agreed or strongly agreed that PWDs can live wherever and however they choose. Out of the 590 participants, 349 (59%) disagreed or strongly disagreed with the statement that PWDs could not have a normal social life. A majority of the respondents, 413 to be precise (70%) disagreed or strongly disagreed with the notion that PWDs were not usually friendly. 263 participants (45%) disagreed or strongly disagreed with the statement, 'I try to interact only for a short time with PWDs.' while it was also noticed that a large number of participants 177 (30%) took a neutral stand. Interestingly, 150 (25%) agreed or strongly agreed with this statement. 468 respondents (79%) agreed or strongly agreed that it would be helpful if they knew something about special needs before they met and talked to a PWD. Responding to the statement about most people feeling

uncomfortable when they interact with PWDs, 252 participants (42.7%) agreed or strongly agreed with the statement, however, 195 (33%) took a neutral stand on this. Regarding people feeling uncomfortable with a PWD in a social gathering, 211 respondents (36%) were neutral and 210 participants (36%) disagreed or strongly disagreed. However, 169 respondents (28.6%) agreed or strongly agreed with this statement. The details are given in Table 4.3

Table 4.3: Frequency distribution of responses of Arab HSS to items within the Social Distance domain

Items	Level of agreement	No.	%
PWDs will benefit if they live and work with people without disabilities	Strongly Disagree	12	2.0
	Disagree	33	5.6
	Neutral	81	13.7
	Agree	270	45.8
	Strongly Agree	194	32.9
PWDs are usually not friendly	Strongly Disagree	209	35.4
	Disagree	204	34.6
	Neutral	102	17.3
	Agree	64	10.8
	Strongly Agree	11	1.9
Most people feel uncomfortable when they interact with PWDs	Strongly Agree	37	6.3
	Agree	215	36.4
	Neutral	195	33.1
	Disagree	101	17.1

	Strongly Disagree	42	7.1
It would be better for PWDs to live and work in special communities	Strongly Disagree	100	16.9
	Disagree	152	25.8
	Neutral	137	23.2
	Agree	136	23.1
	Strongly Agree	65	11.0
PWDs cannot have a normal social life	Strongly Disagree	167	28.3
	Disagree	182	30.8
	Neutral	135	22.9
	Agree	85	14.4
	Strongly agree	21	3.6
PWDs can live where and how they choose	Strongly Disagree	6	1.0
	Disagree	25	4.2
	Neutral	132	22.4
	Agree	250	42.4
	Strongly Agree	177	30.0
People feel uncomfortable with a PWD in a social gathering	Strongly Agree	25	4.2
	Agree	144	24.4
	Neutral	211	35.8
	Disagree	146	24.7
	Strongly Disagree	64	10.8
I try to interact only for a short time with PWDs	Strongly Disagree	73	12.4
	Disagree	190	32.2

	Neutral	177	30.0
	Agree	115	19.5
	Strongly Agree	35	5.9
It will be helpful if I know something about special needs before I meet and talk to a PWD	Strongly Disagree	5	.8
	Disagree	16	2.7
	Neutral	101	17.1
	Agree	259	43.9
	Strongly Agree	209	35.4

4.1.1.3.2 Social Compassion

The items within this domain aimed to examine the items pertaining to communication with PWDs and emotions associated with them. 388 participants (66%) agreed or strongly agreed that most PWDs need more affection and praise than other people. 444 participants (75%) agreed or strongly agreed that people with physical disabilities are just as intelligent as non-disabled persons. The response to the statement ‘Most PWDs feel sorry for themselves’ was mixed, with 211 respondents (36%) taking a neutral stand, 193 (33%) agreeing or strongly agreeing and 186 (32%) disagreeing or strongly disagreeing. 364 (62%) participants agreed or strongly agreed to the statement that PWDs were as happy as people without disabilities. 401 participants (68%) agreed or strongly agreed that PWDs should be given more control in making decisions that affect their lives. Out of the 590 participants, 379 (64%) agreed or strongly agreed that PWDs experience the same emotions as people without disabilities. A majority of the participants 489 (83%) mentioned that it hurt them when PWDs wanted to

do something and they could not do it. 408 respondents (69%) felt frustrated because they did not know how to help PWDs. 218 respondents (37%) disagreed or strongly disagreed with the statement that people with disabilities usually get very aggressive while 231 (39%) took a neutral stand. 141 participants (23.9%) agreed or strongly agreed that PWDs get very aggressive. The above details are given in Table 4.4.

Table 4.4: Frequency distribution of responses of Arab HSS within the Social

Compassion domain

Items	Level of agreement	No.	%
Most PWDs need more affection and praise than other people	Strongly Disagree	10	1.7
	Disagree	44	7.5
	Neutral	148	25.1
	Agree	275	46.6
	Strongly Agree	113	19.2
People with physical disabilities are just as intelligent as non-disabled persons	Strongly Disagree	8	1.4
	Disagree	31	5.3
	Neutral	107	18.1
	Agree	184	31.2
	Strongly Agree	260	44.1
Most PWDs feel sorry for themselves	Strongly Disagree	83	14.1
	Disagree	103	17.5
	Neutral	211	35.8

	Agree	148	25.1
	Strongly Agree	45	7.6
PWDs are as happy as people without disabilities	Strongly Disagree	4	.7
	Disagree	39	6.6
	Neutral	183	31.0
	Agree	244	41.4
	Strongly Agree	120	20.3
PWDs should be given more control in making decisions that affect their lives	Strongly Disagree	4	.7
	Disagree	37	6.3
	Neutral	148	25.1
	Agree	255	43.2
	Strongly agree	146	24.7
PWDs experience the same emotions as people without disabilities	Strongly Disagree	9	1.5
	Disagree	61	10.3
	Neutral	141	23.9
	Agree	199	33.7
	Strongly Agree	180	30.5
It hurts me when PWDs want to do something and they cannot	Strongly Disagree	3	.5
	Disagree	13	2.2
	Neutral	85	14.4
	Agree	237	40.2
	Strongly Agree	252	42.7
I feel frustrated because I don't know how to help	Strongly Disagree	4	.7

PWDs	Disagree	39	6.6
	Neutral	139	23.6
	Agree	248	42.0
	Strongly Agree	160	27.1
People with disabilities usually get very aggressive	Strongly Disagree	70	11.9
	Disagree	148	25.1
	Neutral	231	39.2
	Agree	115	19.5
	Strongly Agree	26	4.4

4.1.1.3.3 Resource Distribution

The items within this domain aimed to examine the items pertaining to the potential of PWDs. 307 participants (52%) disagreed or strongly disagreed with the statement that PWDs did not contribute much to society, however, 171 respondents (29%) agreed or strongly agreed to this. 232 (39%) participants agreed or strongly agreed that PWDs are not as confident as physically normal people, 176 respondents (29.8%) disagreed or strongly disagreed with this and 182 (31%) took a neutral position. 498 respondents (84%) agreed or strongly agreed with the idea that the Government should look after PWDs. A majority of the respondents, 510 (86%) agreed or strongly agreed that PWDs could be trained to learn job skills. To the statement, ‘Not too much should be expected from a PWD’, 320 participants (54%) either disagreed or strongly disagreed with this. 445 participants (76%) agreed or strongly agreed that PWDs could be expected to fit into competitive society. To the statement that simple and repetitive work was appropriate for PWDs, 284 participants (48%) disagreed

or strongly disagreed with this statement and 199 respondents (34%) took a neutral stand, 107 participants (18.1%) agreed or strongly agreed with this statement. The details are given in Table 4.5.

Table 4.5: Frequency distribution of responses of Arab HSS to items within the Resource Distribution domain

Items	Level of agreement	No.	%
PWDs do not contribute much to society	Strongly Disagree	87	14.7
	Disagree	220	37.3
	Neutral	112	19.0
	Agree	136	23.1
	Strongly Agree	35	5.9
PWDs are not as confident as physically normal people	Strongly Disagree	42	7.1
	Disagree	134	22.7
	Neutral	182	30.8
	Agree	187	31.7
	Strongly Agree	45	7.6
The Government should look after PWDs	Strongly Disagree	5	0.8
	Disagree	13	2.2
	Neutral	74	12.5
	Agree	242	41.0
	Strongly Agree	256	43.4
Not too much should be expected from a	Strongly Agree	23	3.9

PWD	Agree	93	15.8
	Neutral	154	26.1
	Disagree	199	33.7
	Strongly Disagree	121	20.5
PWDs can be trained to learn job skills	Strongly Disagree	9	1.5
	Disagree	13	2.2
	Neutral	58	9.8
	Agree	275	46.6
	Strongly agree	235	39.8
PWDs can be expected to fit into competitive society	Strongly Disagree	4	0.7
	Disagree	17	2.9
	Neutral	124	21.0
	Agree	293	49.7
	Strongly Agree	152	25.8
Simple and repetitive work is appropriate for PWDs	Strongly Agree	20	3.4
	Agree	87	14.7
	Neutral	199	33.7
	Disagree	207	35.1
	Strongly disagree	77	13.1

4.1.1.3.4 Social Value

The items within this domain aimed to examine the items pertaining to the positive interaction and integration of PWDs into society. 267(45%) of the participants agreed or strongly agreed that usually PWDs expected special treatment from people around them. However, 207 participants (35%) had a neutral position on this. There was a mixed response for the statement ‘PWDs expect a lot of sympathy from people’ with 209 respondents (35%) agreeing or strongly agreeing, 185 (31%) disagreeing or strongly disagreeing and 196 (33%) taking a neutral stand. 444 respondents (75%) agreed or strongly agreed that most PWDs could marry and have children. 464 participants (79%) agreed or strongly agreed to the statement that it was rewarding when they could help PWDs. 472 (80%) of the respondents agreed or strongly agreed with the statement that they admired the way PWDs coped with life. 428 (73%) of the participants agreed or strongly agreed that after many interactions with PWDs they just noticed the person, not their disability. 403 (68%) respondents agreed or strongly agreed that PWDs were different from one another. The details are given in Table 4.6.

Table 4.6: Frequency distribution of responses of Arab HSS to items within the Social Value domain

Items	Level of agreement	No.	%
Usually PWDs expect special treatment from people around them	Strongly Disagree	29	4.9
	Disagree	87	14.7
	Neutral	207	35.1
	Agree	221	37.5
	Strongly Agree	46	7.8

PWDs expect a lot of sympathy from people	Strongly Disagree	68	11.5
	Disagree	117	19.8
	Neutral	196	33.2
	Agree	176	29.8
	Strongly Agree	33	5.6
Most PWDs can be expected to marry and have children	Strongly Disagree	4	.7
	Disagree	20	3.4
	Neutral	122	20.7
	Agree	254	43.1
	Strongly Agree	190	32.2
It is rewarding when I can help PWDs	Strongly Disagree	4	.7
	Disagree	18	3.1
	Neutral	104	17.6
	Agree	232	39.3
	Strongly Agree	232	39.3
I admire the way PWDs cope with life	Strongly Disagree	3	.5
	Disagree	9	1.5
	Neutral	106	18.0
	Agree	226	38.3
	Strongly agree	246	41.7
After many interactions with PWDs I just notice the person not their disability	Strongly Disagree	4	.7
	Disagree	20	3.4
	Neutral	138	23.4

	Agree	210	35.6
	Strongly Agree	218	36.9
PWDs are different from one another	Strongly Disagree	33	5.6
	Disagree	64	10.8
	Neutral	90	15.3
	Agree	245	41.5
	Strongly Agree	158	26.8

4.1.1.4. Socio-demographics and domains

The four major domains of Social Compassion, Social Distance, Social Value and Resource Distribution were cross tabulated with gender, age, marital status, ethnicity, paternal and maternal education, monthly family income and academic major to examine the relationship between the above mentioned categorical data with the four domains of this study. The findings are discussed in the sections below.

4.1.1.4.1 Gender

With regard to the social distance domain, 34 male participants (56%) took a neutral stand and only 27 respondents (44%) were positive about interacting with and including PWDs into society. 296 female participants (57%) were positive and 226 participants (43%) were neutral regarding their interaction and inclusion of PWDs within society. Both male and female participants were very positive in their social compassion towards PWDs with 51 (84%) male respondents and 482 (92%) female participants responding positively to statements based on social compassion. Both genders took a positive stand regarding resource distribution which included statements on the potential and capabilities of PWDs

integration into the workplace and society. 50 male participants (82%) and 464 (89%) female participants responded positively to this domain. In the social value domain, 54 male participants (89%) and 485 female respondents (93%) scored positively on the statements that were under this domain. (See appendix 15).

4.1.1.4.2 Age

With regard to social distance, 59 participants (63%) above the age of 24 years responded most positively towards interacting with and including PWDs into society. 86 participants (52%) between the ages of 18-20 and 174 participants (54%) between the age group of 21-24 were positive about interacting with PWDs. 292 respondents (91%) between the ages of 21-24 years and 86 participants (92%) above the age of 24 years were positive regarding their compassion towards PWDs. 153 participants (93%) between the ages of 18-20 years scored highest in this domain. In the resource distribution domain, 148 participants (90%) between the ages of 18-20 had the most positive scores. 280 respondents (87%) between the ages of 21-24 years and 84 students (89%) above the age of 24 years responded positively to statements that reflected the potential of PWDs. Statements that described the social value were responded to most positively by 157 participants (95%) between the ages of 18-20 years. 293 participants (91%) between the ages of 21-24 years and 86 participants (92%) above the age of 24 years also responded positively to this domain. (See appendix 15).

4.1.1.4.3 Marital status

Responding to the social distance domain, 60 (60%) married respondents had a more positive attitude towards interacting with and including PWDs than single respondents. With regard to social compassion, 450 single respondents (92%) responded more positively than married participants. Regarding the potential of PWDs, single respondents, 436 (89%) were more

positive than married respondents. 458 single participants (94%) responded positively to the statements that reflected social value. (See appendix 15).

4.1.1.4.4 Ethnicity

In this study, ethnicity was classified based on the income category as upper middle and high income group and lower income and low income group. The countries that were categorised under high income group were Lebanon, Iraq, Kuwait, Oman, Saudi Arabia and Bahrain. Countries like Jordan, Egypt, Syria, Palestine, Sudan, Yemen and Somalia categorised into the lower middle income/low income category. This classification is based on the World Bank Classification (2017) (See appendix 13). Emirati students, who also come under the high income category were taken as an exclusive group as they are the indigenous population of the UAE. Out of the 194 Emirati students, 128 (66%) scored higher on the perceived competence scale towards interacting with PWDs than students from the upper middle and high income group as well as the lower middle and low income group. 182 UAE Emirati students (94%) and 272 students from lower middle and low income group (92.5%) showed comparative scores regarding compassion towards PWDs, while 60 students (83.3%) from the higher middle and high income group indicated lesser compassion scores. Regarding the potential of PWDs, 177 Emirati students (91.2%) indicated scores that were most positive, while 57 students (79.2%) from the upper middle/high income indicated the lowest scores. 183 Emirati participants (94.3 %) responded more positively to the statements that reflected social value of PWDs than the other two groups. (See appendix 15)

4.1.1.4.5 Father's Education

In the social distance domain, 85 Students (73.3%), whose father's education was below high school showed a more positive attitude towards interacting with PWDs. Regarding the social

compassion domain, 109 students (94%) whose father's education was less than high school indicated the most positive scores. 122 students (93.1%) whose fathers' had completed high school showed higher positive scores regarding the potential of PWDs than students with more educated fathers. Social value scores were highest for 125 Arab HSS (95.4%) whose fathers had completed high school. (See appendix 15).

4.1.1.4.6 Mother's Education

Students with mothers' who had doctorate degrees indicated a higher willingness to interact with people PWDs than the other students. 7 students (63.6%) whose mothers' education included a doctorate showed higher scores than the other groups except in the social distance domain, which was not statistically significant. Regarding compassion towards PWDs, 11 Arab HSS (100%) whose mothers were highly educated and included a doctorate had the highest scores for compassion. With regard to the resource distribution (potential) of PWDs, 11 Arab HSS (100%) whose mothers had a doctorate showed higher scores than students whose mothers were less educated. 11 Arab HSS (100%) whose mothers had a doctorate scored higher on items that reflected the social value of PWDs than the other students whose mothers were not as educated. (See appendix 15).

4.1.1.4.7 Monthly family income

Regarding willingness to interact with PWDs, 19 students (73.1%) from lower monthly family incomes of less than Dhs 5000 per month indicated more positive scores than students who had higher monthly family incomes. Compassion towards PWDs showed scores that were almost the same for all groups. However, 137 Arab HSS (95.8%) whose monthly family incomes were above Dhs 20,000 per month indicated higher scores than the other groups. 129 Arab HSS (90.2%) whose family monthly incomes were above Dhs 20,000 per month

indicated higher positive scores regarding the resource distribution (potential) of PWDs than the other groups. 131 Arab HSS (94.2%) whose monthly family incomes were between Dhs 10,000 and Dhs 20,000 scored the most positive scores on items that reflected the social value of PWDs (see appendix 15).

4.1.1.4.8 Academic Major

142 (62.6%) Nursing students were most positive about interacting with PWDs and 25 (43.9%) students of Medicine were the least positive. Regarding compassion towards PWDs, 212 (93.4%) Nursing students and 128 (93.4 %) Pharmacy students scored the highest and students studying for Medicine scored the lowest. 208 (91.6%) Nursing students and 84 (91.3 %) Physiotherapy students showed most positive scores regarding the resource distribution (potential) of PWDs and Medical Imaging students scored the least. Items reflecting the social value of the PWDs indicated high positive scores from 86 students (93.5%) of Physiotherapy, 59 students (93.7%) of Medical Imaging and 212 (93.4%) of Nursing. Students of Medicine indicated the lowest positive scores. In the resource distribution domain, 208 nursing students scored the highest (91.6%). (See appendix 15).

Summary

HSS above the age of 24 years, married participants, students from the nursing major, female respondents, Arab HSS who are Emirati, students whose monthly income is below Dhs 5000 and participants whose father's education was below high school completion and mothers' who are highly educated with a Ph.D degree were found to have the highest scores on the social distance domain. (See appendix 15).

HSS between the ages of 18-20, single participants, students from the nursing and pharmacy major, female respondents, Arab HSS who are Emirati, students whose monthly income is

above Dhs 20000 and participants whose father’s education was below high school completion and mothers’ who are highly educated with a Ph.D degree were found to have the highest scores on the social compassion domain.

In the social value domain, Arab HSS between the ages of 18-20 years, single participants, students from the nursing, medical imaging and physiotherapy majors, female respondents, Arab HSS who are Emirati, students whose monthly income is between Dhs 10000-20000 and participants whose father’s education is high school completion and mothers’ who are highly educated with a Ph.D degree were found to have the highest scores.

HSS between the ages of 18-20, single participants, students from the nursing major, female respondents, Arab HSS who are Emirati, students whose monthly income is above Dhs 20000 and participants whose father’s education is high school completion and mothers’ who are highly educated with a Ph.D degree were found to have the highest scores on the resource distribution domain.

Table 4.7: Highest scores of Arab HSS on demographic variables within each domain

Domain	Age	Gender	Marital status	Academic Major	Ethnicity	Monthly income	Parental Education
Social Distance (Interaction)	Above 24 years	Female	Married	Nursing	Emirati	Below 5000Dhs	Father below high school Mother with higher education (Ph.D)
Social	18-20	Female	Single	Nursing	Emirati	Above	Father below

compassion	years			Pharmacy		20,000Dh s	high school Mother with higher education (Ph.D
Social value	18-20 years	Female	Single	Nursing Medical Imaging Physiothera py	Emirati	Between 10,000- 20,000	Father high school completed Mother with higher education (Ph.D
Resource distribution	18-20 years	Female	Single	Nursing	Emirati	Above 20,000Dh s	Father high school completed Mother with higher education (Ph.D

4.1.1.5 Service delivery of Arab HSS towards PWDs

Four questions pertaining to the service delivery of Arab HSS towards PWDs were analysed from the open ended questions of the self-perceived competence survey. These questions revolved around the comfort level of the Arab HSS while handling PWDs, their clinical preparation to handle PWDs, shared decision making for health related decisions with PWDs and the influence of technology in handling PWDs. The influence of prior contact with comfort levels of Arab HSS during clinical placements were also explored. The results are discussed in the sections below.

4.1.1.5.1. Analysis of responses of open ended questions based on service delivery of Arab HSS towards PWDs during clinical placements

4.1.1.5.1.1 Prior contact of Arab HSS with PWDs and comfort in working with them

584 (99%) students who attempted the question regarding their comfort level in working with PWDs, 544 (92.2%) stated they were comfortable and 40 (6.8%) stated they were not. 6 participants (1%) did not attempt this question. (Table 4.20). Regarding the frequency of prior contact with PWDs and (Q14) from the survey that asked ‘Are you comfortable working with patients with disabilities during the clinical placements’, the highest number of students who answered with a yes were the 118 students (96.7%) who had prior contact with PWDs only once a week. The participants who scored the lowest were the 54 students (87.1%) who had prior contact with PWDs on a daily basis (Table 4.8).

Table 4.8: Frequency of contact of Arab HSS with PWDs and comfort

Are you comfortable working with PWDs in your clinical placements?	Contact				
	No		Yes		Total
	#	%	#	%	
No contact	17	9.4	164	90.6	181
Daily	8	12.9	54	87.1	62
Once a week	4	3.3	118	96.7	122
Once a month/once a year	11	5.1	203	94.9	214

4.1.1.5.1.2 Shared decision making

Responses to Q.16 about involving their patients with disabilities during health related decision making, out of 567 (96.1%) students who answered this question, 338 (57.3%) Arab HSS mentioned that they involved them, while 229 (38.8%) stated that they did not. 23 students (3.9%) did not answer this question.

4.1.1.5.1.3 Clinical preparation

Responses to Q 18 regarding the curriculum preparing them to handle PWDs during clinical placements, 578 respondents who answered this question, 398 (67.5%) said they felt they were prepared and 180 students (30.5%) stated they were not. There were 12 students who did not answer this question.

4.1.1.5.1.4 Technology as a help in handling PWDs during clinical placements

Responses to the Q.20 regarding technology, out of the 570 (96.6%) students who attempted this question, 333 (56.4%) mentioned that it was useful while 237 (40.2 %) expressed that technology had not helped them. 20 students did not answer this question. Details are given in Table 4.8.

Table 4.8: Frequency table responses to the open ended questions based on service delivery of Arab HSS towards PWDs during clinical placements

Question	Yes		No		No response
	#	%	#.	%	
Are you comfortable working with patients with disabilities in your clinical placement?	544	92.2	40	6.8	6
Do you involve your patients with disabilities when you make health related decisions for them?	338	57.3	229	38.8	23
Does the curriculum prepare you to handle PWDs during your clinical rotations?	398	67.5	180	30.5	12
Has technology helped you to handle PWDs in your clinical placements?	333	56.4	237	40.2	20

Summary

A majority of the Arab HSS stated that they were comfortable working with PWDs during clinical placements. More Arab HSS who had contact with PWDs on a weekly basis stated

they were comfortable than students who had the contact on a daily basis. A majority of students mentioned that they involve PWDs during decision making for health related concerns (PWDs). A majority of the students also stated that they felt they were prepared adequately to handle PWDs during clinical placements. Technology was considered a help while handling PWDs for a majority of students.

4.1.2 Inferential Statistical Analysis

Socio demographic variables, prior contact and socio-economic variables were cross tabulated against competence to explore their significance towards service delivery. The following results were generated. The descriptive data has been compiled and presented using frequency tables as percentages or medians, minimum and maximum scores being mentioned against each.

4.1.2.1 Variables that influence the competence of Arab HSS

When the factors of gender, age, parental education, monthly income, marital status, ethnicity, academic major and institution were cross tabulated with competence scores, it was found that only gender, mother's education, institution, prior contact with PWDs and technology were significant contributors to competence in this study. Although there was very little difference between the female median scores (80.50) and male scores (78.00), statistically the results were significant. Institution 1 obtained the highest median score of (82.00) and Institution 4 obtained the lowest scores of (77.00), which was found to be statistically significant. Arab HSS who had prior contact with PWDs on a daily & weekly basis, had scored the highest scores on competence (82.00) whereas those Arab HSS who had no contact had the least scores (78.00). (Table 4.12). All the other factors had similar

scores and were not statistically significant. Age between 18-20 and above 24 years had a median score of 81.00, UAE nationals had a median score of 81.00 and those whose monthly incomes were less than Dhs 5000 had the highest median score of 81.50. Among the academic majors, nursing students showed the highest median scores of 82.00 Details are given in the tables below.

Table 4.10: Cross tabulation of socio-demographic factors with competence

	Gender	Median	Minimum	Maximum	P value
Gender	Male	78.0	52.0	112.0	<0.05
	Female	80.5	48.0	110.0	
	Total	80.0	48.0	112.0	
Age	18-20	81.0	56.0	106.0	NS
	21-24	80.0	48.0	112.0	
	>24	81.0	51.0	99.0	
Ethnicity	UAE	81.0	64.0	106.0	NS
	Upper middleHigh/	79.0	48.0	107.0	
	LowerLower / middle	80.0	51.0	112.0	
Monthly Income	<5000	81.5	63.0	93.0	NS
	5000-10000	81.0	51.0	96.0	
	10000-20000	81.0	48.0	100.0	

	>20000	80.0	64.0	110.0	
Institution	1	82.0	64.0	106.0	<0.05
	2	80.0	51.0	100.0	
	3	79.0	48.0	112.0	
	4	77.0	63.0	107.0	
Major	Nursing	82.0	51.0	106.0	NS
	PT	79.0	48.0	99.0	
	RMI	81.0	56.0	102.0	
	Pharmacy	79.0	63.0	112.0	
	Medicine	80.0	52.0	98.0	

The students whose fathers had a high school qualification had the highest median of 82. The median scores for mother's education across the categories were statistically significant with mothers not completing their high school with (82), with high school (80), with a degree (79) with a Masters' degree (77) and with a doctorate (85).

Table 4.11: Cross tabulation of parents' education with competence

Variable	Level	Score			P Value
		Median	Minimum	Maximum	
Father's education	<HS	81.0	51.0	106.0	NS
	HS	82.0	54.0	110.0	
	Degree	79.0	48.0	112.0	

	Master	79.5	56.0	107.0	
	PhD	80.0	64.0	98.0	
Mother's education	<HS	82.0	51.0	106.0	<0.05
	HS	80.0	56.0	106.0	
	Degree	79.0	48.0	112.0	
	Master	77.0	63.0	98.0	
	PhD	85.0	76.0	94.0	

Summary

The above tables indicate that being a female Arab HSS, a student of institution 1 and having a mother with a higher educational degree (Ph.D) are all statistically significant influences that determine the competence of a Arab HSS towards PWDs during clinical placements in the UAE.

4.1.2.2. Prior contact with PWDs and competence of Arab HSS

Prior contact was cross tabulated with the overall competence and the results obtained was statistically significant, indicating that prior contact with PWDs had a positive influence on the competence of Arab HSS in the UAE especially when that contact was on a daily and weekly basis. When the four domains of competence were cross tabulated individually with prior contact, social compassion, resource distribution and social value were found to have statistical significance however, results of social distance were not found to have any statistical significance. It was noticed that out of the 585 Arab HSS students who responded to Q 11, that asked about the frequency of prior contact with PWDs, with regard to social compassion, (Fig, 23, page 194) the scores showed a steady trend upwards, from no contact

to daily and weekly contact. However, when this contact became lesser with only once a month or once a year, the scores towards social compassion also dropped to even lesser than when the students had no contact. Regarding resource distribution which involved the potential of a PWD and integration into society (Fig, 21 page 193), Arab HSS indicated the highest scores when there was no contact. Daily contact too elicited positive scores towards resource distribution of PWDs. The scores dropped when the contact became weekly and yearly once. The social value scores towards PWDs (Fig, 22 page 193) were highest when the contact of Arab HSS was minimal, once a year as well as when contact was on weekly basis and lowest when the contact was only once a month. The table below and figures (21, 22 & 23) show the results obtained on the Kruskal – Wallis test for overall competence and on each domain that was statistically significant.

Table 4.12: Median, minimum and maximum score vs. prior contact with PWDs

Type of contact	Median	Minimum	Maximum	P Value
No contact	78.0	56.0	112.0	<0.05
Daily	82.0	63.0	99.0	
Weekly	81.5	48.0	107.0	
Monthly/Yearly	81.0	51.0	98.0	

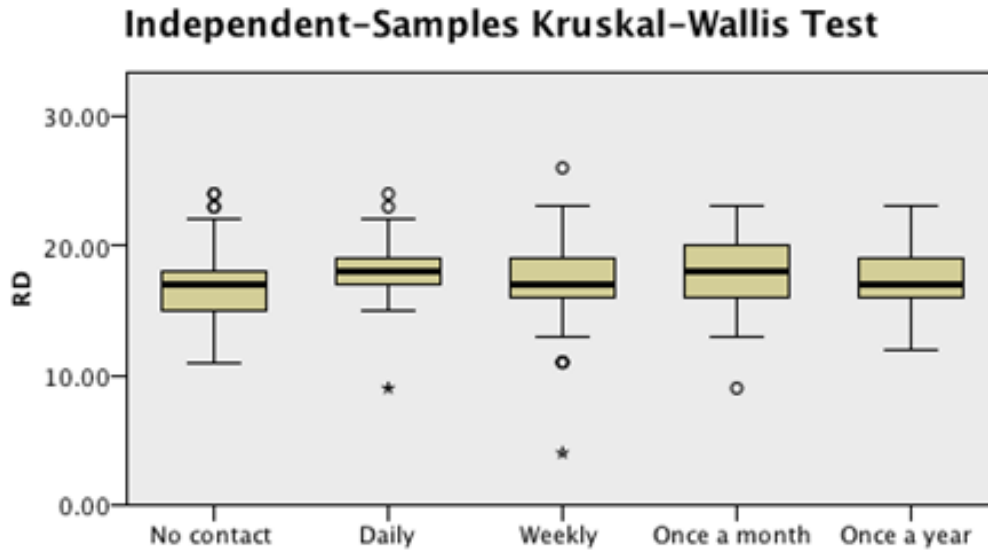


Figure 21: Frequency of prior contact with Resource Distribution

There was a statistically significant ($P < 0.01$) difference in the distribution of RD score with type of contact.

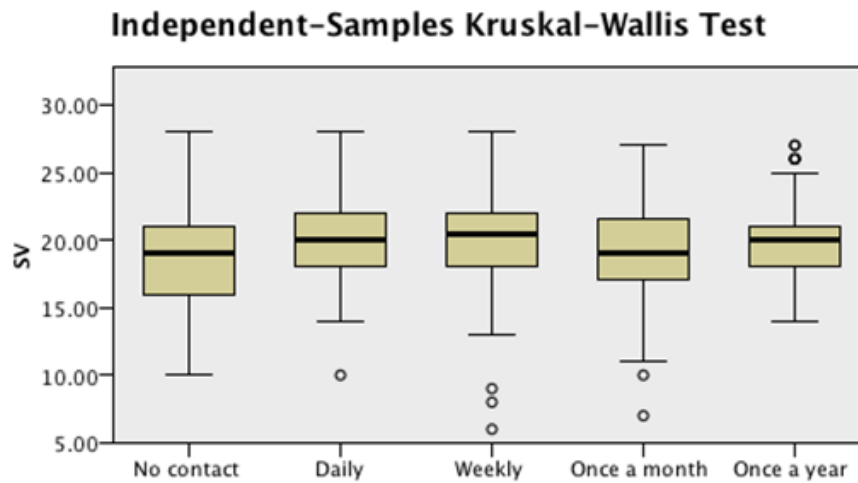


Figure 22: Frequency of prior contact with Social Value

There was a statistically significant ($P < 0.01$) difference in the distribution of SV score with type of contact.

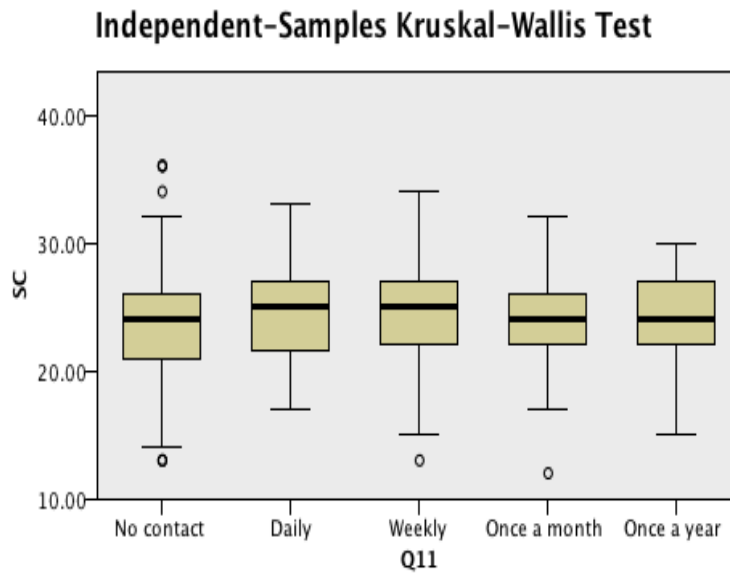


Figure 23: Frequency of prior contact with Social Compassion

There was a statistically significant ($P < 0.01$) difference in the distribution of SC score with type of contact

Summary

The above figures and tables indicate that an Arab HSS shows more competence when there is contact with PWDS on a daily or weekly basis. However, social compassion increases in an Arab HSS when there is daily and weekly contact with a PWD. The students value PWDs more when the contact with them are on a weekly or yearly basis and think they are resourceful and have potential when there is no contact or there is daily contact.

4.1.2.3. Analysis of questions related to service delivery from the survey

When the items of service delivery were examined, only Q. 20 was found to be statistically significant. This question explored the benefits of technology for Arab HSS to handle PWDs during clinical placements. Results indicated a median score of 79.00 for students who mentioned that technology did not help them and 81.00 who mentioned that it had helped

them to handle PWDs. This difference, although minimal between the groups, was shown to be statistically significant. All the other factors of service delivery proved to be statistically insignificant in this study. Regarding their comfort level of working with patients with disabilities during clinical placements, Arab HSS who mentioned not being comfortable scored 81.50, while Arab HSS who mentioned they were comfortable scored 80. To the question of involving their patients with disabilities while making health related decisions for them and regarding the preparation from the curriculum to handle PWDs, there was equal distribution between both answers. (80). Detailed scores are given in the tables below.

Table 4.13: Analysis of questions related to service delivery from the open ended questions of the survey

	Group	Scores			P Value
		Median	Minimum	Maximum	
Are you comfortable working with patients with disabilities	No	81.5	52.0	96.0	NS
	Yes	80.0	48.0	112.0	
Do you involve your patients with disabilities during decisions making	No	80.0	52.0	112.0	NS
	Yes	80.0	48.0	107.0	
Does the curriculum prepare you to handle people with disabilities	No	80.0	52.0	107.0	NS
	Yes	80.0	48.0	112.0	
	No	79.0	52.0	112.0	<0.05

Has technology helped you to handle people with disabilities	Yes	81.0	48.0	107.0	
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Summary

Technology was found to be a statistically significant influence on the competence of the Arab HSS in this study. The other variables that were found to be statistically significant were gender, mother’s education and institution of the student (See tables 4.10 page 190 and table 4.11, page 191).

4.2. QUALITATIVE ANALYSIS

Data was collected from the interviews of clinical tutors and PWDs which were transcribed and coded with the help of the NVivo software. Thematic analysis was also conducted by the researcher to generate the findings which are mentioned below.

4.2.1. From Interviews

Interviews were conducted on 18 clinical tutors to explore the competence and service delivery of Arab HSS based on the academic training they (HSS) had received from their institutions and 8 PWDs who were all working adults with physical disabilities to explore their experiences with health providers during their hospital visits. Findings from the interviews using thematic analysis along with the support of the NVivo software are mentioned below.

4.2.1.1 Results from the transcripts of clinical tutors

Analysis of the transcripts of the interviews conducted on clinical tutors from the institutions of the sample yielded four over-arching themes, which provided a description of the competence and service delivery of undergraduate Arab HSS towards people with observable disabilities during clinical placements in the UAE (see Fig 24 page 198). Each of the themes is briefly described and supported with illustrations from the NVivo software and with excerpts from transcripts taken verbatim from the transcript as supportive evidence, with the source of each quote from the participants indicated as P1, P2 along with the percentages of responses. The details are mentioned in appendix 15.

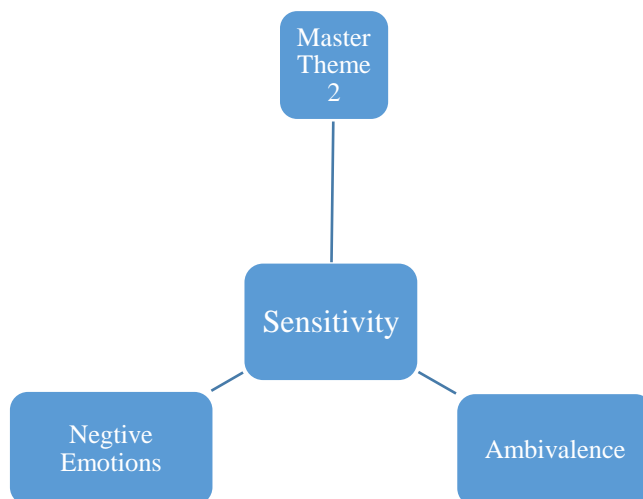
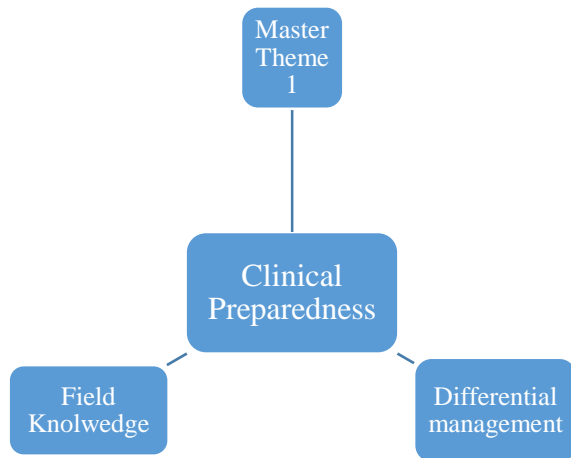
The themes obtained as a result of extensive thematic analysis following the Braun and Clark (2006) recommendations have been discussed in Chapter 3 (Table 3.5, page 143) as well as through the NVivo programme for the transcripts of the clinical tutors are:

Clinical preparedness that includes the knowledge that a student gains during the course of study, either through theory or through practice (field knowledge) and the ability to use differential methods and skills for diverse sets of people during clinical placements (differential management).

Technology that involves the use of gadgets/machines/equipment, either for the purpose of communication or for procedures during rehabilitation of PWDs in clinical settings.

Sensitivity which considers the feelings of the Arab HSS towards PWDs that includes negative emotions as well.

Assessment that could be either formative (ongoing informal feedback to improve the student's learning) or summative (formal measures that are adopted that are usually standardised against a benchmark at the end of a unit or programme).



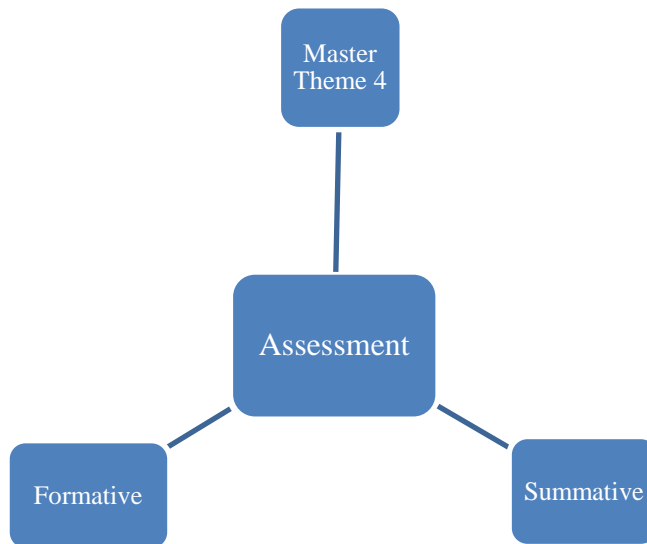
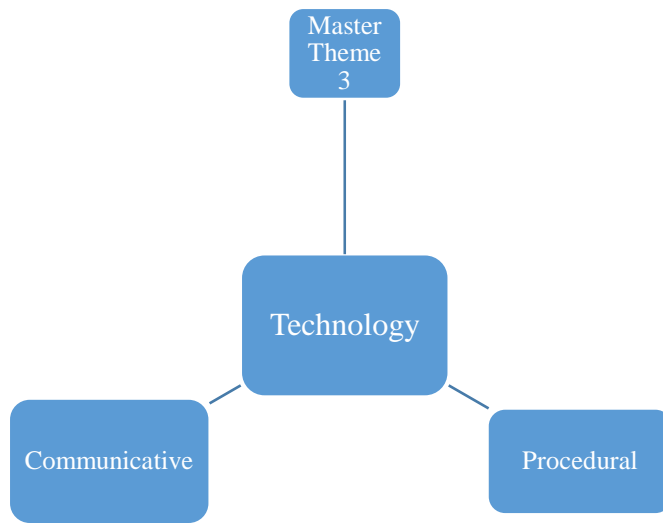


Figure 24: Master and sub themes from the transcripts of clinical tutors

A majority of the clinical tutors mentioned that their students had been exposed to PWDs during clinical placements. However, a few did admit that there had been no exposure. Overall, all the participants mentioned in their interviews that their students were prepared

for clinical placements that included people with disabilities. However, a few of them did admit that the existing content being taught was not sufficient to prepare them to handle PWDs. Some of them stated that the content was too theoretical and that they were open to the inclusion of practical experiences in the form of volunteers with disabilities who would be willing to come in for role play, have PWDs deliver a few sessions which could be extracurricular and include more topics on disability within the public health module. They also mentioned more exposure to PWDs to prepare them professionally to handle a diverse set of disabilities during clinical placements. A detailed description of the responses of the clinical tutors are given in appendix 16.

4.2.1.1.1 Academic/clinical preparedness for clinical placements

Detailed analysis of the transcripts using the NVivo programme is mentioned in appendix 15 with the participant who responded to the themes in column 1, the percentage of the reference of the theme in column 2 and the context in which the reference was made in column 3 (as mentioned by the interviewee). Seven out of eighteen clinical tutors believed that the students, although were being prepared generally, were not being prepared particularly to handle PWDs in the clinical placements (P3, P8, P11, P14, P15, P17 & P18). However, eight participants believed they were preparing students adequately (P1, P2, P5, P6, P7, P9, P12 & P16) and three had mixed thoughts regarding the preparation (P4, P10 & P13). However, some of them mentioned the importance of clinical exposure which would enhance their theoretical knowledge (P3, P4, P6 & P9). (See appendix 15)

The two sub themes deduced from the transcripts of the clinical tutors on theme 1 Clinical preparedness (See figure 24, page 198) were differential management and field knowledge.

Differential Management: Responding to the query of the researcher regarding teaching

Arab HSS differential management skills in handling PWDs during clinical placements, five participants mentioned that there were modules that taught students differential skills to handle PWDs (P1, P3, P4, P5 & P6). However, ten participants mentioned that there was no differential skills that were taught but rather a general skill set that was embedded within the curriculum that could be used with PWDs as well (P8, P9, P10, P11, P12, P13, P14, P15, P17 & P18). P1, P5, P6, P13 & P14 mentioned teaching them specific skills that help them deal with particular patients during their field (clinical) placements. This knowledge was field centric knowledge.

4.2.1.1.2 Analysis of sensitivity in Arab HSS towards PWDs

The two sub themes that emerged from the second master theme of Sensitivity was negative emotions and ambivalence. Participants reported sensitivity in their students when handling people with disabilities in the form of emotions ranging between pity for them (P16) to being scared (P2, P8, P17, P18) and disgusted (P4, P7) leading to avoidance (P8 and P17). Some respondents mentioned that they had not noticed any sensitivity in their students (P1, P5, P9, P12 & P15). However, they did mention that people with physical disabilities and children with disabilities evoked more sensitivity in their students than any other disabilities (P3, P4, P6 & P10). Tutors reported that their students had been taught to be kind and caring (P11 & P15), however, generalisations could not be made as sensitivity was a personal characteristic (P6, P10 & P16). (See appendix 15)

4.2.1.1.3 Analysis of technology and competence of Arab HSS towards PWDs

Technology which was another master theme from the transcripts of clinical tutors (See figure 24, page 199) was a variable that was found to be statistically significant in this study (see table 4.13 page 195). A word tree generated by the NVivo software, indicated

that Arab HSS rely to a major extent on technology for their educational needs and clinical tutors have mixed opinions.

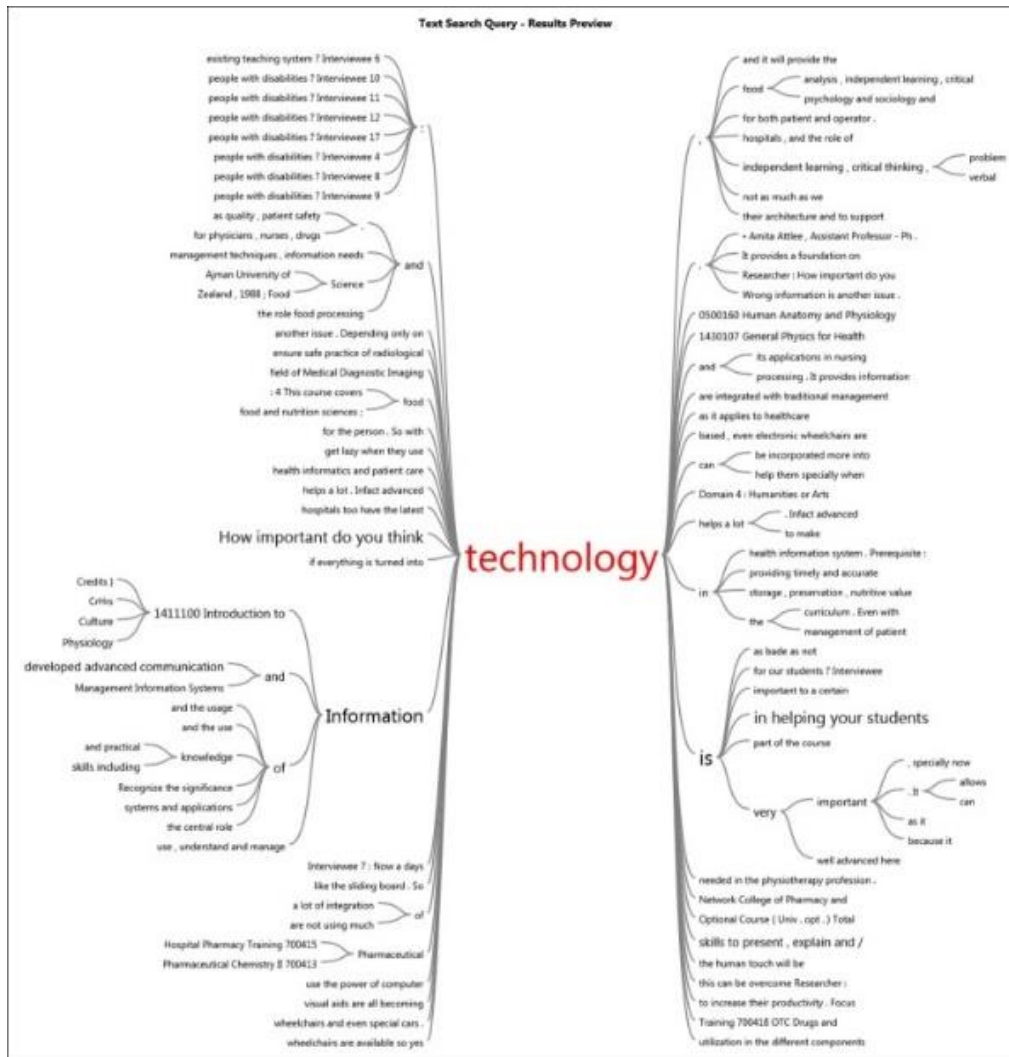


Figure 26: Word tree of the term technology from the transcripts of clinical tutors from NVivo

Technology was mentioned in contexts of being used as a teaching tool by most of the tutors (P1, P3, P4, P14) in the form of videos and content being uploaded and discussed on student portal forums like Moodle and Blackboard (P3, P13, P14). Ease of work and more comfort for the PWD was mentioned (P2, P7, P9, P10, P11 and P14). It was also mentioned as a

communicative device with professionals around the world (P14, P17, P18). However, overdependence on technology making the field of rehabilitation less human centric and empathetic was mentioned as a concern by (P1,P8). Keeping pace with the rapid advancement of technology in the UAE was mentioned as a challenge by P5 and P6 in their respective institutions which were not as advanced as it should have been. (See appendix 15).

4.2.1.1.4 Analysis of assessments of Arab HSS with regard to clinical placements by clinical tutors

The master theme 4 (See Fig 24 page, 199) on assessment had two sub themes on formative and summative assessments. Participants mentioned that students had summative assessments that were standardised, which was the main assessment of the service delivery during clinical placements. The summative assessments were in the form of clinical workbooks or portfolios, (P1, P2, P3, P5, P10, P13, P17, P18), practical pre-clinical examinations conducted before the students went on clinical placements (P1, P16). The formative assessments were done by the preceptor (a person who was assigned from the hospitals who would be their clinical tutor during the placement) in the form of observational assessments (P2, P6, P7, P8, P11, P12, P14 & P15). Reflective writings of the Arab HSS in clinical workbooks (P3, P10 & P13) and post clinical conference presentation sessions at the end of the day (P4, P6, P7, P9 & P13) were also part of the formative assessment (See appendix 15).

Clinical workbooks

Clinical workbooks included documentation of and self-reflective accounts regarding specific areas of competence of a student trainee (Carraccio & Englander, 2004) that demonstrated their progress and technical capacity. The clinical workbooks that the

researcher was given access to by the clinical tutors included learning materials such as notes, procedure logs and self - assessments. They also included care plans and reflective essays. This enabled for the various domains of competence such as communication and sensitivity which included the use of communication strategies to meet patients' needs and their participation in shared decision making to be examined. Reflective writings of the student regarding their clinical experiences which included their strengths, weaknesses and new knowledge gained was also explored. Self-assessments and assessments by members of the clinical team provided insight into the student's work habits, capacity for teamwork, and interpersonal sensitivity (Dannefer, Henson et al., 2005). The clinical workbooks allowed the student to be assessed in an integrated, coherent manner using multiple methods such as reflection, clinical tutor assessment, proctor based guidance and peer evaluation that provided for frequent and constructive feedback (Epstein, 2007) that allowed for broader insights into competence.

The responses of the clinical tutors were supported by the written excerpts of the Arab HSS. In the section 'Care Plan', a detailed account of the student's plan of action for each of the patients was documented. As observation was not conducted in this study due to ethical reasons, the written account of the student was the next best option for the researcher to validate the responses of the clinical tutors and Arab HSS. The researcher particularly looked for competencies that was the focus of this study such as communication.

4.2.1.1.5 Analysis of suggestions from clinical tutors to improve the Public Health module

All eighteen participants admitted that the teaching material was too theoretical and were open to the idea of including more practical sessions within the public health module.

Suggestions were made to have internship programmes in disability inclusive units like the occupational therapy centres where the chances of seeing PWDs would be higher (P 5, P 12 & P13). They also mentioned learning alternate communication skills that included sign language and Braille (P 8) and more exposure to PWDs during clinical placement (P2, P10, P11, P12, P14 & P18). There was mention of including more content on disabilities into the existing public health module (P1, P6, P7, P15, P17 & P18). From the word tree, time constraint had been linked to modules which was mentioned by P6, P16 & P17 as they were wary of the time constraints and a heavy existing curriculum. The word tree also connected communication as being useful to be added to the module, exclusive chapters on disability being included along with new innovative ideas to equip the modern student to handle a diverse population of patients, PWDs included.

Table 4.31: Results of suggestions of clinical tutors to improve the public health module as coded by NVivo in percentages with references

Interviewee	Coded reference percentage	Context
1	3.52	Reference 1: Knowledge is always good. It won't be a bad idea to incorporate more theory too regarding disabilities in the module.
2	15.94	Reference 1: We need to do more awareness training. We are doing that but sometimes it should be the initiative of the students to work with people with

		<p>disabilities. Cooperation between the college and the clinical side should also be in such a way that there are more chances to work with all kinds of patients, including people with disabilities. Because after graduation they will have to deal with people with disabilities- this should be understood by the clinical supervisors of the hospital. Preceptor workshops explaining the needs of our students, goals of the course can be explained and a plan of work can be planned so that the distance can be made shorter between them and us.</p>
3	7.20	<p>Reference 1: I feel when they are doing musculoskeletal disorders, they should go into 2-3 weeks of clinical practice so that they can make use of what they have studied. Now it is just theory in the beginning and clinical placements happen much later, if it is embedded it would be much better because some things are learnt better practically.</p>
5	12.20	<p>Reference 1: Postings in areas like occupational therapy departments where they will see more patients with disabilities will expose them to the use of assistive devices used for ambulation and communication. Even if they are observers there it</p>

		will create an impact on the students and will make them realize they need to improve their skills and personalize their services for different patients.
6	16.21	<p>Reference 1: We should be adding new innovations to the module, new types of devices, communication, assessments. It needs to be updated constantly.</p> <p>Reference 2: Technology can be incorporated more into the curriculum and maybe a separate module that focuses on disability can also be considered. I have taught in many places- India, Saudi but I have never seen a module exclusively for teaching students to prepare them to handle people with disabilities. Maybe we could include an exclusive chapter instead of a module because of the time constraints. Since preparation to handle people with disabilities is already embedded in the curriculum, just a chapter maybe sufficient.</p>
7	6.51	<p>Reference 1: Maybe prepare them better for the kind of cases they may see in hospitals. Desensitization is a good idea by showing them videos and pictures, we don't do much of that now. We teach them how to take care of patients in a general sense but we don't focus on specific disabilities.</p>

8	8.48	Reference 1 :We have to add alternative communication methods like sign language and Braille and also expose the students to more patients with hearing and visual disabilities during clinical
9	4.56	Reference 1: There has to be separate classes on how to take care of people with disabilities.
10	8.03	Reference 1: There has to be proper orientation to the students regarding disabilities. They also need to see patients who have disabilities during training and in hospital settings.
11	6.05	Reference 1: We have to include more patients with disabilities during clinical. Now they are only dealing with mostly normal cases.
12	16.31	Reference 1: Actually I feel they need more exposure to patients with disabilities. When they see more patients that's when real training happens. Reference 2: We have to include more patients with disabilities during clinical. And also teach them about specific disabilities in detail. Maybe look for exclusive facilities where they can see more patients.
13	17.57	Reference 1: We are planning to add internships after they finish their programme. -6 months which will hopefully give them more clinical exposure. I think

		<p>if we have more tutors working it would be possible to give them one on one training, more clinical placements. In 2004 we had 8 students now in 2017 we have 65-70 students. It is an exponential growth.</p> <p>Reference 2: It would help in a general degree programme. In our programme we cover it in many chapters- its embedded and integrated, for example within the respiratory and cardio vascular disabilities. So if you tell me to separate it, I cant. Physiotherapy is very specialty oriented. In that placement we want them to focus on specific problems not a general topic. Maybe it would be good in the Introduction to health sciences module which is offered in the general programme so that all health science students can benefit not just the physiotherapy students.</p>
14	12.33	<p>Reference 1: As the number of people with disabilities increases our students need to understand different types of communication methods to handle people with different disabilities. They also need to be more sensitive to their needs. This will come only from exposure to them.</p> <p>Reference 2: Of course yes but maybe if it is introduced in the common year all health science</p>

		students can benefit not just the pharmacy students.
15	1.71	Reference 1: Yes maybe a chapter or module on disabilities.
16	21.51	Reference 1: We are planning to add internships after they finish their program- 6 months which will hopefully give them more clinical exposure. Right now because of time constraints we are not able to give them more practical sessions which they need. Reference 2: We have topics on disability in all our modules. It is integrated and embedded in the Physiotherapy programme.
17	13.56	Reference 1: We have to include more topics on disabilities, give them more training on how to handle patients with disabilities during clinical. And also teach them about specific disabilities in detail. But already their curriculum is so packed with information and there is no time.
18	6.63	Reference 1: Including more topics on disabilities can be a start. And more clinical exposure so that they can understand them better.

4.2.1.2 Analysis of open ended questions from the survey of undergraduate Arab HSS

There were 4 open ended questions pertaining to the service delivery of Arab HSS towards PWDs in the self-perceived competence survey that are reported in the following sections that examined the Arab HSS' clinical preparation to handle PWDs prior to their placements, shared decision making involving PWDs, the importance of technology in handling PWDs and their comfort level at interacting and working with patients with disabilities during their clinical placements.

4.2.1.2.1 With regard to clinical preparation to handle PWDs prior to clinical placements

Open ended responses for the question in the survey that was completed by undergraduate Arab HSS 'Has the curriculum prepared you enough to handle patients with disabilities during your clinical placements' elicited responses that indicated that although the Arab HSS were prepared to handle PWDs generally during clinical placements, there were specific concerns such as inadequate disability content in the curriculum, insufficient exposure to PWDs and minimal skill development particularly in the area of communication as is obvious in the below mentioned statements by Arab HSS. There was an eagerness and willingness among the students to learn new skills and a few of the students suggested visits to disability centres, dedicated clinical skill sessions, learning sign language, voluntary visits to the rehabilitation centres and community service with PWDs as suggestions. These statements by the Arab HSS are stated below:

'Our curriculum focuses on the theory part more than others which is frustrating. More focus should be shown towards their interaction'

I would like to learn more about how to deal with patients with disabilities -more communication skills and interactions with them should be included in our curriculum'

We should be taught sign language

*There should be more visits to disability centres and school of special needs children to clinics of the genetic disorder, clinics that's deals with disabilities to be more exposed
More visits and clinical rotations should be there in rehabilitation centres*

During bedside teaching, more explanation on how therapy for disabled people would differ from normal with rationale to interact more with them should be given

A dedicated clinical skill session/sessions would make dealing with disabilities more efficient and comfortable for both the patient and the Arab HSS

Add rehabilitation clinical training in curriculum such as autism cases to know how to communicate with them by applying speech therapy and behaviour therapy

We have only been taught to handle ideal situation, nothing out of the ordinary which is not proper

A special needs coping and handling instructions depending on each disability should be taught before we go on placement.

We don't know how to handle people who are deaf, for this sign language will be good for us to learn. We need more exposure, visit to places where there are lectures and seminars by specialised people that include speeches by disabled people

Voluntary training in any centre of special needs people would be good

We require compulsory community service with disabled patients

More chapters should be added to curriculum how to assess and provide help or care to people with disabilities

We need to know how to deal with patient and disability, what rules and regulations must be done with patients who are disabled

4.2.1.2.2 With regard to shared decision making

Responses to the question ‘Do you involve your patients with disabilities when you make health related decisions for them, ‘elicited a majority of responses from the Arab HSS that were right based and inclusive focusing on empowering the PWD. However, some of these responses were exclusively for people with physical disabilities, as seen in the responses below.

It is their right as a human being and as their mental state allows them to think right and they should be involved in decision making so yes I do

Yes as they are a part of the society, they must be involved

They have brain, they can think like us so I always involve them

They ought to know, it is their right

Yes because they may have an opinion that will help them and me to help other disabled people

Even if he has disabilities we need to involve the patient in decisions and even in the care plan

Patient should have the control even if they have disabilities, it is their life

Because they have the right to make their own decisions. And also a nurse should treat all my patient the same

Of course they have to be involved in their care plan its their right as patient and also being disabled doesn't mean that I get to tell them what do or that they are less of a person, if anything they should be granted more freedom to be involved and make choices because they need to feel the sense of responsibility and control

I will ask for their consent when I make the decision. I will deal with them as they are just like the non-disabled patients

They are human. They have the right to decide what they want as the normal person, I don't have the right to make decision rather than him/her

It is important to make them feel in control and not helpless, especially if the disability doesn't involve the brain and cognitive ability

Every patient should be involved except if the disability is mental

I will treat patient with disabilities as normal patient if they any mentally aware

They are humans and have the right to be involved in any treatment plan for them. They are capable of making their own decisions

I think autonomy should be granted to all people. Exceptions can be made when the person has a certain mental issue deeming them unable to take thoughtful decisions

Every patient not only who is disabled has the right to be part of decision making process.

The patient should know his case and the possible solutions to select among it the most suitable one for him to make them comfortable

They understand the situation more than we do, they have to be involved in the treatment plan

They have to know what is going on because it is related to their health

It is their life, they are independent. They can have their own decisions

I try to make them feel satisfied about making life and medical decisions

They are human beings and they have right to decide and be involved in their treatment plan

Every patient whether healthy or disabled as the right to be involved in the therapy he or she receiving

It is their basic right as humans to be involved in decision making regarding their own problems because they have more control about their own life and they are able to choose the decision that suits them most

Care should be tailored to each and every patient whether disabled or not including them in the decisions

They have the right to choose the mode of treatment for themselves. Generally when a patient chose their mode of treatment the outcome is better

4.2.1.2.3 With regard to technology

Most of Arab HSS responded to the question in the survey ‘Has technology helped you in handling people with disabilities’ very positively because they mentioned that, due to the limited content and exposure to disability during their classroom and clinical learning, the internet had been an advantage. Knowledge regarding disabilities, treatment procedures and awareness regarding the abilities of PWDs through the presence of social media that promoted successful stories of PWDs, had helped Arab HSS in their personal clinical experiences. They also mentioned the ease of working because of modern gadgets and the ease on PWDs because of modern equipment.

I learned how to deal with PWDs regarding what I should do and how to be with them and motivate them all of these things I learned from the internet.

We use lifting machine to lift up the patient, it makes it easier on us

If I have doubt about anything related to disabilities, I can search on the internet

Social media platforms have a high role in putting light on people with disabilities in contributing to the society just like any other person. This showed me that most of them are normal people and should be treated as such

There are a lot of educational programs online that help in dealing with PWDs they discuss the needs of people with disabilities

Electronic wheel chairs to move, comfortable protective beds, screens etc all help PWDs. It makes life easier for them

Not that much technology are made for PWDs

More technology is available now a days is helping us with patients as in their comfort

New technology that the hospital is providing makes it easy for everyone to learn

Social media has shown that people with disabilities are just normal people

Technology has given me lot of information, which has made me understand what PWDs go through, how to deal with disabilities and know how to interact with them

Technology makes it easy to handle PWDs than manual work

A quick research on google will help to have idea about condition and some treatment

New gadgets make it easy for them to do exercise during physiotherapy sessions

I can google whatever want to know about disabilities so even if they don't teach in college its ok

Technology helps PWDs to take care of themselves better and make work easy and increase patient confidence and satisfaction

Availability of the assistive devices that are modified and simpler to teach the patient or treat them using them

It helps improve communication skill of the patient

4.2.1.2.4 With regard to comfort of Arab HSS to work with patients with disabilities

A majority of Arab HSS stated that they were comfortable handling PWDs during clinical placements (see Table 4.13, page 195). However the few students who mentioned not being comfortable with PWDs put the onus of the discomfort on themselves.

I am always concerned about how I would make them feel.

If I say unintentionally something, that would hurt them

I would be biased to put in less effort with a disabled patient

Because I don't have enough experience with them. I feel scared sometimes

Because they need special observation and treatment, I am not trained enough

4.2.1.3 Analysis of results from the transcripts of people with disabilities

Eighteen PWDs were interviewed regarding their experiences with health care personnel in clinical settings. Questions revolved around how satisfied PWDs are about the way Arab HSS handle them during clinic visits, if they are involved in the decision making for themselves, about how knowledgeable they are about disabilities and handling PWDs and whether they have been giving adequate training prior to their clinical placements to handle PWDs. The researcher did a thematic analysis based on Braun and Clark's (2006) suggestions on the transcripts as the NVivo software was not able to identify clear themes. After detailed analysis, the major theme that emerged from all the transcripts was professionalism under which four sub themes were identified-Training, Knowledge, Communication and Sensitivity relating to Arab HSS and their service delivery.

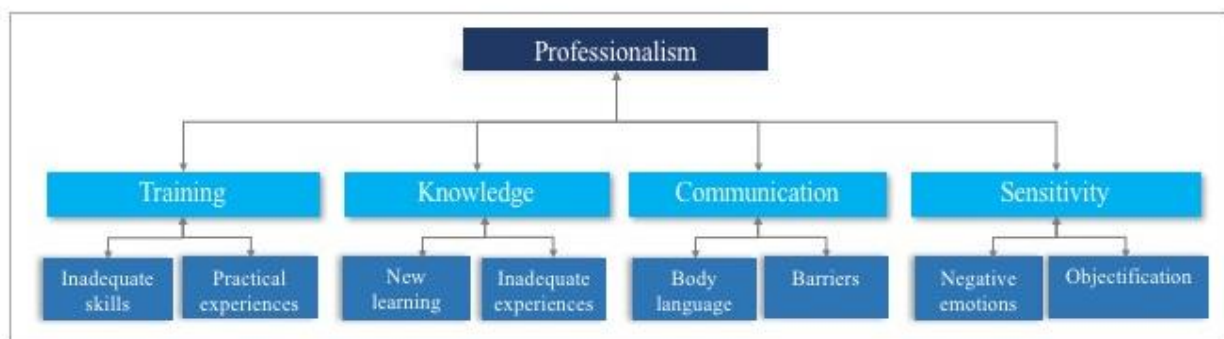


Figure 26: Major themes and sub themes from the transcripts of PWDs

Professionalism, in context to the transcripts, essentially indicated the training that the Arab HSS had received in college, field knowledge regarding disabilities and differential services provided by Arab HSS to PWDs. Communication involved verbal, non-verbal as well as alternate communication such as Sign language, Braille and so on. Sensitivity involved the emotions that Arab HSS had towards PWDs including objectification which included inhumane emotions of not being treated like a human being by Arab HSS which had been mentioned by four out of eight PWDs in their interviews.

4.2.1.3.1. Analysis of responses of PWDs regarding knowledge, skills and training of Arab HSS

Regarding the knowledge, skills and training of the health providers received from their institutions, seven out of eight PWDs were dissatisfied, hurt and frustrated. They mentioned instances of being misdiagnosed, mishandled and even ignored and passed around due to lack of knowledge of the providers along with discomfort in providing services for them.

PWD 1: I pointed to my stomach and she did not wait to elaborate. She prescribed medicines for pain but did not ask me any other questions because she wanted to finish the interaction with me quickly. It was actually a case of food poisoning but she gave me medicine for pain not for my problem. A wrong diagnosis means wrong treatment

PWD 3: They look all over the place but not at you, there is a sense of discomfort, a sense of I don't know how to deal with you kind of situation

PWD 4: They feel very uncomfortable when they see me. And because they are not comfortable with me, they try and pass me to another person as though to avoid me

PWD 6: The moment they realize I cannot see they become confused and either ask me too many questions or try to finish the meeting quickly. When I have to be examined they never prepare me before the check. Even if it is to take my BP, they start the procedure without telling me. When someone touches me without telling me it makes me startle. I would prefer if they tell me before they touch me. They don't know how to handle people like us

PWD 7: They have zero education regarding how to handle people with disabilities. They don't know how to transfer or carry me (she is on a wheelchair)

4.2.1.3.2 Analysis of the responses of PWDs regarding the communication skills of Arab HSS

Communication was another point that was focused on in all the interviews. Not only did they express being ignored or overtly preferred over other patients (PWD 8) but some were sensitive about the nonverbal communication of the health provider towards them particularly when they are objectified (PWD 3 and PWD 4).

PWD 1: They sometimes misunderstand my problem and then treat me according to what they have understood which could be the wrong treatment

PWD 7: There is always a barrier between them and us. I feel it from their body language

PWD 2: Communication is the key to everything. If you are going to treat people with hearing disabilities you should learn their language. Otherwise it becomes very awkward for the professional as well as the patient. After sometime they get frustrated when they cannot communicate with me

PWD 4: I feel they just don't want to deal with people like us. It seems like they just want to finish off the interaction with me so that they can be in their area of comfort. They usually do not look at me when they speak. They look at my wheelchair, they talk to my wheelchair as though I am not there. I would like be treated like a human being not an object.

PWD 5: They are not able to help because they do not know how to communicate with us so although they want to help they can't

All the participants mentioned that there should be more sensitivity shown to them and that the Arab HSS should be taught to hide their negative emotions (PWDS 4) like frustration (PWD 2), anger (PWD5), anxiety (PWD 6), pity (PWD 1), helplessness (PWD 5), fear (PWD3) and impatience (PWD 7). These negative emotions they believed were responsible for being ignored, making them behave as though they did not exist (PWD 4). They expressed sentiments of wanting to be treated with understanding (PWD6) as human beings (PWD 4, PWD3), not just an object (PWD 4) or a case (PWD 3). They also expressed that they did not want only their wheelchairs and disability to be seen (PWD 3, PWD 4) rather to be seen as human beings.

PWD 3: They either treat you with too much sympathy or not enough. Sometimes they are very tough because they think you are exploiting the disability to get something like charity.

4.2.1.3.3 Analysis of responses to shared decision making in health related issues

Regarding being involved in their health related decision making, six out of eight participants mentioned that they were not included in this process and that the provider would instruct them with their medication process and they would follow the instructions. They mentioned

that not only were they not involved but were not spoken to if a bystander was with them because they were underestimated to understand the seriousness of the situation.

The first instance when they start talking to me, they are talking as though you don't understand what they are saying as though I am deaf or learning impaired, they talk slowly and break it up for me (PWD 3). However, PWD 6 mentioned that they always involved her in decision making and asked for her suggestions regarding the treatment plan. PWD 8 too mentioned being involved in the decision making process.

They always ask me my opinion and I tell them openly if I like or do not like something. They are very open to suggestions and sometimes I feel I am in control when I am with them. They give me a lot respect and freedom to express myself (PWD 8).

Participants mentioned that when they sensed the discomfort in the provider they would try and help them by suggesting their ideas regarding the treatment plan.

In fact I give them ideas. I study the situation and give them options of what to do because they sometimes don't know because they are only used to 'normal people' (PWD 7).

They are quite clueless because of lack of communication and then I give them suggestions like writing on a piece of paper or texting on my phone to make them comfortable with me (PWD 2)

Regarding suggestions about what more could be added to the curriculum of the Arab HSS to improve the services towards them most of the participants mentioned increased exposure to disabilities, (PWD 4) more than just theoretical knowledge through simulation (PWD 7) with hands on experience and learning to communicate using alternate methods like Sign language and Augmented communication using assistive technology.

A short workshop on basic sign language will be good. They learn so many courses, this can be very helpful for us. But they need to learn for all disabilities not just to handle us (PWD 1)

A group of disabled professionals should take workshops for them (PWD 7)

There should be phases to the curriculum. First introduce the fact that there are people with disabilities in the community and the different types of disabilities. Next they need to be taught how to treat them and how not to treat them and here it needs to be emphasized that they need to see you as a person not just a case. Next phase could be the medical part of how to treat people with disabilities. Another important idea is to bring people with disabilities to talk to them. The talks should not be done by experts about people with disabilities because then it becomes like a curriculum (PWD 3)

I am not saying all professionals should learn sign language but if you are going to treat people with hearing disabilities you should learn their language (PWD 2)

They need to first understand the disabilities differently because each disability is different. For me, it would be to give them the knowledge that people who can't see are more sensitive to touch- it's a simple knowledge but if they know that they would be more sensitive before they touch us suddenly. Also they need to learn to be patient (PWD 6)

Sign language can be included as a workshop along with their learning of theory in communication. Also if they are exposed to more people with disabilities they will not stare as much as they do now (PWD 5)

Some participants mentioned on the job training rather than learning just in college (PWD 7 & PWD 8) as they thought Arab HSS would have more exposure to disabilities when they joined work rather than in college where they had limited time to be on clinical placements.

Participants mentioned wanting to be treated like everyone else without being given preferential treatment (PWD1) as they had equal rights (PWD 1 and PWD 3) and to focus on treatment for the health problem that they currently presented to the provider with rather than trying to cure them of their disability (PWD 3) which they had come to accept but which the health provider was not able to come to terms with.

PWD 3: I would like to be treated like a human being who is going for a medical condition and my medical condition should be addressed. If I ask for further assistance in other medical fields then they should provide me with it not because I am in a wheel chair, they assume they have to cure me. If I don't come to you and ask how to walk again you shouldn't tell me how to walk again because that's not why I am there.

As human beings I think whenever we see someone who is hurt you want them to feel better and when you see someone on a wheel chair or with a disability you want to cure them because then they become like you, they become 'normal'. But if they are different from you, it makes them feel pity for them, sympathy and there is a sense of fear that one day you will be like them.

4.3 Analysis of the documents of the institutions

Documents such as the overview of the public health modules and clinical workbooks of the Arab HSS were explored to examine the responses obtained from the survey and the interviews. Details of the exploration are given below.

4.3.1 Analysis of the modules pertaining to issues of public health

A detailed review of the public health modules of the four institutions revealed only broad topics of communication, patient safety, health and hygiene, psychosocial care, patient care & management and community practice under which topics of disability were briefly mentioned. There were no detailed descriptions or sections on disability. The modules explored by the researcher indicated that they were designed to develop the fundamental knowledge and skills of Arab HSS relevant to health care within the context of the community. They were integrated with basic sciences and clinical sciences to enable the students to apply their skills and knowledge to health care in order to become competent professionals. The philosophy of the public health modules were based on shared values of excellence, community based diversity, integrity, creativity, social justice promoting community service, scholastic inquiry and multidisciplinary learning which is lifelong. However, despite all these values being incorporated, there was no exclusive content on disability issues and their management. The researcher also looked at the study plans of the institutions (see appendix 17, 18, 19 & 20)

The number of years to complete an undergraduate health science course in Pharmacy, Physiotherapy and Radiology in all the four institutions is 5 years and Paramedics and Nursing is 4 years, which is inclusive of a common year where subjects like Physics, Chemistry, Biology, Math, Psychology, English and Islamic Studies have to be studied as a foundation year before entering the Health Science major. Medicine is a 5 year course followed by a year of internship based in a hospital under the supervision of clinical supervisors.

4.3.2 Analysis of suggestions from clinical tutors to improve the Public Health module

All eighteen participants admitted that the teaching material was too theoretical and were open to the idea of including more practical sessions within the public health module. Suggestions were made to have internship programmes in disability inclusive units like the occupational therapy centres where the chances of seeing PWDs would be higher (P 5, P 12 & P13). They also mentioned learning alternate communication skills that included sign language and Braille (P 8) and more exposure to PWDs during clinical placement (P2, P10, P11, P12, P14 & P18). There was mention of including more content on disabilities into the existing public health module (P1, P6, P7, P15, P17 & P18). Time constraint had been linked to modules which was mentioned by P6, P16 & P17 as they were wary of the restricted time in a semester for teaching and a heavy existing curriculum. Communication was suggested by the clinical tutors to be added to the module, exclusive chapters on disability to be included along with new innovative ideas to equip the modern student to handle a diverse population of patients, PWDs included. (See appendix 16).

From the interviews of the clinical tutors, it was indicated that topics on disability had not been separated, but rather had been embedded within the entire curriculum in an integrated manner. In rehabilitative majors like nursing , physiotherapy and radiology there were more than two courses in which disability had been mentioned. However, in a non rehabilitative major like medicine, there was no content on disability even in an integrated manner. From the interviews with clinical tutors of medicine, it was evident that students adapted to the situation when they had to treat a PWD during clinical placements and the learning was on the job rather than from the institution that they were academically enrolled in.

4.4 Conclusion

Findings that have been reported in this chapter are from the survey (quantitative) as well as the interviews with clinical tutors and PWDs (qualitative). Important documents that could support this study have also been explored to analyse the competence and service delivery of Arab HSS towards PWDs during their clinical placements. A detailed discussion of these findings and analyses have been included in Chapter 5. A total of 590 participants completed the competence scale-a researcher modified self-perceived competence survey that attempted to identify the competence and service delivery of Arab HSS towards PWDs during clinical placements in the UAE. In this study, a majority of students were female and Muslim. The results indicated a moderate score of competence among the students (80.00) in handling PWDs during the clinical placement. Factors that were found to be statistically significant in this study were gender, mother's education, institution of the student, prior contact with PWDs and technology. Girls had a higher competence score than boys in this study. Students whose mother's educational qualification was higher (Ph.D) had the highest scores on competence. Students from institution #1 scored the highest in competence and those who had prior contact with PWDs on a daily and weekly basis had higher scores of competence. Technology was a statistically significant influence that helped students to handle PWDs more effectively. Overall the Arab HSS of this study had an inclusive mindset that was indicative of integrating the PWD into society. They responded to the survey with a right based approach answering the questions of inclusion and decision making as a basic right of the PWD. The Arab HSS, being part of the millennial generation, accepted this as a way of being and did not consider it as being different. They indicated confidence in the cognitive skills of the PWDs and their ability to integrate into society and be valuable contributors.

Emotionally PWDs were looked upon as weak and with pity, which could lead to a show of dominance by the Arab HSS in the clinical relationship, blocking the empowerment of PWDs. The Arab HSS had more faith in the confidence and skills of PWDs than they had in themselves. Although their thoughts were inclusive, their actions as reported by the PWDs themselves and mentioned by the Arab HSS in the open ended questions in the survey, were filled with emotions such as fear, anxiety and discomfort. Although Arab HSS mentioned that PWDs have the right to shared decision making in health related choices which the PWDs negated mentioning that they are never involved in health related decision making, evidence from the clinical workbooks indicate that Arab HSS predominantly follow the medical model of care. The two main areas of improvement that needs focusing according to PWDs were in the areas of communication and sensitivity as they expressed that Arab HSS are not aware of how to communicate with them without hurting their feelings. PWDs wished to be treated like human beings without being objectified and identified by their disability. PWDs gave suggestions regarding the curriculum which the clinical tutors were open to. Clinical tutors expressed their regret regarding the lack of time to prepare the Arab HSS more proficiently to handle PWDs even though they realise it is a requirement. Students were open to learning more about disabilities and they were eager to learn Sign language and Braille. PWDs mentioned including disability content that focused on types of disabilities, policies regarding disability, care and management, communication and increasing sensitivity. PWDs suggested utilising them more as part time tutors of the disability content, desensitisation sessions with PWDs, role playing so that they could have the real effect in a simulated environment so that the students could have more exposure to them not only in the clinical placement but in general situations too.

A quick look into the public health modules also revealed that there is no exclusive content on disability, rather it is embedded within the topics and integrated into the curriculum. (See appendices 17,18,19,20).

Clinical workbooks were supportive evidence in this study that indicated how the Arab HSS handle patients during their clinical placements, PWDs included. The care plans in the workbook and the reflective writings provided an insight of the manner in which they communicated with and included PWDs in the decision making process during their (PWDs) visit to the hospitals. Although Arab HSS had mentioned a right based view on the survey, the reflective writings indicated that they (Arab HSS) were unsure and unprepared to handle PWDs and mentioned communication as a major barrier during their interaction with PWDs. The writings also indicated the Arab HSS being too protective of the PWDs which has been mentioned in the responses obtained from PWDs (See page 221).

Findings in this chapter from the survey as well as the interviews indicate that although the scores of Arab HSS indicate moderate competence, the lack of training in handling disabilities during clinical placements and exposure to PWDs within and outside the curriculum are evident in the manner they handle PWDs, following the medical model of care.

CHAPTER -5

**DISCUSSION/LIMITATIONS/
IMPLICATIONS/FUTURE
RESEARCH**

5.0 This mixed method study examined and explored the competence and service delivery of undergraduate Arab HSS towards people with observable disabilities during clinical placements by determining the factors that influenced the above mentioned concepts. The conceptual framework of this study projected that disability, when perceived from a biopsychosocial viewpoint, endorses viewing the health condition in a holistic manner. It also proposed that the service delivery of Arab HSS would be influenced by three factors which included competence of the Arab HSS, dimensions of diversity (see figure 6, page 91) of the Arab HSS and institutional disablism (which has been defined in chapter three). Literature has implied that health care providers take a medical stance towards disability which can create negative attitudes towards PWDs causing a detrimental effect on their health consequences. It also mentions prior contact with PWDs to be a contributing factor in improving the attitudes and knowledge of Arab HSS. Socio demographic factors like age, gender, income, ethnicity, academic major and religion have been linked to competence. Increased knowledge of Arab HSS regarding disabilities has been reported to have a positive connection with the disability instruction in the undergraduate curriculum. For decades, researchers have been concentrating more on the attitudes towards PWDs, with lesser focus on knowledge and skills regarding disabilities and rehabilitation. This study has included all three factors under the term competence (see page 16).

This chapter provides the discussion and summary of the findings, their implications in the health care field, the limitations of the study and recommendations for future research. The purpose of this research was to examine and explore the competence and service delivery of undergraduate Arab HSS towards people with observable disabilities during clinical placements in the UAE. Based on the self-perceived competence scale used in this study, the

data established that undergraduate Arab health science students in the UAE are moderately competent towards people with observable disability which essentially translates into moderate positive attitudes, skills and knowledge towards disabilities. The normative range for the competence scores is 0 -128 as there were 32 questions on the competence scale which was divided into four domains of social compassion, social distance, social value and resource distribution (see page 101 for scoring key). A higher score would indicate a higher score of competence towards PWDs. The median score of competence in this study was found to be 80.00 indicating a moderately high competence which is similar to the result obtained in the study by Ghagare et al. (2015), Matziou et al. (2009) in Greece and Uysal et al. (2014) in Turkey who also found moderately positive attitude scores in their studies. Factors that have shown significant relationship with competence in this study are gender, mother's education, institution, prior contact with PWDs and technology.

As competence is a relatively new term that has been used by the researcher, there are minimal studies to compare the results of this study with. However, the researcher has used studies that include attitude, knowledge and skills separately for the purpose of comparison to further validate this study.

5.1 Discussion of the findings in relation to the research questions

RQ.1: What are the attitudes, knowledge and skills (competence) that undergraduate Arab health science students have towards people with observable disabilities in the UAE?

To answer the first research question, an item analysis was conducted on the competence scale (see appendix 14) to analyse the existing competence of Arab HSS students towards people with observable disabilities in the UAE. Responses of the students indicated an

overall inclusive mind set reflecting belief in the skills and abilities of PWDs, with younger Arab HSS scoring higher than the older Arab HSS (which is explained in detail later in this chapter). The multi-item arrangement of the competence scale permitted specific scrutiny of this study and data on the nature of the students' competence relating to specific attitudes and knowledge about PWDs identified possible misconceptions and negative attitudes. Although responses from Arab HSS indicated that PWDs could successfully be integrated into society and could be looked upon as being no different from people without disabilities, most of them agreed to the statement that mentioned giving them menial simple jobs to do. This is not because of a lack of faith in their potential as they responded very positively to the resource distribution domain questions, but rather based on an emotional undertone of not giving them a difficult time as they are already faced with so many challenges to handle within society and with their own disability. Attitudes that underestimate the potential of PWDs can lead to debilitating power roles, where the Arab HSS takes on the role of the decision maker during rehabilitation sessions endorsing the medical model which could in turn inhibit the empowerment of the PWD, making them dependent on them.

Although the overall score of the Arab HSS was moderately positive (80.00), undesirable stereotypes and discriminatory inclinations were noticed in the responses of Arab HSS that relate to the perceived emotional disposition of PWDs. They (PWDs) were perceived by the Arab HSS (See page 171) as needing special treatment from people around them. Similar findings have been identified by Vincent- Onabajo et al. (2015) in their study conducted in Nigeria. There are far reaching implications if these attitudes are taken to their clinical placements because genuine concerns of PWDs can be considered frivolous and taken for granted affecting the service delivery if PWDs are perceived as being emotional and

expecting more praise and attention than people without disabilities. If a PWD is looked upon as someone who can be easily discouraged and is seen as constantly seeking praise, this could lead to the Arab HSS regarding the PWD as an object of pity and taking a patronising role that could seem discriminatory to the PWD. Arab HSS students, particularly Emirati students, agreeing to the statement of PWDs expecting special treatment for themselves could be related to the fact that the UAE government is very supportive regarding the needs of the PWDs. Providing social assistance as per the Federal Law #2 of 2001, they are entitled to receive monthly assistance subject to terms as per the existing laws. Healthcare, education, employment and rehabilitation of PWDs are taken care of by the government and as per Article #3 (Federal law 29/2006), the UAE guarantees equality and full inclusion of PWDs in all legislative, economic and social development programmes and policies. They are provided with 'Atheer' cards by the Ministry of community development that entitles PWDs to a variety of services and benefits in the areas of health and housing, exempt from fees for services related to vehicles and receive discounts on mobile data packages. They are provided with special training, rehabilitation and opportunities for employment by the UAE Ministry of Interior with the intention of full inclusion into society. Sanad cards issued by the Community Development Authority (CDA) entitle them to a host of privileges and services provided by a multitude of entities that take care of their needs. There is a 50% reduction in the fees for driving licenses in Dubai and free parking with special parking permits that are issued by the Ministry of Social Affairs. In Abu Dhabi, the capital city of the UAE, there is a 50% discount on public taxis and the Ojra passes allow them free lifetime travel on all public buses. With so many benefits available to PWDs, it is natural for the Emirati Arab

HSS to believe that all PWDs expect 'special treatment' from the people around them because they are entitled.

HSS seem more confident about the skills of the PWDs, rather than in themselves, which is revealed in statements like them being frustrated regarding their lack of skills in helping PWDs and being unprepared in their interaction with them. Educational strategies capable of inducing confidence in Arab HSS towards persons with disability are urgently needed to equip them with skills that can make them confident of interacting with PWDs during clinical placements. Similar findings of students being under confident was observed in the study conducted by Wolffd et al. (2004). Item analysis of the competence scale revealed positive scores regarding the equality of PWDs in terms of cognitive abilities and personality traits such as confidence and enthusiasm, their outlook including ambition, success, competitiveness and contribution to society (See appendix 14). This was noticed especially between females and Arab HSS who were in the age group of 18-24 years displaying a generational change in thought process of how disability is viewed in the modern world, indicating a cultural acceptance of PWDs in the Arab HSS of this study. Studies conducted by Bakheit & Shanmugalingam, (1997) and Dorji & Solomon (2009) have generated similar results that indicate that younger healthcare providers with a higher education level have more positive attitudes towards PWDs than providers who are older with less education (Ouellette-Kuntzet al., (2009), Yazbeck et al. (2004). There are many studies that indicate that women have more positive attitudes and expectations from PWDs (Ten Klooster et al. (2009), Leyser & Greenberger (2008), Sahin & Akyol (2010) & Chen et al. (2002). In all these studies, the compassionate, caring, encouraging attributes of women were mentioned as a reason. It is encouraging to observe that the Arab HSS in this study unanimously agree

that PWDs are friendly and sociable. This perceived warmth has been associated more with PWDs than with people without disabilities (Cuddy et al. 2009). This could be a contributing reason why the Arab HSS of this study are open to PWDs being included into society because of their amicable nature. The decision regarding where PWDs should live and work within the society according to the Arab HSS should be left to the PWD which reflects a rights based mind set, a characteristic of a majority of the millennial generation that fights for causes that they believe in (Hazari & Thompson, 2014) These positive attitudes need to be encouraged and supported especially because some of the students of Institution 4 did not share these attitudes and the margin between the majority with positive attitudes and those with negative attitudes was negligible in some instances (see page 165).

To conclude and answer the first research question, Arab HSS in the UAE have a moderately high score of competence towards people with disabilities. Their attitudes are inclusive, knowledge regarding the potential of the PWD is high with great expectations from them. However, their knowledge regarding the emotional traits of the PWD is restrictive, which is evident from the responses to the questions regarding their emotional skills. The Arab HSS seemed more confident regarding the skills of the PWDs than their own.

RQ.2: How do the attitudes, knowledge and skills (competence) of undergraduate Arab health science students affect their service delivery towards people with observable disabilities during their clinical placements in the UAE?

Domain analysis of the competence scale was conducted to answer the second research question. (see appendix 15). The four domains of competence that were analysed were social distance, social compassion, resource distribution and social value (which have already been defined in chapter 3).

There were mixed thoughts regarding where PWDs would benefit to stay and work. Although a majority of the students supported inclusion of PWDs into society, a considerable number of students were in agreement that they would benefit if they lived and worked in special communities. This could probably be explained in terms of them not being insensitive or supportive of the idea of segregation but rather thinking in terms of special communities being better equipped with special amenities and services that probably would not be available in the larger society. However, a majority of the students also mentioned that the ultimate choice of where and how to live should be a decision taken by the PWD themselves (Page 168). The students believed that PWDs are capable of having regular social lives as they are usually friendly people (see page 167). The students who mentioned that they preferred to keep their interactions with PWDs short, could have been because of a lack of knowledge and skills regarding disabilities that reflect on their confidence of handling PWDs. This was obvious from the responses to the items pertaining to their skills in handling PWDs (see page 172). From the responses it was evident that many of the students did agree that people generally felt uncomfortable being around a PWD. However, in a social setting the same sentiments were not as pronounced (see page 168). This could be because in a social gathering the Arab HSS is not expected to demonstrate their clinical expertise and knowledge as opposed to if it was in the hospital setting. If the feelings of discomfort is high in Arab HSS on whom the expectations are more because of their projected expertise and nature of their work, the assumption would be that the public would be even more uncomfortable around PWDs. Discomfort among health science students has been reported in the study conducted by Amosun et al. (2013), Lam et al. (2010) which could affect the rehabilitation services when these students who are not comfortable with PWDs provide

services for them. In social gatherings there is a mob identity that makes people experience a weak collective responsibility (Striblen, 2014) and feel less accountable for their behaviour, hence the probability of more discomfort in clinical situations than in social settings. Students, whose family monthly incomes were lower, were more compassionate and willing to interact with PWDs than students from higher monthly incomes. This could be justified as students with lower incomes being more empathetic to the feeling of being disadvantaged due their own financial challenges. Also as a result of restricted finances, there are more chances of them becoming the caretaker of PWDs if they have relatives as opposed to Arab HSS who come from affluent upper class families where social hierarchy further influences the social and cultural beliefs towards PWDs (Goldstein, 2012) raising the possibility of disassociating from PWDs to maintain their social status in society. Similar results were found in the study conducted by Coban et al. (2017) in which students from higher income families were more hesitant to establish contact with PWDs than students from the lower income families. The wealthy Arab HSS however, were found to be more compassionate towards PWDs which could be because of more benevolent activities and gestures that they do to help the less fortunate that could originate from feelings of pity and helplessness regarding their condition. Millennials (as this generation is called) are associated with being generous with their time, money and influence (Hazari & Thompson, 2014) which could also be a reason why the Arab HSS of this study were found to be compassionate (see page 182). Nursing students were most positive about interacting with PWDs (as seen in studies conducted by Sahin and Akyol (2010), which is contrary to the findings by Tervo et al. (2004), Cervasio & Fatata, (2013), Devkota et al. (2017) who found that they were the group that had least positive attitudes. This positive attitude could be because nursing students have

more clinical opportunities than other health care students to be exposed to PWDs (as seen from clinical workbooks) which has been found to be a contributing factor in many studies (Li and Wu (2014) and Symmons et al. (2014)). The curriculum that has disability modules help to strengthen the fundamental worth of PWDs, a possible reason for students of Nursing demonstrating more positive attitude in this study. Modules like Psychosocial care, Mental Health nursing, Community health nursing could have contributed to the scores of nursing students being highest among all the health care majors in this study because of more exposure to PWDs during their clinical placements. Consistent exposure to PWDs has been found to result in respect and more inclusive practices aligning with disability rights principles as is evident from the results of studies from Shields and Taylor (2014), Li, Wang et al. (2013), Kleeman (2007), Krahe & Altwasser (2006) and Yazbeck et al. (2004) to have positive attitudes and knowledge towards PWDs during clinical placements and a strong integrated curriculum that embeds content on disability in every topic that is taught (as mentioned by clinical tutors during the interviews).(See appendix 14). This positive competence score could also be because nursing is a rehabilitation specific programme (Olaoye et al., 2016) that includes working with PWDs regularly. Another possible explanation could be that their program curriculum includes more than two courses that address disability, whereas the non-rehabilitation specific disciplines like medicine and dentistry offer only one or sometimes none. (Olaoye, 2016). Students of Medicine had the least inclination to interact with PWDs, which is similar to the results found by Khan et al. (2016) who established nursing students to be most willing and the medical students to be least willing to interact with PWDs. Sahin and Akyol's (2010) study contradicts these studies as their results indicate that both doctors and nurses have a positive attitude towards PWDs.

A justification given by Jones et al. (2008) is the limited time that doctors have to attend to patients in general and hence might not have special time for PWDs. Other reasons that have been cited are low motivation, insufficient health providers and limited knowledge regarding disability issues (Witter, Kusi & Aikins, 2007). There is also the argument that when disability related courses within the curriculum are delivered from a diagnostic framework of the medical model it will not be effective on students' knowledge of disability (Gilson, 2002) and from the interviews of clinical tutors of medicine there is an admission that the model of care that is currently being followed is the medical model (see appendix 16 for responses from clinical tutors).

HSS were more positive about the cognitive abilities especially of people with physical disabilities than their emotional abilities. Although they thought that PWDs have similar emotions as people without disabilities they also mentioned that PWDs need more affection and praise than the others a thought that could make Arab HSS feel over protective in interactions with them. A majority of the Arab HSS mentioned feeling hurt when they saw a PWD trying to do something and they were not able to. They stated that they felt frustrated for not being able to help during those times (see page 171). These emotions of Arab HSS could translate into doing things for PWDs during clinical interactions, thus making them lose out on opportunities to grow and empower themselves.

Arab HSS believed that PWDs contribute to society as they have the skills, abilities and confidence that are the same as people without disabilities. The students have high expectations from PWDs and they are certain that they would be able to learn job skills and be employed in jobs that are not just simple and repetitive. (See page 173). However, on being asked the question if they should be given simple and routine tasks to do, a majority

of them were in favour of that (the explanation has been given under Q.1). They have admiration for the way PWDs cope with their lives and with frequent interactions they admitted to look beyond a person's disability (see appendix 14 on the item analysis). This could be because they get familiar with the PWD and the initial discomfort of the 'halo effect' (a cognitive bias that affects the decisions and judgements that one makes based during the first impressions) fades in subsequent contacts helping the students to see beyond the disability and focus on the person for their characteristics and personal worth. They consider them social beings who can achieve goals of professional competence (Falanga, et al., 2011) because they view the PWD as a resource. These are positive attitudes that will help Arab HSS to empower PWDs during clinical interactions especially during times when they are most vulnerable due to their health.

Technology was found to be a significant contributing factor that influences competence in this study. This is not surprising as the participants are all between the ages of 18-28 considered to be the "Millennial" generation defined as students who are born between 1982 and 2000 (Leight, 2012). These students have characteristics that are typical of the digital age and they are most comfortable learning through interaction using technologies that include their mobile phones, internet and computers. This is in alignment with the responses that the students mentioned in the survey (see page 214) which indicated that technology is key to this generation (Leight, 2012) In contrast, the clinical tutors were not as inclined to technology as the students, as they felt technology could 'dehumanise' the service approach that was currently being followed. Caution will have to be maintained between the viewpoints of the two generations because Millennials have the ability to perceive the stark contrast between their levels of comfort and their teachers' technology comfort level

(Starlink, 2017). This, in turn, could affect learning preferences if traditional approaches including more lectures in the classroom and simulated laboratory environments are used. Students have suggested that more technology ought to be included in the curriculum and the same learning material could be enhanced through online and electronic modes which the tutors are already using in the form of Moodle and online videos. Millennials are already shifting their preference towards a more portable learning environment by using instant messaging for communication with peers and through emails to clarify course information and expectations with their tutors. They do not consider education and technology as separate but rather as unified.

Overall, the clinical tutors of the Arab HSS believed that their students had been prepared to handle PWDs generally during clinical placements with a minority mentioning that the preparation was specific. The students believed that they were not adequately prepared to handle PWDs. This overall claim was endorsed by the PWDs as their experiences with health providers were mostly negative (see section 4.2.1.3.1 page 219). A reason for this discrepancy could be because in clinical placements, the Arab HSS is always assisted hence there is support provided, if necessary by the clinical preceptor who is the health care educator from the hospital supervising the Arab HSS during clinical placements. Once the student enters as a staff health provider, the assistance of the clinical preceptor is no longer available and the responsibility is on them to provide differential treatment depending on the varied needs of the patient. PWDs have mentioned problems in communication (see 4.2.1.3.2 page 220) and sensitivity (see page 221) as the major barriers faced by them in clinical settings. Similar challenges have been reported in the study conducted by Devkota et al. (2017). Health providers giving them incomplete information, not being able to understand

their needs, being distant, disengaged and uncommunicative towards them were some of the behaviours of health providers that made PWDs feel frustrated in this study. A possible reason for these behaviours of health providers could be because of the lack of formal training given to Arab HSS to provide necessary services to PWDs which was reported in the study conducted by Lam et al. (2010). The uncertainty of the manner in which they needed to speak to PWDs could have either made them avoid or ignore them. Another concern mentioned by the PWDs was that the Arab HSS did not talk to them directly and instead spoke to the person accompanying them making them feel devalued as a person. These behaviours are part of the exclusionary attitudes that Yazbeck et al. (2004) have mentioned that stems from paternalistic attitudes that tend to deny the PWD their existence, their needs and their personal aspirations. The lack of preparedness of health providers, specific skills such as communication exclusive to disability like Sign language and Braille, poor understanding of the needs and rights of PWDs could all be possible reasons of the lack of sensitivity and miscommunication that were reported by the PWDs. Similar negative attitudes of health care providers being disrespectful, rude, neglectful and discriminatory have been seen in the study conducted by Mannava et al. (2015). Insensitive health providers who lack knowledge, skills and have minimal information regarding the needs of PWDs have been reported in studies conducted by Frohmade et al. (2013), Walsh-Gallagher (2013) and (Satchidanand et al., 2012). Interrelated factors that range from personal, organisational and socio-cultural could be reasons for these attitudes (Goldstein, 2012). In this study too, it was found that the Arab HSS were not equipped to manage PWDs during clinical placements. Inadequate content related to disability in the curriculum, inadequate exposure to PWDs and negligible skill development, especially in the area of specialised communication, could attribute to

problems during delivery of services by Arab HSS which has been endorsed by Seccombe (2007). She has mentioned in her study that nurse educators have suggested PWDs to help prepare and deliver the education program to improve the attitudes of Arab HSS towards PWDs. This has also been mentioned by the PWDs of this study as a suggestion (see page.220). Relational services like having a friendly service provider who was understanding and active participation of the provider were mentioned as necessary by PWDs in their interviews which has been studied by Stachura & Garven (2003) as being crucial for successful intervention practices. Participatory practices of professionals who used active listening, empathy, respect, compassion and unconditional support to strengthen the benefits of service delivery was an important finding of a study by Dunst et al. (2002).

A majority of students affirmed that they involved PWDs when making health related decisions for them (see page 211) as they considered it their right to be involved. They were less affirmative about this involvement when the person had an intellectual disability. However, PWDs did not agree with this assumption as they felt the providers were confused and had no idea how to handle them. Some PWDs even mentioned that to make the health provider feel comfortable, they would give suggestions themselves, as they were familiar with what worked for them. Most mentioned that the health provider would spend minimal time and energy on them and would want to finish the interaction as quickly as possible, probably to get back into their zone of comfort and regain their authority over familiar situations. These statements of the PWDs make them believe in the integrated threat theory of prejudice which suggests that affiliates of an in-group (HSS) anticipate affiliates of the out-group (PWD) to behave in a manner that is uncomfortable to their own group (Bustillos & Silvan-Ferrero 2012). Such beliefs could lead PWDs to create a negative self-image which

can make them feel powerless and frustrated (Jahoda & Markova, 2004). PWDs have expressed the desire to be treated like human beings (see page 219), be liked and accepted with all their differences (Keller & Siegrist 2010) and be included into society (Findler et al. 2007). Health providers have been prompted to reflect on their own moral conscience while interacting with PWDs because negative attitudes seem to be prevalent as much in health professionals as the public (Hoberg, 2010). Clinical experiences from previous interactions with health providers, particularly their attitudes can inhibit PWDs from accessing health services even when they have serious health issues that require intervention (Shaikh & Hatcher, 2005, p51). Service provider's attitudes and knowledge have been widely researched (D'Ambruso, Abbey & Hussein 2005, Shaikh & Hatcher (2007) and a direct relationship on the patient's willingness to accept and use the services has been established with the provider's attitudes and knowledge. In a study conducted by Badu (2016), a majority of the respondents' perception regarding the health provider's knowledge on disability in the study seemed limited. In the same study, most of the PWDs mentioned facing discrimination while accessing health care. Similar findings have been reported by Iezzoni (2011) and Jones et al. (2008), however, they also admitted that they were allowed to ask questions pertaining to their treatment to the health provider.

A close look at the public health module of the institutions did not reveal any exclusive content on disability. However, there were specific courses in each specialty that had more content on disability than the public health module. An interesting similarity across the courses was that content on disability was intrinsically embedded within the chapters without any segregation. This could have been one of the reasons why the Arab HSS of this study exhibited positive scores on competence because disability was not approached as a unique

condition to be handled in a specialised manner rather as part of their clinical experience, communicating the message that disability could happen to anyone at any time (see interview of PWD 3 under section 4.3.3.) and it should not be seen as something catastrophic. Inclusion of disability based content into the curriculum has been highly endorsed by researchers who found that there was an association between the content and fostering of positive attitudes and knowledge in Arab HSS. (Stachura and Garven (2007), Tait & Purdie, (2000), Flynn et al. (2005). Advantages of including disability content in the curriculum has been documented as improving the fundamental worth of PWDs and respect towards them (Olaoye et al., 2016), reduction of prejudicial attitudes (Yazbeck et al.,2004) and hence receptivity to inclusion (Shields and Taylor (2014), Li, Wang et al. (2013), Kleeman (2007) and Krahé & Altwasser (2006). Researchers endorse for disability content to be included in curriculums with the hope that it would reflect on their clinical practices even while being trained (Magallona & Datangel, 2012). In this study, the value of combining information-based instruction with structured fieldwork experiences (Williams et al., 2007) has proven to be beneficial towards developing a positive score of competence in the Arab HSS with institution 1 having the highest competence scores. Prior knowledge (background) about disability has had a positive impact on attitudes in this study as seen from the overall scores of competence. Background knowledge in disability has been found to influence attitudes towards PWDs in many studies (Chen et al. 2002, Tervo et al. 2002, 2004). There is enough evidence to indicate that disability related content should be incorporated into every training module in the curricula (Kroll et al. 2006). It would be an added advantage if clinical tutors could also be equipped through updated disability knowledge and skills through in service training sessions. Including the rights of PWDs in the public health module so that all Arab

HSS and staff who teach them are aware (Tervo et al., 2004, Sahin & Akyol (2010) which can avoid any negative attitudes that could potentially lead to discrimination intentionally or unintentionally against PWDs during clinical placements, knowledge about disabilities to help in interacting more positively with PWDs even when societal attitudes pose challenges to full acceptance (Loewen & Pollard, 2010) are all suggestions that exist in literature to improve attitudes and knowledge towards PWDs. Another strategy to improve attitudes and knowledge could be by encouraging students to take part in real or simulated activities, Byron & Dieppe (2000), Saketkoo et al. (2004), Amosun et al. (2005), Seccombe 2007a). This has been mentioned by the clinical tutors (see section 4.2.1.1), the PWDs (see page 223) and students (see section 4.2.1.2) in this study as suggestions for improving the public health module. Two areas that need urgent modifications are in communication and sensitivity because the discrepancy between the Arab HSS responses and the PWDs responses are most evident in these two capacities. It would be beneficial to structure the training period with qualified, intensive sessions including the PWDs in the training so that students can be desensitised before they go on clinical placements. This would help in reducing the negative stereotyping (Abdul Wahab & Gain, 2003). This is a suggestion that has come from the PWDs themselves in this study as there is a realisation among the Arab HSS, clinical tutors and PWDs that simulated learning and pretend role play will not be as valuable as the experience of having a PWD deliver a training module to the students. Students will hence be able to relate to and anchor their beliefs about PWDs to real everyday life experiences which will also help them to break away from prejudicial depictions of PWDs (Corrigan et al., 2002).

To conclude and answer the second question raised in this study, the competence of the Arab HSS is critical to the PWD, in taking decisions to access health services for themselves because the lack of knowledge of Arab HSS regarding disabilities, especially in their clinical preparedness in the areas of sensitivity and communication, has been found to be important areas of concern in this study. There is also a discrepancy between the idealistic thoughts regarding service delivery towards PWDs, such as shared decision making, which elicited positive responses from Arab HSS but negative reactions from the PWDs based on their practical experiences, raising the doubt of socially desirable responses from the Arab HSS to the question. The benefit of doubt could be given to the Arab HSS, by assuming the integrated threat theory of prejudice (Bustillos and Silvan-Ferrero 2012) that PWDs adopt, which can lead them to create negative self-images that make them feel powerless and frustrated (Jahoda and Markova 2004) towards health providers who seem to know less than what they know about their disabilities and its management.

RQ.3: Do any of the demographic/ variables of (age, gender, educational qualification of parents, academic major, prior contact with PWDs, ethnicity, socio economic factors, marital status and religion) influence the competence and service delivery of Arab health science students towards people with observable disabilities in the UAE as measured by the self-reports of Arab HSS

Decades of research that mention various demographical variables that have contributed to attitudes, knowledge and skills of Arab HSS towards PWDs have revealed mixed results (Bricout & Bentley, 2000, Loo, 2001). The same was evident in this study too. When the factors of gender, age, parental education, monthly income, marital status, ethnicity, academic major, prior contact and institution were cross tabulated against the competence

scores, it was found that gender, mother's education, institution and prior contact with PWDs were statistically significant variables influencing competence and service delivery.

The relationship between gender and attitudes has been inconsistent in literature, with many studies indicating that women generally maintain more positive attitudes than men (Martin et al. (2005), Satchidanand et al. (2012) Hunt & Hunt, 2000, Woźniak (2009), Au & Man (2006), Tervo et al. (2004), Thompson et al. (2003), Yuker & Block (1986) and a few reporting no relationship (Gordon et al. (2004), Kowalska (2011), Yazbeck et al. (2004), Ouellette-Kuntz et al. (2010), Morin et al. (2013b). A rare finding where males were found to have more positive attitudes than females was stated by Devkota et al. (2017). In this current study, women were found to have a higher competent score than men. This could be because female students are usually more accepting (tolerant, patient) and less likely to hold prejudicial attitudes towards PWDs (Nowicki & Sandieson 2002) as they have fewer behavioural misconceptions (Tervo et al. (2002, 2004). Women students tend to be more sensitive in parallel with their social roles as daughters, sisters and wives (Chen et al. (2002), Tervo et al. (2002, 2004), Martin et al. (2005). The inherent feelings of motherhood and cultural differences between gender expectations in the UAE could be another reason why girls could have more positive attitudes towards PWDs (Tervo et al., 2004). In this society girls are seen as more accepting, tolerant and patient, less likely to have attitudes that are prejudiced towards PWDs. Similar findings have been obtained by Chen et al. (2002) and Martin et al. (2005) in their study which showed girls with a more positive attitude than boys. Haimour (2012) also found females to have more positive attitudes than males in his study that was conducted in Saudi Arabia on undergraduate students. With the health care industry in the UAE being dominated by females, this is an interesting implication.

An interesting result that emerged from this study was the statistical association between the maternal education and competence. A similar result was found in a study conducted by Coban et al. (2017) while assessing health science students' attitudes towards PWDs in Turkey. The father's educational background was not a significant factor in this study. Studies conducted by Yildirim Sari (2010) and Coban et al. (2017) yielded results which were similar to this study in terms of father's educational background. Culturally, Turkey and the UAE have similar patterns of child rearing where the mother's role is dominant and has a greater influence on attitude formation in several areas of life including disability. In the UAE where polygamy is legal, often the father figure is missing or has lesser influence on the children than the mother, for whom child rearing is an important responsibility. The implication of this finding from this study is that the more educated the mother is, the higher the scores of competence are likely to be on the offspring, a reassuring evidence as more girls are enrolled in higher education than boys in the three federal universities in the UAE (The National, 2017).

Students whose mothers had a higher degree like a doctorate scored high scores on competence. A possible reason could be because mothers with higher degrees could have a heightened awareness of current issues and requirements related to disability due to their innate curiosity that stems from their higher education backgrounds. There is a strong relationship between higher educational attainment and competency (Desjardins, 2003) and it could be this competency that the student could have imbibed through observation. There are also studies that indicate that higher the educational qualification, the more positive the attitude is towards PWDs (Parasuram 2006).

Institution was another factor that was found to be relevant in this study. Students from Institution 1 had the most competent scores and Institution 4 had the least competent scores. The high scores could be attributed to the incorporation of disability issues within their curricula (similar findings have been established in the study done by Coban et al., 2017) and the intense clinical preparation that they received before they went on clinical placements which covered all aspects of general patient care modelled around the competency model including patient safety, use of technology, evidence based practice and working in multi-disciplinary teams. The responses of Arab HSS to the open ended questions in the survey regarding clinical preparation through curricular learning indicated a strong motivation and willingness from the students to include more content on disability, more exposure to PWDs and learn specialised techniques to work with them. This intrinsic motivation could have also been a reason for the high competent scores obtained by students of this institution. Technology which has also been found to be a significant factor in this study (See Table 4.13, page 195) that influences competence could have been another reason why the scores are positive as most of the students mentioned that they used the internet as a reference for learning new skills related to handling PWDs. This institution also stresses on reflective practices of the Arab HSS as is evident from the interviews of the clinical tutors through post conferences at the end of the day during clinical placements. All the above mentioned reasons could have contributed to the students of institution 1 achieving the highest scores on competence. A surprising outcome of the survey results were the scores obtained by the students of University 3 which were lesser than University 1 and 2. University 3 is the only institution that had an exclusive disability policy and a dedicated disability resource centre attached to the institution. Exposure to students with disabilities was higher among the

students in that institution and if literature has to be relied upon, most studies mentioned that frequent contact with PWDs has been found to improve attitudes towards them (Kalyva & Agaliotis (2009), Seo & Chen (2009), McDougall et al. (2004), Hunt & Hunt (2000). Allport's contact theory of 1954 quoted by many researchers (Sahin & Akyol (2010), Horner-Johnson et al. (2002), Chen et al. (2002) & Shannon et al. (2009) support this theory. In this study, although the students had moderate scores on the competence scale, their scores were lower than the students of Institution 1 & 2 who did not have any exclusive inclusion policy for disability. When prior contact was cross tabulated with the four domains of competence, it was found to be statistically significant (figures 21, 22, 23, page 193) especially in the domains of social compassion, social value and resource distribution. Only social distance was not found to be significant statistically. Arab HSS who had daily and weekly contact with PWDs displayed higher scores for compassion towards PWDs than students who had monthly and yearly contact. Most of the students who had mentioned daily contact in Q 12 of the survey (See appendix 8) had elaborated it mentioning it was a family member who lived with them and whom they probably had to take care of as a shared family responsibility. This could be a reason for having compassionate feelings towards all PWDs. The nature of contact for weekly interaction was a friend or relative who did not stay with them or volunteering experiences that they have had. These were mentioned in the responses to the open ended question regarding the nature of the contact on the survey. This could have led to more compassion, an insight that has been endorsed by Ten Klooster et al. (2009). When students had either no contact or daily contact it indicated higher scores towards resource distribution. Even when there was no actual contact with PWDs if the Arab HSS were positive about the potential of the PWDs, it could be because of the success stories they had

heard and read about in social media, an active influencer among the millennial generation who have a strong sense of moral values and rights and the drive to fight for causes that they believe in. It is also possible that they may have had some personal experience during various campaigns that are prevalent especially in the UAE. Students who had daily contact might be more aware of their potential because of their frequent contact as it would reveal their strengths and limitations. In this survey there was a question about ‘not noticing their disability after multiple contacts with PWDs’ to which a majority of students completely agreed. This could be another reason why they scored higher on the resource distribution domain. Arab HSS valued PWDs more when there was minimal prior contact with them. The findings revealed that when the contact was on a yearly basis and also when they had contact on a weekly basis, the students valued the PWDs more. When the contact was less, the students probably valued their time with them more and tried to maximise the quality of their contact. Au & Man (2006) in their study mentioned that one way to show that the PWD is valued is by not feeling sorry for them or pity them as it is an indication of a positive attitude. In this study the response to the statement ‘PWDs expect a lot of sympathy from people’ elicited a neutral response from most of the students which indicated a thought that was neither negative nor positive. However, the surprising observation of this study was that, those who had daily contact with a PWD showed the highest scores on social distance and the lowest social distance when the contact was yearly. An explanation for this could be that in collectivist societies like the UAE, where people are interdependent with their in- groups, the goals of the in group is a shared responsibility, hence having a PWD at home would be the onus of the family (Papadoulous, 2009). If the Arab HSS was a caregiver of the PWD in the family, he/she would have to cope with multiple responsibilities and though they did not

experience disability themselves, they might have had to take care of the physical and emotional challenges that were disability-related. They would also have to handle the practical rehabilitation care plan of the PWD because it would be expected of them as health science students within the family. In addition to this, they could have their own individual problems and family roles and relations to maintain. This dual role that they have to preserve could lead to 'courtesy stigma' that is found among people who take care of PWDs, a common phenomenon that has been reported in studies conducted by Ali et al. (2012), Corrigan et al. (2006) and Mak et al. (2006). With longer durations of care, the psychological state of mind and attitude of the caregiver becomes more negative influencing the quality of caregiving (Zheng et al., 2016). Tervo et al. (2004) have mentioned that positive responses tend to decline as students begin clinical placements maybe because the contact with PWD is in a medical setting offering less than positive experiences affecting their attitudes. The maintenance of a social distance from PWDs during clinical placements could be because of saturation. This association between social distance and daily contact was not statistically significant in this study even though the results showed this connection in the study. There have been studies conducted that found that attitudes towards PWDs are more positive when the social distance increases (Meyers & Lester, 2016). This implies that more experience with PWDs might not necessarily lead to more positive attitudes towards them.

The classic hypothesis of contact of Allport (1954) cited by many researchers (Horner-Johnson et al. (2002), Shannon et al. (2009) claims that respondents who had more prior contact with PWDs had positive attitudes towards PWDs (Kalyva & Agaliotis (2009), Seo & Chen (2009), McDougall et al. (2004), Hunt and Hunt (2000) and would be more

comfortable in their interactions with them. The above hypothesis was supported in this research by similar expected results.

The other variables that did not show statistical significance but considered to be important enough to be included in this study were age, income, religion, academic major, marital status and ethnicity. The results of this study found younger Arab HSS to be more competent refuting the claims of Werner et al. (2013) who mentioned that with more exposure to issues related to disability there would be a creation of more knowledge leading to more positive attitudes and Vincent-Onabajo and Malqwi (2015) who claimed that more positive attitudes develop as one ages because of reflective practices that come with aging. The results of this study relate to the results found by Rosenthal et al. (2006), Ghagare et al. (2015), Ouellette-Kuntz et al. (2010) & Morin et al. (2013b).

Religion was not cross tabulated with competence and service delivery in this study because 97% of the participants were Muslim hence the study could almost be proclaimed as a study done on Muslim Arab HSS. The researcher had hoped to get more non-Muslim participants but since that did not occur this variable was not taken into consideration during calculations. However, the researcher is mindful that it could be a crucial factor if examined with other religions, because the number of studies connecting religion with disability is minimal with very few researchers linking the two concepts, Shaikh, (2009), Etieyibo (2016), Blanks & Smith (2007) & Imhoff (2017). This has been mentioned as a limitation of this study (See page 260 under limitations).

Nursing students were found to have the highest scores on competence in this study among all the other health science majors. This finding is in alignment with the findings from the studies done by Ten Klooster et al. (2009), Sahin & Akyol (2010) and Olaoye (2016).

However, it contradicts the results obtained by Matziou, et al. (2009), Tervo et al. (2004), Au & Man, (2006) & Devkota et al. (2017) strengthening the notion that the differences in findings could be related to the curriculum, internship programmes with exposure to PWDs, as well as cultural differences.

This study observed that married participants had a higher score of competence than single respondents in interacting with and including PWDs into society. Single participants however, displayed higher scores on competence with regard to social compassion, value and resource distribution. Marital status is a factor that has been included only in few studies (Zheng, 2016) in attitude studies. It has not been reported as being a statistically significant variable in most of the studies and it was the same in this study too.

Regarding ethnicity which was divided into income groups based on the World Bank Classification (2017), it was found that Emirati Arab HSS indicated the highest scores of competence regarding interaction with PWDs. With regard to social value a majority of Emirati participants responded most positively to the statements that reflected social value of PWDs than the other two groups. Self-reported compassion was evident in the high scores of Emirati students and students from the low income group. Regarding resource distribution with regard to PWDs, Emirati students indicated the highest scores. In all the domains of competence Emirati students scored the highest. A possible explanation could be because in the UAE, there are strong awareness campaigns to make the country as inclusive as possible with the most obvious campaign “My Community, A city for Everyone”, a programme aimed to make Dubai which is a prominent city in the UAE the most inclusive city in the world.

To conclude and to answer the third research question of this study, the most significant variables that were found to be statistically significant were gender, mother's education, institution of the Arab HSS, prior contact with PWDs and technology.

5.2 Triangulation of results obtained from quantitative and qualitative data

Arab HSS in the UAE were found to have a moderately high median score of competence (80.00) towards people with disabilities in this study. Their attitudes were found to be inclusive, knowledge regarding the potential of the PWD was high with great expectations from them and they seemed more confident regarding the skills of the PWDs than their own. However, their knowledge regarding the emotional traits of the PWD was found to be restrictive, which was evident from the responses to the questions regarding their emotional skills (see Table 4.4, page 171).

Clinical Preparation to handle PWDs

Overall, the clinical tutors of the Arab HSS believed that their students were being prepared to handle PWDs during clinical placements with a few mentioning that the preparation was not adequate (see page 199). The responses from the students also reflected that they were adequately being prepared to handle PWDs in their clinical placements (see page 211). This overall claim was rejected by the PWDs (see page 219) as their experiences with health providers were mostly negative. They have mentioned being misdiagnosed, mishandled and even ignored and passed around due to lack of knowledge (page 219). This is an interesting consolidation of data as clinical tutors are an important source of information for students in the process of preparing them for clinical placements. A reflection of their own teaching practices to consider necessary modifications in the curriculum to include teaching

differential skills that would accommodate and include the needs of all the patients, PWDs included would help reduce this discrepancy.

Communication

PWDs have mentioned communication (see page 220) and sensitivity (see page 221) as the major barriers faced by them in clinical settings while interacting with health providers. Lack of knowledge regarding specific communication tools like Sign language and Braille, was mentioned as a possible reason for the lack of sensitivity and miscommunication as reported by the PWDs. This was echoed by the Arab HSS as a reason for the uncertainty of the manner in which they needed to communicate with PWDs which either made them avoid or ignore them (see page 212). Arab HSS mentioned that they felt hurt and frustrated regarding their lack of skills in helping PWDs and being unprepared in their interaction with them (see table 4.4, page 172). Some of them also mentioned being uncomfortable when interacting with them from the response regarding the statement ‘‘I try to interact only for a short time with PWDs’ (see page 169). Responding to the question ‘Are you comfortable working with PWDs during clinical placements,’ a majority of students mentioned that they were, (see table 4.13, page 195) however of those who answered positively the ones who had prior contact with PWDs only on a weekly basis were found to be more comfortable than when the contact was on a daily basis. (Table 4.8, page 186)

Clinical tutors however reported that their students had been taught to be kind and caring (See page 201). They also mentioned that sensitivity was a personal characteristic placing more onus on the student. Some PWDs even mentioned that to make the health provider feel comfortable, they would give suggestions themselves, as they were familiar with what worked for them (see page 222). Most mentioned that the health provider would spend

minimal time and energy on them and would want to finish the interaction as quickly as possible, probably to get back into their zone of comfort and regain their authority over familiar situations (see page221)

Shared decision making

Related to communication and sensitivity was the notion of including PWDs to make health related decisions for themselves. A majority of students affirmed that they involved PWDs when making health related decisions for them see table (page 213) as they considered it their right to be involved. They were less affirmative about this involvement when the person had an intellectual disability. However, PWDs did not agree with this admission from Arab HSS, as they felt the providers were confused and had no idea how to handle them (see page 221). Although the Arab HSS seemed to take a right based approach as is evident from their responses on the self-perceived competence survey, PWDs refuted this and felt devalued as a human being from the manner in which Arab HSS treated them including being objectified (see page221) and not being spoken to directly but through the bystander which is another discrepancy that was found in this study from the responses.

Technology

Another important discrepancy in the responses from the Arab HSS and the clinical tutors was in the area of technology. From the perceived competence scale, technology was a variable that was statistically significant (see table 4.13, page196). A majority of the Arab HSS admitted that technology had helped them handle PWDs in their clinical placements (see page 187). Clinical tutors were not as convinced about technology helping Arab HSS, mentioning an overdependence on technology being detrimental to the human centric nature

of their jobs (see page 203). This technological divide is an important factor as the Arab HSS are all millennial students who can be engaged if technology can be introduced in the form of assistive devices while handling PWDs, a paradigm shift for the tutors who are all from the generation before.

Two areas that need urgent modifications are in communication and sensitivity because the discrepancy between the responses from Arab HSS, clinical tutors and PWDs responses are most evident in these two capacities. It would be beneficial to structure the training period with qualified, intensive sessions including the PWDs in the training so that students can be desensitised before they go on clinical placements. This would help in reducing the negative stereotyping (Abdul Wahab & Gain, 2003). This is a suggestion that has come from the PWDs themselves in this study as there is a realisation among the Arab HSS, clinical tutors and PWDs that simulated learning and pretend role play is not as valuable as the experience of having a PWD deliver a training module to the students. Students will hence be able to relate to and anchor their beliefs about PWDs to real everyday life experiences which will also help them to break away from prejudicial depictions of PWDs (Corrigan et al., 2002).

The perceived competence of the Arab HSS is critical to the PWD, in taking decisions to access health services for themselves because the lack of knowledge of Arab HSS regarding disabilities, especially in their clinical preparedness in the areas of sensitivity and communication, has been found to be important areas of concern in this study. There is also a discrepancy between the idealistic thoughts regarding service delivery towards PWDs, such as shared decision making, which elicited positive responses from Arab HSS but negative reactions from the PWDs based on their practical experiences, raising the doubt of socially desirable responses from the Arab HSS to the question.

5.2 Conclusion

Disability has become a natural part of the living due to various reasons such as an ageing population, increase in diseases that could be debilitating, war and terrorism, poverty and medical inventions that preserve and prolong life. According to the report from the World Health Organisation (WHO 2011), there are over one billion people estimated to be living with disability in the world. Social inclusion and community participation of PWDs are important concepts guiding policies for them globally. Negative attitudes toward disability hinder the inclusion process and could incur losing a potential resource because of a lack of knowledge regarding the potential of PWDs leading to stigmatisation and marginalisation. Identifying and comprehending the attitudes and knowledge towards disability can help define the factors that impede or foster the social integration and health outcomes of a PWD. There is an urgent need for adding social communication skills into the public health module (Yildirim et al., 2010) and more exposure to PWDs in organised, planned environments where the students are able to see PWDs in powerful roles like leading a disability module during their training, sharing success stories with the students, volunteering as models for role play (which have all been suggested by PWDs in this study during the interviews).

There are many studies that have been conducted on the attitudes and knowledge of undergraduate students towards disability in the Western world which has been discussed in Chapter 2, however, lesser work has been done in the Middle East on this topic and negligible research in higher education in the UAE. The findings of this study will hopefully enhance the limited data and knowledge regarding disability, competence and service delivery of Arab HSS in the UAE.

The UN Convention on the Rights of Persons with Disabilities considers the inherent dignity of individuals with disability as paramount and appeals to Nations to increase their knowledge regarding disabilities and to defy stereotypes and prejudices against PWDs in order to promote and be aware of the potential, strengths and contributions of PWDs (Offergeld, 2012). The UAE Government has recently decided to start referring to people with special needs or PWDs as '*the determined ones*' (Gulf New, 2017) an empowering term that radiates positivity and capability. How society refers to a group of people is pertinent as it has the ability to change perceptions towards them as is obvious from earlier terms that referred to PWDs as handicapped people, disabled people, people with impairments, people with disabilities to the most recent people with determination which indicates a paradigm shift from being protective, empathetic, supportive and integrative to a more rights based approach that exudes empowerment and inclusion without differentiation.

From the study it is obvious that the Arab HSS in the UAE, despite not having exclusive institutional programmes on disability to guide them and minimum content on disability in the curriculum that is specialised along with a predominantly theoretical teaching approach, have indicated moderately positive scores on the competence scale. This could be because they live in a country where the disability laws are strong and functional that reflect values of inclusiveness and empowerment. In this study gender, mother's education, institution, prior contact with a PWD and technology have shown to be statistically significant which is noteworthy as two of the factors gender and mother's education are female oriented factors that have shown significance in a patriarchal society like the UAE.

The participants, especially the students belong to the millennial generation, who are considered to be idealistic and altruistic with a passion for social causes can be highly

beneficial to society. They are a generation that freely uses social platforms and media to create awareness and raise money for causes that are meaningful to them. Being global citizens, risk oriented and technologically confident, they are eternal optimists even though they are the most targeted generation in history (Hazari & Thompson, 2014). In this study they have indicated that they are prepared to include PWDs into society by obtaining moderately positive scores on competence thus demonstrating that they are a generation who have the attitudes, knowledge and skills that are required of a Arab HSS to provide quality services. As they are powerful stake holders in the health care field they have the ability to bring a change in society by giving PWDs the respect they deserve and becoming role models and a ‘powerful voice’ (Abdulwahab & Gain, 2003) for the general public to follow. For this they need to shift from the medical model of care which is predominantly what is being followed in the UAE (as was obvious from the interviews of PWDs and clinical tutors discussed in detail in Chapter 4) to an integrated model of care that has elements of the social model and the rights based model so that PWDs are given services based on ‘civil rights’ rather than terming it as ‘special services’ making them feel as though society is doing them a favour. In this study although the Arab HSS indicated moderate scores on competence indicating attitudes and knowledge that regard PWDs as having equal rights and campaigning for social integration, reality is that they (Arab HSS) have challenges within themselves for not being equipped enough to develop a relationship with the PWD (Coban et al., 2017). This will be possible only when the Arab HSS is exposed to the triad combination of education, information and contact (Chan & Cheng, 2001).

Another area of concern has been the limited literature on the lived experiences of PWDs who should be the motivating force behind the issues faced by them in society at all levels.

Two challenges that face PWDs in the Arab world are the absence of awareness of their rights and a lack of clear practical legislation of the protection of those rights (Thani, 2006). The interviews of the PWDs in this study have lent an invaluable insight into the reality of the situation that can only be explained by their experiences with Arab HSS in clinical situations in the UAE. By including PWDs in this study the researcher has been able to democratise the research process' (Nind, 2014) by intentionally including people who have been traditionally marginalized by academic research. In this study, they have taken a powerful and integral role of contributing to formal knowledge production (Nind, 2014). These insights can help in the designing and modification of existing curricula. Future practitioners must realise that a partnership with the PWD is vital, but even that partnership needs to go beyond the solitary focus on the PWD as this micro view (Fleming –Castaldy, 2015) does not take into consideration the various challenges that the PWD has to face in attaining their desired life (Phelan, 2011) hence there needs to be a redefining of perspectives of the PWD focusing on the social and cultural influences that underlie empowerment (Taff et al., 2014). It is a big disservice that is being done to our students (and their potential patients) when they are made to explicitly stay within the comfort zone of the theoretical without including practical content related to the PWD's life realities. There is an urgent need to equip the Arab HSS to work with a diverse group of individuals, PWDs included because they (HSS) are a reflection of the society (Devlieger et al., 2003).

5.4 Limitations of this study

In this research, no manipulation nor any random assignment is involved so evidence that is obtained will be severely restricted and much weaker than data obtained in experimental

research (Johnson & Christensen, 2014). Although the researcher does not expect the findings to be generalizable to all other settings, transferability will be hoped for.

The time frame of mixed method research studies was a concern as the study required not only the survey to be distributed in a minimum of 4 institutions but an extensive number of interviews in multiple sites that are geographically split (Glesne 2006, p.39) to be conducted.

As this study involves convenience sampling and purposeful sampling, generalisability of the study will be limited. However, as it is the first study of its kind, it will be a direction for future studies in this area.

Only Arab HSS are part of this research. The findings of this study will be limited to only students who fall under this category. As the study is situated in the UAE and very limited studies have been conducted with Arab HSS, the results will be valuable.

Competence and service delivery towards only people with observable disabilities will be part of this research. All other non-observable disabilities will not be part of the inclusion criteria. Hence the results will be applicable to only people with observable disabilities.

There can never be a complete elimination of bias in any study where the researcher is a stakeholder and has a professional interest, however, it was minimised as the researcher showed reflexivity (Finlay, 2002), during the construction of knowledge to reach certain assumptions during the phase of discussion when interpretation was required. The researcher tried to take a neutral stand which was difficult but helped in not contaminating the results. Being self-critical is another strategy that the researcher used so that there was minimum personal bias. This was done to maintain the validity of the data.

The integrity of the researcher was a deciding factor towards the validity of the analysis in reporting the results accurately keeping the purpose of the study as a priority which was to gain an insight into the inclusive practices of Arab HSS towards PWDs during clinical placements. The results obtained were to reflect on better practices if required and for inter transference of best practices between the health care institutions in the UAE as all of them come under the Ministry of Higher Education. The researcher was positioned in such a way that there was no personal benefit or threat as a consequence of the results of this study.

The competence scale has been researcher modified including statements from three widely used scales to assess competence of undergraduate Arab HSS towards people with observable disabilities. As this is the first time the scale is being used, comparisons of results had to be restricted to results of scores obtained on attitudes and knowledge of other studies from literature.

Another limitation of this study is that which is inherent to survey research. There is a possibility that the participants gave socially desirable responses (Tervo et al., 2004). The study did not account for unaccounted effects of response set bias as well as social desirability. A response is centered around the respondent's capability to recollect a recent attitude or behaviour (Streiner & Norman, 2003) based on their experience with people with disabilities which may have affected the participants' interpretation and responses to the survey. However, the negative responses to some of the items suggest that the students may have indeed expressed their true perceptions without bias.

Related to the above point is the effect of 'optimising' (Streiner & Norman, 2003), a kind of bias in responding that involves the investment of the participant responding to the survey accurately. If the survey does not interest them there is a tendency for the respondent to finish

the survey quickly with little concern for the accuracy of their responses. The researcher has expected a sense of social responsibility and has assumed that they have completed the survey with honesty so that accuracy of data collection has been maintained

The survey is a snapshot of the competence of Arab HSS at this moment in time. It does not necessarily make predictions of their future behaviour and beliefs.

Although a large sample size was taken for this study, the respondents were all undergraduate Arab students from the UAE, hence the diversity of the sample was restricted with reference to their age, religion and level of education.

The sample was not balanced by gender, marital status or religion so the results may be skewed in favor of female. Religion was not taken into consideration for analysis even though it was mentioned in the third research question in this study because a large majority of students (97%) were Muslim. Similarly a majority of the students were single.

The survey was conducted in English which is not their first language of the Arab HSS. This may have affected the results due to their limited understanding of the English language. This was minimised as the sample taken had all attended a minimum of two years in an English medium institution where the medium of teaching is in English and all the students who are enrolled have a minimum IELTS score of 6. A description of the proficiency level in English is given in Appendix 4 in the form of a scoring key.

There are no standardized measures of contact and there is little consensus in literature regarding what constitutes contact. Participant's knowledge and reporting of their own prior experiences required self-reporting which could have suffered from systematic response bias (Sharp et al., 2011).

Observation is a method that is used extensively in qualitative research that adds rigour to the study. In this study, it was not ethical possible to conduct observation on PWDs during their clinic visits hence the researcher had to be satisfied with interviews and documents that reflected the competence and service delivery of the Arab HSS.

Notwithstanding the limitations, this study represents a first step in understanding the competence of a representative sample of Arab HSS in the UAE towards PWDs and has provided a baseline for future intervention studies.

5.5 Implications

The implication of the findings of this study is the contribution to the existing understanding of attitudes, knowledge and skills (competence) of Arab HSS towards people with observable disabilities in the UAE. This understanding could provide insights into their disposition regarding disability which could impact them as future practitioners.

The results of the study could be used as needs assessment data to recommend the development of a disability awareness curriculum that has its base on an integrated model of social care and rights based care. The historical beginning of Special education has its grounding within the fields of medicine and science (Peters, 1993a, 1993 b, 2004). This has prompted curriculums to be grounded in the medical model of disability which is prevalent even in current times in the U.A.E.

The traditional learning experiences of Arab HSS are focused on structured clinical experiences that are discipline specific, the results of this study guide that general experiences, such as volunteering in centres for PWDs, having PWDs being involved in delivering a few sessions for the students, as mentioned by the PWDs and clinical tutors as

endorsed by Seccombe, (2007), making changes in the communication module might be effective for developing competency in professional behaviours, including better understanding of disabilities, increase in sensitivity and confidence in Arab HSS. Service-learning pedagogy has been under-used in health science education. This could be an opportunity to experience disability in a societal context (Sahin & Akyol, 2010).

The voices of PWDs are the most feebly heard ones as is obvious from a dearth of literature on this topic especially in the UAE. This study hopes to highlight their 'voices' with the intention of looking at an issue from all angles without judgement.

Competence is a term used very often in health care but personal competence is an under researched concept from a global as well as local perspective. There are many studies on attitudes but very few on attitudes, knowledge and skills. This study hopes to advance further research on this topic as it is a term that is being widely used in health care currently.

5.6 Recommendations

Several pertinent recommendations have emerged from this research that relate to the competence and service delivery of Arab health science students towards people with observable disabilities. With women and mother's education being important variables in developing competence among health science students, more focus needs to be directed towards empowering women in this country which is already part of the nation building process as they are partners and contributors of this process. With 49% of the national population in the UAE being women according to the 2005 Census, they are a formidable force in government as well as private sectors (UAE Ministry for Federation National Council Affairs). The government's strategic vision for women in the UAE along with the

Emirati woman's commitment to benefit from these strategies has enhanced the Government's need and drive for gender empowerment. This reflects in the fact that 70% of the graduates in this country are women (Office of Higher Education, 2007). With so many women pursuing higher education in this country, aggressive marketing and incentives need to be given to women in health science sectors to encourage them to choose career paths that are in the health sector as gender (female) has been found to be a statistically significant variable in this study.

Technology was found to be a strong variable as was the integrated curriculum that includes a minimum of two or more disability related content in the modules that will benefit all the stakeholders of this study, the Arab HSS, clinical tutors and PWDs. The most effective medium to capture the millennial student's attention would be through technology as this generation does not know or understand a world without technology and education leaders need to modernize teaching methods to tailor the educational experience in such a way that it allows the student to apply theory with practice through the medium that they are most comfortable with – technology. (Leight, 2012). By including disability content through innovative means using technology, the Arab HSS can be equipped to face the challenges of handling people with various needs, PWDs included.

Prior contact with PWDs, especially on a daily/ weekly basis was found to be significant in developing competence in Arab HSS in this study especially in the areas of compassion, value and resource distribution. By generating more opportunities for contact with PWDs in various situations outside the clinical setting would help them understand the biopsychosocial nature of the PWD which is essential if the Arab HSS has to shift focus from the current medical model to the social/ right based model of care.

5.7 Future research

Future research could include the comparative exploration of different disability types as there is such a broad range of different disabilities. Including people with intellectual and emotional disabilities would give a more complete description of competence towards disabilities in general. Additionally, a comparison of other cultures would provide a broad summary of global attitudes towards PWDs.

Future research should include various confounding variables that could address the severity of the disability, quality and quantity of contact as well as the nature of the relationship between the people with and without a disability.

This study provides the platform for the development of several potentially important future research in the UAE. Perhaps the most important trigger for new research this study has made is the introduction of the relationship between competence and service delivery in context to disability among Arab health science students.

As culture is a primary factor in what influences one's competence, it would also be interesting to explore whether there are explanatory links between competence and culture.

There is a need for future research to be conducted with larger sample groups in different universities, majoring in a variety of health disciplines in different geographical areas in the UAE. This research also suggests revision of curricula of health sciences faculties to increase the competence of the students and the quality of services for PWD (Sahin H, Akyol, 2010).

Replication of this study including Arab HSS located in other geographical in the MENA region using the researcher modified perceived competence scale will endorse the validity of the survey instrument and identify the competence of Arab HSS in other regions advancing its use into research in the area of competence permitting comparative studies to be conducted. This will add to the existing assessment tools that are used to examine the competencies of Arab HSS as currently there is no assessment tool that being consistently used. (Crookes & Brown, 2010).

5.8 The researcher's personal growth: The journey of the researcher from the unknown to the known

As a counselor, which is my professional identity, reflection is a technique that comes naturally to me. As I reflect over the past four years, I am amazed at the person I have evolved into, traits and characteristics that I would not have been aware of if not for this research study. Starting as a **novice** the first challenge that I had to face was to shift my thoughts from being casual to formal. For this to happen I was advised to read, read and read. Born a light reader, I had to develop into a serious **reader** bringing out the **critic** in me. Every statement had to be questioned and arguments had to be deduced. That was the start to my inquiry. The **free thinker** in me helped me vividly to brain storm ideas to conduct this research. Academic debates became interesting and the art of referencing while debating started developing within me. My initial days as an **explorer** found me looking for things I didn't know existed from my paradigm search, to data, sample and sites. With each new information gained, came the excitement and curiosity of an **academician**, who had set out with a few pertinent questions and an inquisitive mind. As I handed out my first batch of surveys, I became the **informant** explaining the importance of the study and its implications to the students. Being

the **outsider** I was looked upon as an **intruder** initially till they started seeing me on campus more often and then I was looked upon as an **intellectual** who was there with a mission.. The clinical tutors were open and willing to talk during the interviews and I became the avid **listener** hearing and absorbing all the words spoken and unspoken becoming their **confidant** in the bargain as I got a glimpse of their inside stories. My interview sessions with the PWDs made me seem like an **activist** who was there as a crusader to fight their cause. During the period of analysis relearning the basics of statistics and the nuances of thematic analysis rekindled the **student** in me and later gave birth to the writer, editor and formatter who tirelessly produced an 80,000+ word study that would hopefully in the future be able to add value to the world of research in more ways than just becoming another book on the shelves of a library. Like a **marathon runner** I have mixed feelings within me feeling exhausted in an exhilarating way, happy that I was able to give a part of myself into this study and in return feel a sense of satisfaction with the experience gained through this research and proud that I finished what I set out to do.

5.9. Concluding remarks

This research was conducted to explore and understand the competence and service delivery of Arab HSS towards people with observable disabilities during clinical placements in the UAE. The aims and objectives of this study were instrumental in guiding the research process which set out to examine the above mentioned variables to answer the research questions framed by the researcher. A mixed method using a modified self- perceived competence survey on Arab HSS in the UAE within the four health science institutions along with semi structured interviews with clinical tutors and PWDs as well as analysis of documents of the institutions were conducted. The findings of this study indicated that gender (being female),

mother's education, the integrated curriculum of the institution of the student, technology and prior contact with PWDs especially on a weekly basis had a statistical significance with competence and service delivery of the Arab HSS in this study. Based on these findings, a set of evidence based recommendations have been offered, in section 5.5. It is hoped that these findings would bridge the research gap that was found in the literature, directing future research in this much required important area of competence and service delivery. This study is valuable, as it is the first study conducted in the UAE on this topic. In the endeavour to answer the question raised by a friend, who was instrumental for this research to be conducted, the researcher has been able to find some probable answers and endorses Aimee Mullins quote "The only true disability is a crushed spirit". In this regard, the UAE Government taking a positive federal step in referring to PWDs as 'people of determination' is an empowering paradigm shift towards a more right based course of action that will encourage society to be more accepting and inclusive towards disability in the UAE which will influence all sections of society, healthcare included.

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APPENDICES

Appendix 1: Articles of the Federal law 29/2006

Appendix 2: UAE signing the ratification of the UN Convention

Appendix 3: CAA list of accredited health science institutions

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